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INNOVATIVE ACTIVITIES OF SMALL AND MEDIUM-SIZED ENTERPRISES IN KOMARNO DISTRICT (SLOVAK REPUBLIC)

The article studies the relationship between innovative activities of micro-, small and medium-sized enterprises and their business performance, including the export-oriented one. The author's hypotheses are confirmed by the analysis of the results of the survey carried out among business representatives in Komarno district, Slovak Republic.

Keywords: innovative activity; small and medium-sized enterprises; Komarno district; questionnaire.

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ІННОВАЦІЙНА ДІЯЛЬНІСТЬ МАЛОГО ТА СЕРЕДНЬОГО БІЗНЕСУ В ОКРУЗІ КОМАРНО (СЛОВАЧЧИНА)

У статті досліджено взаємозв'язок між інноваційною діяльністю мікро-, малого та середнього бізнесу та показниками його успішності, зокрема, у сфері експорту. Авторські гіпотези підтверджено за результатами аналізу відповідей в опитуванні представників бізнесу в окрузі Комарно, Словаччина.

Ключові слова: інноваційна діяльність; малий та середній бізнес; округ Комарно; опитування.

Рис. 3. Табл. 1. Літ. 13.

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ИННОВАЦИОННАЯ ДЕЯТЕЛЬНОСТЬ МАЛОГО И СРЕДНЕГО БИЗНЕСА В ОКРУГЕ КОМАРНО (СЛОВАКИЯ)

В статье исследована взаимосвязь между инновационной деятельностью микро-, малого и среднего бизнеса и показателями его успешности, в частности, в сфере экспорта. Авторские гипотезы подтверждены в результате анализа ответов при опросе представителей бизнеса в округе Комарно, Словакия.

Ключевые слова: инновационная деятельность; малый и средний бизнес; округ Комарно; опрос.

Introduction. Creating and maintaining quality business environment is a key issue for developed economies. Small and medium-sized enterprises play an irreplaceable role in developed economies, especially in workplaces creation and maintaining regional development. Quality improvement in business environment reflects not only enhancement of business activity but also contributes to increasing standards of living and improved performance of economy overall.

The primary aim of this paper is to explore the innovation activity of small and medium-sized businesses in Komarno district. We used the primary data collection with this purpose.

Continuous monitoring of business environment is necessary to maintain long-term economic growth, which is the basic pillar of business development and competitiveness in Slovakia at international scale.

Literature review. Company, as the basic unit of economy is surrounded by external environment – social, economic and technical environment a company can have

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impact on. Business environment has influence on business at certain stages, e.g. in determining business objectives and while achieving them. The impact of the environment on business is far more stronger, than the influence of business on changing environment (Synek and Kislingerova, 2010).

There are numerous definitions of business environment by different authors. A. Malach et al. (2005) defines business environment as an impact of those factors, which affect business activity of a specific company. This influence can either simplify business activity (e.g., through tax advantage, clear legal system etc.), or can make business activity more difficult (e.g., due to corruption, bureaucracy etc.).

D. Needle (2004) defines business environment as a collection of factors outside an organization that affect its operation and mutually influence one another. He claims that all businesses are limited by the environment in which they operate as well as influence the environment they operate in. Considering the mutual influence of these factors Needle identified 3 levels of interaction:

1. Local level – cooperation of businesses with local authorities; marketing and personnel strategy is influenced by businesses operating at the same market; business is influenced by regional policy.

2. National level – business is influenced by national environment, e.g. inflation, employment policy etc.

3. International level – business is influenced by international policy, e.g. international pricing, supranational bodies in the EU etc.

He also emphasizes, that the ability of business to influence the environment is decreasing as business is moving from local environment towards the international one. The ability of business to influence the environment depends on the size of business.

Different indices can be used to measure business environment. These indices can be:

- unique – special survey is used to collect the necessary data about a chosen objective;
- composite – index is derived on the basis of already existing research and indicators.

Other perspectives provide the following division of business environment indices:

- objective – calculated on the basis of objective measurable data;
- subjective – they are based on subjective opinion of respondents.

The Global Competitiveness Index (GCI) is the key element of The Global Competitiveness Report, published by the World Economic Forum, whose local partner agency is the Business Alliance of Slovakia (BAS). The GCI index focuses on the evaluation of countries' ability to achieve sustainable growth in the medium term and ensure high level of prosperity for citizens. "The GCI index ensures the openness of criteria, which correlate and never contradict. The evaluation provides a weighted average of different indicators, where each indicator reflects a single aspect of the complex reality, known as competitiveness. All the indicators are grouped in 12 different pillars – 12 pillars of competitiveness. The listed criteria are in correlation and directly influence one another" (Hrecko, 2013: 50). The Global Competitiveness Report (2014–2015) ranked Slovakia the 75st which is said to be improvement com-

pared to 2013. Performance Director of Business Alliance of Slovakia, Robert Kicina welcomed the positive result. After 7 years of worsening position as well as reaching the worst ranking in 2013, the 2014–2015 report shows the strengthened position of the country, increasing macroeconomic stability, decreasing deficit and better government efforts against tax evasion. Kicina emphasized, that despite the fact Slovakia has improved its position, the country has not reached a position among the most competitive countries, where most of the EU countries are ranked, except Greece and Croatia (The Global Competitiveness Report 2014–2015, 2014).

While conducting research on regional competitiveness, relative position of an evaluated region is usually emphasized in relation to other regions.

P. Korec et al. (2011) based on the statement of B. Gardiner et al. (2004) describe regional competitiveness as competitiveness at micro- and macrolevels, while in most cases microlevel of firms and macrolevel of states is distinguished. Competitiveness is neither an aggregate of firm competitiveness, nor a derivative of national competitiveness (Korec et al., 2011).

Competitiveness of regions can be defined with indicators determining the competitive ability of a researched region and its ability to compete with other regions as well as the results based on regional competitiveness. Describing regional competitiveness it is essential to combine indicators and results of competitiveness. Summarizing approach was also used by I. Lengyel (2004), who combines indicators and results of competitiveness in the pyramid of competitiveness, describing assumptions and outputs of a region. Success determinants are the base of the pyramid – social and economic structure, regional accessibility, skills of workforce, regional identity etc. The basic categories are in the middle of the pyramid, these categories measure competitiveness and serve as the basis to increase performance of a region, to enhance quality of life and living standards in it.

It is very difficult to determine, which factor and what measure can influence regions' competitiveness, because most of the factors are indicators as well as results that influence one another. S. Rucinska (2008) provides the results of the researchers from Cambridge Econometrics and professor R. Martin, who identified 3 types of regions by competitiveness: regions with supply side, regions with increasing income, technological regions.

When defining determining the factors of competitiveness, E.M. Porter (2004) identified 3 types of competitive advantages, which categorize economies as a following: economies oriented on expenses resp. production factors, economies oriented on investment, economies oriented on innovation. Regions with orientation on production factors compete with low expenses and low production factors. Regions with investment focus are improving productivity and increase efficiency. Regions focusing on investment will compete with innovative technologies, providing innovative products and services.

The evaluation of business environment in Slovakia happens is usually demonstrated through Regional Business Environment Index (RBEI) used by the Business Alliance of Slovakia (BAS). The RBEI index is used to compare effectively different districts of Slovakia. The index is made up of 106 independent indicators evaluating different aspects of business environment. RBEI indices are measured on the scale 1–6, where 1 indicates the worst condition for businesses and 6 stands for the best

condition. The mentioned 106 indicators are grouped into 8 pillars forming 4 subindices, each subindex consists of two pillars.

Table 1. The RBEI index for different districts of Nitra Region in 2010, competitive regions 21 (PAS, 2010)

	SR average	KN	NZ	LV	TO	NR	ZM	SA	Nitra Region average
Subindex I: Economic activity	3.51	3.23	3.22	3.26	3.26	3.79	3.38	3.6	3.39
1st pillar: Economic environment	3.48	3.34	3.38	3.35	3.4	3.69	3.3	3.56	3.43
2nd pillar: Economic output	3.53	3.13	3.09	3.18	3.15	3.87	3.44	3.63	3.36
Subindex II: Public administration and legislation	3.32	3.23	3.33	3.36	3.36	3.01	3.4	3.46	3.31
1st pillar: Legislation	4.19	4.19	4.41	4.19	4.28	3.78	4.6	4.34	4.26
2nd pillar: Public administration	2.63	2.47	2.47	2.7	2.64	2.4	2.89	2.77	2.62
Subindex III: Technologies and infrastructure	3.3	2.98	3.11	3.01	3.08	3.25	3.1	3.31	3.12
1st pillar: Infrastructure	3.26	2.83	2.93	2.86	2.85	3.07	2.77	2.85	2.88
2nd pillar: Technologies	3.34	3.16	3.31	3.17	3.33	3.45	3.47	3.82	3.39
Subindex IV: Education and human resources	3.43	3.12	3.29	3.24	3.43	3.74	3.47	3.63	3.42
1st pillar: Human resources	3.68	3.21	3.42	3.32	3.65	4.04	3.68	3.94	3.61
2nd pillar: Education	3.16	2.95	3.07	3.11	3.01	3.2	3.1	3.07	3.07
RBEI	3.43	3.14	3.23	3.21	3.29	3.54	3.39	3.53	3.33

Nowadays a business can remain competitive at saturated markets, if it introduces unique and innovative ideas for consumers. Fast reaction to changing market conditions is vital, because products lifecycle has shortened as compared to previous years, and also consumers change products more frequently. To remain successful, business should spend more and more on innovation (Marosi, 2014). Competitiveness can be maintained, if one is able to react immediately to market changes. Companies have to choose innovation process, which does not exceed their abilities. In case of inappropriate decision, company will lack development in the future. It is important to emphasize that those companies with lack of innovation will not necessarily decline, but it is certain, that innovation has impact on competitiveness and influences the future of business. Nowadays open innovation is becoming fashionable, bringing advantages as well as disadvantages to business. Open innovation refers to the use of both inflows and outflows of knowledge, firms can and should use external as well as internal ideas as they look to advance their technology. Implementing a model of open innovation is associated with certain disadvantages: revealing information not intended for sharing, implementing ideas, which do not always fit company culture and clash of different viewpoints. We can benefit from open innovation when ideas from different company culture make a product or a service more successful (Frankova, 2011).

Innovation activity of small and medium enterprises (SMEs) in Slovakia is behind other EU members. A survey conducted in 2010 shows that innovative activities and policies of Slovak businesses is far below the EU average. The survey also shows that innovation activity of businesses in 2010 increased by 0.63% as compared to 2009. Considering the results of this research we can stated that even the smallest increase is

recognised as innovation activity for small and medium businesses once they agree to spend small amount of money on research and development (Sopkova, 2012).

Problem statement and research objective. The primary aim of the study is to explore the innovation activity of small and medium sized businesses in Komarno district. We used the primary data collection. To achieve the primary objective we need to research the theoretical background first by studying domestic and foreign literature. We formulated the following assumptions before conducting our own research:

Assumption 1: Innovation activity is characteristic for small businesses in Komarno district.

Assumption 2: Export-oriented companies are innovative.

Assumption 3: Innovative activity of microbusinesses is hampered by the tax system, rules and regulations.

Conducting our research and collecting primary data we used a questionnaire. The sample is made up of 100 small and medium sized businesses, located in Komarno district. We used a random selection of companies by sending our questionnaire via mail. The questionnaire contains 36 questions examining businesses from different perspectives. Following the general characteristics (main business activity, year of foundation, legal form, number of employees) we created question groups concerning the following: macroenvironment of the company, competitiveness, strategic management and innovation ability.

We applied mainly closed questions as well as questionnaire items under Likert scale. The questionnaire research was conducted in February-March 2015. The submitted questionnaires were properly coded before answers were filled into a chart with coded questions. We used Microsoft Excel for data processing.

We created auxiliary tables and graphs to make the interpretation of the results more transparent.

Key result. From 100 companies surveyed, 34% are microbusinesses with max of 9 employees. The rest 66% of the companies questioned are either medium, or small businesses (48% small, 18% middle-sized). The employee number of companies reflects that the majority of companies are micro and small businesses. Concerning the legal form: 41% operate on the basis of trade license, 37% are limited liability companies. We can say that our sample reflects the established trend, because regarding the foundation and management of businesses, the abovementioned legal forms are the most common ones. Following the basic characteristics (legal form, the number of employees) we will analyze only those questions connected with innovation and the assumptions stated above.

In assumption 1 we stated that small and medium sized businesses in Komarno district can be characterized with innovation activity. To confirm or discard our assumption we used two principles to examine businesses. We established the categories of micro- small and medium-sized businesses basing on the number of employees. As a next step, we examined the level of innovation by categories created. 1% of businesses said that out any innovation activity has not carried since the establishment of business (for microbusiness, introduced in 2014 only this data is not surprising). The rest of the companies declared innovation activity during their operation. Innovation activity can focus on the development of machine park, employee training or accessing intangible assets, premises as well as innovation on them.

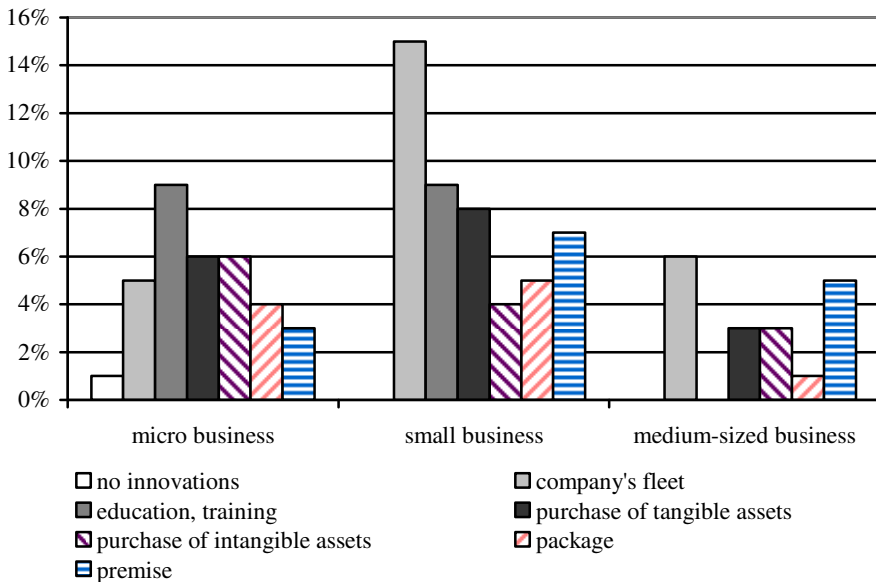


Figure 1. Categorization of companies by the number of employees and innovation activities, own graph based on the questionnaire conducted

Figure 1 clearly shows innovation activities of the companies considering the size. Microbusinesses seem to be more innovative in training and education of their employees; 9% of the businesses involved in our research and popular among 26.4% of microbusinesses. Most of middle-sized businesses have innovated since their establishment. The most frequent innovation activity is fleet innovation. 31.25% of small businesses have realized this type of innovation (15% of the companies in our research). Innovation in education and trainings were second. Middle-sized businesses also prefer fleet innovation, where 33.34% of the responding companies felt it as the most important type of innovation (characteristic for 6% of the businesses involved in our research). It is important to mention that all middle-sized businesses in our research have carried out innovations since their establishment. Considering the number of employees and innovation activity of businesses, we can declare that microbusinesses invest into human resources and innovation of this type. Motivation factor is catching up with competitors. They create a strong base for their activity to achieve growth. Increasing the size of a company will shift emphasis on fleet investment, where motivating factor is proper technological background. Providing high-quality products and services requires advanced machinery and equipment. This type of innovation is represented by small and medium sized businesses in our research. By the number of employees, 48% of businesses in our research are small or medium-sized businesses, all declaring the presence of innovation activity. Our first assumption is confirmed.

Our second assumption focuses on export activity of businesses. We grouped businesses according their export activity, as we were interested in differences in their innovation activity. 62% of businesses declared to have export activity. The result is not surprising, because Komarno district is close to borders and intense export

activity takes place here since cultural and language barriers are no problem for managers.

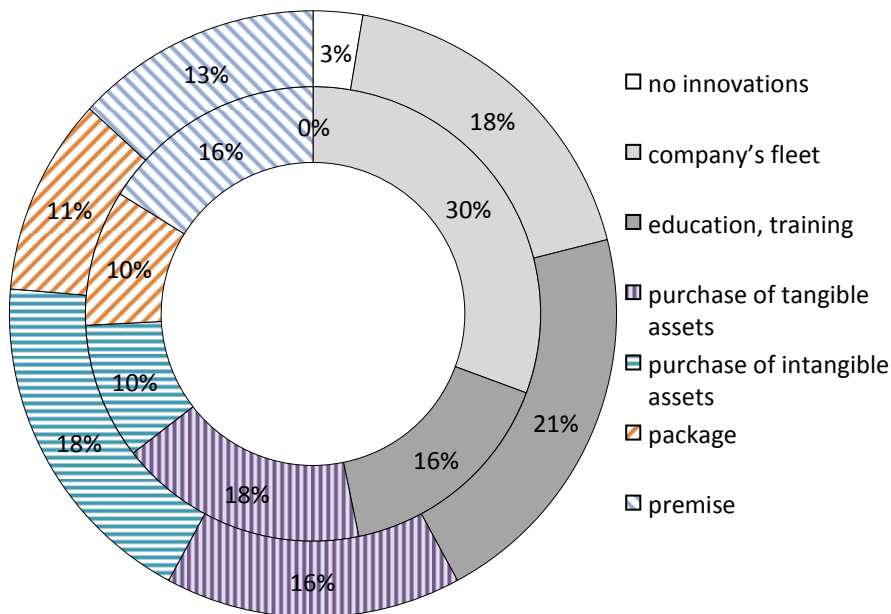


Figure 2. **Categorization of companies by export and innovation activity,** own graph based on the questionnaire conducted

Our second assumption is that export-oriented companies are innovative. Figure 2 shows that export-oriented companies (inner ring of the chart) have all innovated since their establishment. Innovation activity in export-oriented companies is mainly focused on equipment innovation. 30.65% of these companies invested in machinery and equipment. Our second assumption is also correct, export-oriented companies are proved to be innovative. To maintain market position and remain competitive constantly developing business environment, innovation is important for export-oriented companies. Needs and preferences of foreign customers are the catalyst of innovative activity.

During our research we also checked the factors supporting and hampering innovations. The companies answered questions about the predefined factors. We used the Likert scale, value 1 expresses hampered innovation activity, 5 stands for factors motivating innovation. Our last assumption on innovation confirms that innovation in microbusinesses is hampered by tax system, rules and regulations. To confirm our assumption we categorized the companies by the number of employees. In different categories we examined and presented the values with the help of weighted arithmetic mean.

Our research can confirm that tax system, rules and regulations as well as low innovation ability can hamper most innovation activity in microbusiness (2.74). The effective team proved to be the catalyst of innovation in these businesses (3.14). Low innovation ability (2.98) is the main obstacle of innovation in small businesses, while effective team (3.54) similarly to microbusiness is the catalyst of innovation.

Medium-sized businesses also blame the tax system, rules and regulations (2.78) for low innovation activity, while research and development, cooperation of production and marketing (3.44) contribute to increased innovation. Neither we can confirm or discard our third assumption, because the factor hampering innovation activity of microbusiness is not only the tax system, rules and regulations, but also low innovation ability of these businesses.

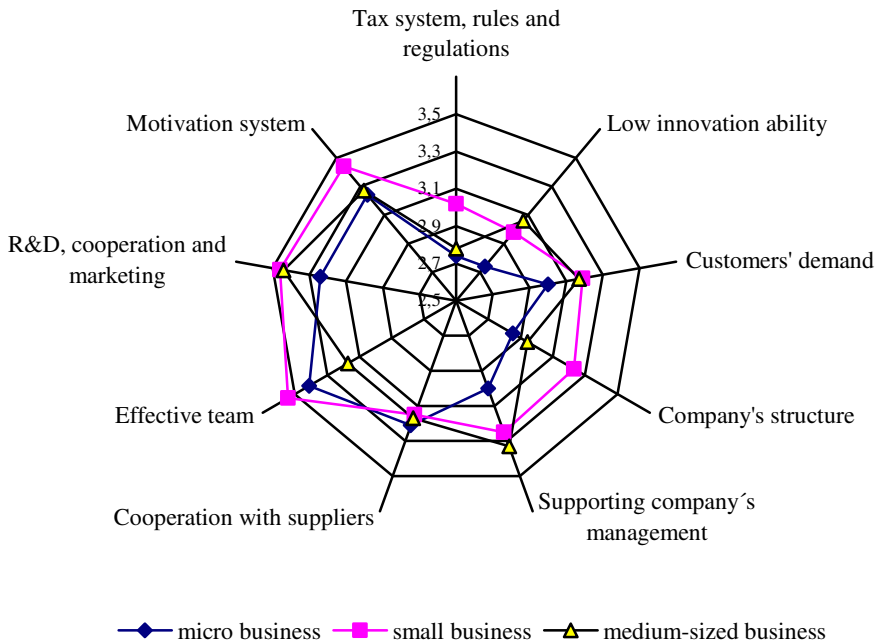


Figure 3. Factors influencing innovative activity considering companies size, own graph based on the questionnaire conducted

Conclusion. Innovation and development are important for companies in competitive business environment. Innovation is the key to satisfy consumer demand and remain competitive at the market. In our research, we randomly chose and asked 100 companies in Komarno district about their innovation activity and set 3 assumptions about them. As 48% of the companies in our research were small companies, they have declared the presence of innovation activity since their establishment, so our first assumption proved to be correct. Our second assumption was that export-oriented businesses are innovative. Analysis of the data shows the correctness of the second assumption, export-oriented businesses indeed are innovative. It can be explained by the fact that constant development and innovation are essential for competitiveness. We also explored the factors hampering and improving competitiveness to confirm our third assumption. Our third assumption stated that tax system, rules and regulations hamper innovation activity of microbusinesses. Neither we can accept, nor discard this assumption. Our research results show that tax system, rules and regulations can hamper innovation, but similarly the company's low innovation ability can be an obstacle to innovation as well.

Small and medium-sized businesses in Komarno district put emphasis on innovation activity regardless whether they fall into micro or small business category. The results gained can lead to further research to get a more accurate insight into the innovation potential of businesses.

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References:

- Frankova, E.* (2011). Kreativita a inovace v organizaci. Vydavatel'stvo Grada. Praha. 256 s.
- Hrecko, J.* (2013). Globalny index konkurencieschopnosti 2013–2014. In: Pro IN (Casopis pre stredny a vrcholovy manazment priemyselných podnikov). Rocnik 14, cislo 6/2013 (ss. 50–62) // www.academia.edu.
- Korec, P., Maganca, M., Sopkuliak, A.* (2011). Regionalna konkurencieschopnost' v kontexte globalizacie, novej ekonomickej geografie a inovacnych procesov. *Geographia Cassoviensis*, 5(2): 57–66.
- Lengyel, I.* (2004). The Pyramid Model: Enchanging Regional Competitiveness in Hungary. *Acta Oeconomica* (Budapest: Akademia Kiado), 54(3): 323–342.
- Malach, A. et al.* (2005). Jak podnikat po vstupu do EU. Praha: Grada Publishing. 528 s.
- Marosi, I.* (2014). A csaladi vallalkozasok megujulasi lehetosegei szlovakiai fiatalok megitelese szerint. In: Nagy Imre Zoltan szerk: Vallalkozasfejlesztés a XXI szazadban: IV tanulmánykötet (oo. 157–175). Budapest: Obudai Egyetem Keleti Karoly Gazdasagi Kar.
- Needle, D.* (2004). Business in Context. London: Thomson learning.
- PAS (2010). Konkurencieschopne regiony 21 // regiony21.sk.
- Porter, E.M.* (2004). Bulding the Microeconomic Foundation of Prosperity: Findings from the Business Competitiveness Index // www.weforum.org.
- Rucinska, S.* (2008). Konkurencieschopnost' regionov s dφrazom na inovacie. Transfer inovacii (Kosice: Technicka univerzita v Kosiciach), 12: 181–185.
- Sopkova, G.* (2012). Konkurencieschopnost', jej teoreticke vymedzenia a postavenie SR v Global Competitiveness Report. In: Zbornik prispevkov z medzinarodnej vedeckej konferencie pre doktorandov a mladých vedeckých pracovníkov MERKUR 2012 (pp. 782–790). Vydavatel'stvo Ekonom, Bratislava.
- Synek, M., Kislingerova, E. et al.* (2010). Podnikova ekonomika. Praha: C.H. Beck. 498 s.
- World Economic Forum 2014. The Global Competitiveness Report 2014–2015. 565 p.

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