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**Marek Teplý**

## **CHALLENGES TO INTEGRATING REQUIREMENTS OF THE QUALITY MANAGEMENT SYSTEM INTO AN ORGANISATION'S STRATEGY**

### **KOMPLIKACIJE POČAS INTEGROVANIA SYSTÉMU MANAŽÉRSTVA KVALITY DO ORGANIZAČNEJ STRATÉGIE**

***Abstract:** The article explores challenges in integrating the requirements of ISO 9001:2015 within organisations and their related existing systems. The author has gathered information from twenty-two organisations, where data have been collected through the external audit process. The results have been discussed to see if the organisations with fully integrated systems have been more successful in achieving their goals. The paper elaborates on the most critical areas such as objectives and targets, Key Performance Indicators, stakeholders and risks. Based on the research, the author has concluded that only one out of the twenty-two organisations has a fully integrated system in place. Moreover, the research has confirmed the hypothesis that organisations with fully aligned systems tend to better achieve their established goals.*

***Keywords:** Audit, Business, Management, Objectives, Organisation, Strategy*

***Kľúčové slová:** Audit, Business, Management, Ciel', Organizácia, Stratégia*

***JEL:** L 10, L 15, L 21*

#### **Introduction**

The image of quality has been shaped by both supply and demand sides through industrial revolutions, globalisation and information technology for over decades. The phenomenon of seeking common quality denominators has become relevant only since the customer “centrifcation” (customer is the driving force of organisations’ activities).

The shift of the influences and power from suppliers to clients have stipulated new trends and re-defined customer service and its value in the market (Slater & Narver, 1994). Hence, the new quality paradigm has become a multi-dimensional model consisting of diverse factors which embody the overall quality concept.

Subsequently, the archetype of the organisation-client relationship has been refined to allow for collaboration and focus on synergies. This supply-demand cooperation process is being further enhanced by new emerging markets - catalysts that facilitate the collaboration through a variety of products and services such as customer relationship management (CRM) database, business intelligence (BI) tools, data analytics, social platforms or frameworks that advance organisations' capabilities to improve customer relationship and satisfaction.

For those organisations looking to develop value-adding products or services and exceed customers' expectation, the international quality standard ISO 9001:2015 has become a globally

sought framework across industries. Therefore, achieving certification to ISO 9001:2015 reflects the organisations' ongoing commitment to their customers and superior output. However, from the organisations' perspective, achieving certification to ISO 9001:2015 could be a confronting experience as developing a new system could collide with well-established habits, culture and operations.

The case study looks to explore the challenges of small to medium size organisations in the Australian and New Zealand markets related to the integration of Quality Management System into the existing organisational strategy. The case study examined 22 organisations across industries that have achieved certification to ISO 9001:2015 and analysed the output of their external audits. The results have then been analysed and compared with organisations overall success in achieving their objectives. The goal of the paper is to investigate whether organisations with fully integrated systems are more effective in achieving their targets compared to those businesses where the quality system has not been fully integrated. The paper builds on academic literature, case studies and utilises quantitative and qualitative data.

### **Quality Management System Overview**

Achieving certification to ISO 9001 illustrates a significant milestone and evidence that organisations not only provide quality service or produce a quality product, but continuously meet markets' expectation in a turbulent environment (Ilkay et Aslan, 2012). The standard defined quality of product, process or service through intrinsic principles that manifest critical quality components. By adopting those requirements, organisations anticipate attaining both financial and non-financial benefits.

For instance, Novokment and Rogosic (2017) argued that certified and mature Quality Management Systems provide organisations with long term financial effects (earnings before interest and tax and return on asset) as opposed to organisations with the less mature developed systems. The selected organisations in this case study claimed that achieving certification resulted in immediate impact in the areas such as organisational knowledge, risk management and planning activities.

Developing or improving management systems is a complex process that involves the entire organisations and their resources. It is expected, that the systems of organisations committed to the certification process would keep evolving to reflect organisations current operations. However, this is not to say that increasing complexity of the businesses should result in more complex management systems.

On the contrary, the systems should stay intuitive and simple to support relevant activities in organisations. Therefore, the author looks not only to explore the challenges that organisations face when adopting the quality management system but will attempt to answer the following question: “Would organisations with fully integrated systems be more effective in achieving their goals compared to those organisations where systems misalignment has been exposed?”

### **Integration of the Standard Requirements with Existing Arrangements**

This chapter will discuss organisation strategy and its interrelationship with the requirements of ISO 9001:2015. The objectives of this chapter are to develop an awareness of strategy principles and identify the critical areas of activities that should be considered when adopting standard requirements to ensure strategy and operations alignment.

Wheelen and Hunger (2000) defined a strategy as a plan for achieving the established objectives of a business. Further, Kaplan and Norton (2006) asserted that successful business strategy requires developing layers at three levels; corporate, business and functional with defined a

connection throughout these levels. A similar perspective was provided by Sohrab et al. (2013) who branched the strategy into business and operational level where the role of business strategy is to achieve a competitive advantage in the market whereas operation strategy is considered as core competency generating profit activities (Schroeder et al., 2011).

ISO 9001:2015 exhibits a similar hierarchy that identifies the organisational and operational levels. However, the standard does not clearly classify such composition; the categories could be apparent when analysing the requirements in detail. Although the majority of the requirements of the standard are focused on the operational level (International Organisation for Standardisation, 2015), to ensure the system functionality, both the organisational and operational levels must be aligned.

### **Objectives and Key Performance Indicators**

Based on the analysis of the selected twenty-two organisations, the audit reports have highlighted that sixteen companies (approximately 75 per cent) failed to fully align newly developed quality elements with existing business strategy which includes mission, vision, objectives and targets (goals) and key performance indicators (KPI). This concern proposes a theory that newly developed strategy elements have not been integrated with either existing arrangements or have not been accounted for being a component of a larger system.

Firstly, the misalignment with organisation's mission and vision might reveal the fact that organisations do not consider their direction when developing a strategy as well as those fundamental artefacts that have not been communicated and effectively implemented. Ignoring the organisation's mission and vision, in reality, could lead to a diversion or at least an operational distraction from the established direction. For instance, organisation pursuing tenders that are not aligned with their capabilities or does not fit into the service or product portfolio. A genuine mission and vision not only allow for visualisation of the company's future (Ozde, 2011) but provide a framework for all company's actions.

Secondly, the reports identified that the quality objectives do not provide support to the overall strategy and that lower-level objectives do not contribute to the overall goals. The evidence suggests that the quality objectives have been established aside without the involvement of other relevant stakeholders from different areas such as marketing, human resources and finance.

Scholars claim that aligning objectives and strategy is necessary for improving organisational effectiveness (Kaplan and Norton, 1992; Joshi, Kathuria, & Porth, 2003; Walker, 2013) and should occur throughout the business, process, communication, structure, leadership and management. The absence of effective alignment could result in strategy disruption in different business functions. For instance, a misalignment of human resource strategy when developing a training plan could result in inadequate organisation competence.

Likewise, an identical issue has been identified with organisations' individual KPIs that do not provide support and do not directly contribute to objectives and targets. In other words, the organisations' emphasis on targeted areas does not contribute to the overall results due to lack of interrelationships throughout the strategy layers. According to the research fellow at the MIT Sloan, Michael Schrage, KPIs are the most important data that the organisation shall monitor (anonymous, 2018).

Based on the global study released by MIT Sloan in June 2018, 70 per cent leaders out of 3200 companies agreed that functional KPIs are critical to meet and improve customer satisfaction. Moreover, aligning KPIs through the business allows for more effective changes in an organisation related to operations, culture and strategy. In reality, organisations' focus on

misaligned KPIs with company's goals could result in pursuing different priorities or distracting business from its core functions.

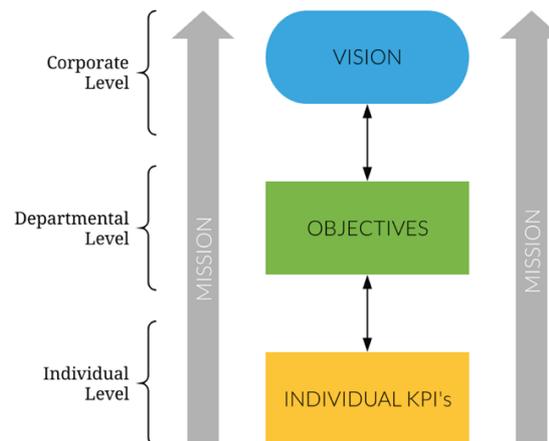


Figure1: (Teply, 2019) Illustration of strategy alignment among elements in corporate, departmental and individual levels.

### Stakeholder analysis and the role in the organisational strategy

Another specific requirement of the standard refers to identifying internal and external stakeholders and their needs and expectations. This was yet another area of concern pointed out in the case study, where approximately 90 per cent of the selected companies did not fully integrate their identified parties into operations. The evidence suggests that organisations often do not utilise the full potential of stakeholder's analysis. It seems that the outcome is another passive record filed in the system which could be a valuable input for organisations' strategies.

The importance and benefits of stakeholder strategy were emphasised by PWC, that highlighted the fact that nine out of ten leading organisations understand the importance of the stakeholder's alignment (Anonymous, 2016). For instance, forming effective stakeholder's strategy during a complex transformation or developing an engagement plan is fundamental for achieving the company's objectives. Underestimating stakeholder's analysis could result in unidentified opportunities or ignoring critical risks.

### Organisational risks

The last inefficiency indicated that 80 per cent of studied companies failed to integrate operational risks with their existing arrangements. This also relates to ineffective risk management.

- Firstly, the reports stressed that organisations have not considered all business functions and activities when identifying risks.
- Secondly, identified risks have been poorly controlled and have not been implemented from bottom-up.

The reports often refer to a lack of identifying risks especially in internal projects for internal clients where organisations did not apply a risk-based approach.

For instance, Shochat and Fallen (2012) emphasised that strong operational risk management shall consider organisational structure, Projects in-flight or planned, Internal processes and policies, External compliance requirements, Reporting tools and processes, Communication standards and IT infrastructure to develop robust and reliable risk management. The authors

claimed that identifying risk may require skills that are not present in the company and that the business needs to engage an external party. For instance, risks identified in complex projects often consider core activities; however, risks related to project delivery itself are often overlooked. Those risk could include, infrastructure, resources, skills, engagement plan, interface management, and so forth.

**Achieving objectives**

Formal management review meetings have been completed across twenty-two companies. The objective of the Management review meetings was to analyse and evaluate the system alignments based on the results of external audits and measure the impact on achieving objectives and targets.

In order to compare the results, measurable objectives and targets have been established across three areas; finance, operations and product and service quality (errors, non-conformances). For the simplification, the individual percentages have been averaged to indicate the overall achievement in the first column (see Fig. 2). The second column indicates whether the systems have been fully integrated based on the results of external audits.

Organisation	Overall Objectives Achieved [%]	Systems fully aligned/integrated?
Organisation 1	78	NO
Organisation 2	68	NO
Organisation 3	79	NO
Organisation 4	45	NO
Organisation 5	80	NO
Organisation 6	82	NO
Organisation 7	63	NO
Organisation 8	94	YES
Organisation 9	51	NO
Organisation 10	59	NO
Organisation 11	65	NO
Organisation 12	81	NO
Organisation 13	77	NO
Organisation 14	76	NO
Organisation 15	59	NO
Organisation 16	68	NO
Organisation 17	50	NO
Organisation 18	82	NO
Organisation 19	73	NO
Organisation 20	61	NO
Organisation 21	55	NO
Organisation 22	60	NO
<b>Average</b>	<b>68</b>	<b>N/A</b>

<i>Maximum</i>	<i>94</i>	<i>N/A</i>
<i>Minimum</i>	<i>45</i>	<i>N/A</i>

Figure2: (Teply, 2019) Organisations’ results of achieving overall objectives and targets in percentages

**Discussion**

Overall, the case study has revealed that seventy-five per cent of studied companies did not align their quality objectives and targets with their existing goals, KPI's and mission and vision. Ninety per cent of the organisations did not integrate stakeholders in their arrangement, and eighty per cent of the companies did not align their organisational and operational risks with business functions. Only one out of the twenty-two businesses has fully integrated its systems.

The study also confirmed that the only organisation with integrated systems has achieved ninety-four per cent of established goals which is approximately twenty-eight per cent more than the overall average. This includes financial and non-financial objectives and aspirational goals. The limitations of the study shall consider the following.

- Firstly, the higher achievement could reflect a lower risk appetite which could result in developing more realistic objectives and targets.
- Secondly, different industries and sizes of business could result in different maturity, skills, commerce knowledge and resources available and therefore achieving better results.
- Thirdly, the sample size could limit the research and interfering the result onto the population could be misleading. Therefore, the author proposes that another study could include a more significant sample with specific groups that would represent different industries.

**Conclusion**

The literature indicates that achieving ISO 9001:2015 benefits organisations from different perspectives. For instance, improving clarity on processes and procedures, increasing customer satisfaction, enhancing control of business activities, developing awareness of the external environment and more importantly adopting a systematic approach to perform business operations.

The case study demonstrated that organisation strategy could be more effective if all elements are mutually supportive and aligned towards a single direction to deliver impact. In this example, the organisation with fully integrated systems with existing arrangements has achieved approximately 15 per cent more objectives than those with misaligned strategy components. The case study also highlighted the importance of interconnections and the involvement of all stakeholders to enhance the process of integration through the business.

Moreover, the relationship among individual elements should be flexible enough to allow for amendments whose impact should consider all the relevant consequences. Although achieving certification is an important milestone, the organisations' arrangements need to be logical and complement the system as a whole.

**References**

[1] ANONYMOUS 2015. Many Financial Institutions Yet to Align Operational Risk Management with Strategy, KPMG And RMA Survey: Less than 20 Percent of Institutions Have Achieved Full ORM and Strategy Alignment. PR Newswire, Dec 09.

- [2] ANONYMOUS, 2016. Increase Internal Audit's Value by Focusing on Leadership, Says PwC: Firm outlines five characteristics of very effective internal audit leaders that help achieve stakeholder alignment and better performance. PR Newswire, Mar 08.
- [3] ANONYMOUS, 2018. New MIT Sloan Management Review study. PR Newswire, Jun 26.
- [4] BOUNABRI, N., AHMED, A.E., SAAD, E., ZERROUK, L. and IBNLFASSI, A., 2018. Barriers to ISO 9001 implementation in Moroccan organisations: Empirical study. *Journal of Industrial Engineering and Management*, 11(1), pp. 34-56.
- [5] DEMARCO, J., EDWARD, JR., BRAY, P. and STONE, D.L., 2019. KPMG–RMA's 2018 Survey on Operational Risk Excellence. *The RMA Journal*, 101(5), pp. 60-66.
- [6] ILKAY, M.S. and ASLAN, E., 2012. The effect of the ISO 9001 quality management system on the performance of SMEs. *The International Journal of Quality & Reliability Management*, 29(7), pp. 753-778.
- [7] JOSHI, M. P., KATHURIA, R., & PORTH, S. J., 2003. Alignment of strategic priorities and performance: An integration of operations and strategic management perspectives. *Journal of Operations Management*, 21, 353-369.
- [8] KAPLAN, R. S., and NORTON, P. D., 1992. The balanced scorecard: Measures that drive performance. *Harvard Business Review*, 70, 71-79.
- [9] NOVOKMET, A.K. and ROGOŠIĆ, A., 2017. Long-Term Financial Effects of Quality Management System Maturity Based on Iso 9001 Principles. *Amfiteatru Economic*, 19(11), pp. 1003-1016.
- [10] OHMAE, K. (1982), *The Mind of Strategist: The Art of Japanese Business*, McGraw-Hill, New York, NY.
- [11] SCHROEDER, R.G., GOLDSTEIN, S.M. and RUNGTUSANATHAM, M.J. 2011. *Operation Management*, McGraw-Hill, New York, NY.
- [12] SHOCHAT, J. and FALLEN, K., 2012. MANAGING OPERATIONAL RISK. *Energy Risk*, 9(6), pp. 22-24,26.
- [13] SLATER, S.F., and NARVER, J.C., 1994. Market orientation, customer value, and superior performance. *Journal of Marketing*, 59(July), 63-74.
- [14] SOHRAB, K.S., SALIMIAN, H., NAZEMI, J. and ALBORZI, M., 2013. Operations strategy and business strategy alignment model (case of Iranian industries). *International Journal of Operations & Production Management*, 33(9), pp. 1108-1130.
- [15] TEPLY, M., 2019. Challenges to integrating requirements of the QMS into an organisation's strategy. Unpublished article. LIGS University.
- [16] WALKER, R. M., 2013. Strategic management and performance in public organisations: Findings from the miles and snow framework. *Public Administration Review*, 73, 675-685.
- [17] WHEELLEN, T. and HUNGER, D. 2000. *Strategic Management and Business Policy*, Addison-Wesley, New York, NY.

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**ANALYSIS OF SELECTED INDICATORS AND THEIR IMPACT ON THE DEVELOPMENT OF TOURISM WITHIN THE PROJECT „EUROPEAN CITY OF SPORTS KOŠICE“**

**ANALÝZA VYBRANÝCH UKAZOVATEĽOV A ICH VPLYV NA ROZVOJ CESTOVNÉHO RUCHU V RÁMCI PROJEKTU „EURÓPSKE MESTO ŠPORTU KOŠICE“**

***Abstract:** Tourism has reached high level of development. It has become a part of consumption and the lifestyle of the population, especially in the economically advanced countries. Tourism currently forms a comprehensive system that has an interdisciplinary character and affects the national economy of the country. It is very important for the whole society, because it creates a high added value not only for the countryside and its inhabitants, but it creates values also for visitors. The main aim of the paper is to point out at the importance of tourism activities creation or activities in general and their linking with tourism sphere. At the example of the European City of Sports project, it shows the meaning of implementation the project to the city of Košice and the results of its application and activities into the practice. The results of the survey show that implementation of the project brought positive reaction of the tourism participants and the number of performances in individual areas has increased. The importance in concrete details of activities is seen not only for the city as mentioned, but for the Košice region as well. The paper represents one part of the survey held based on this project.*

***Keywords:** Tourism development, European City of Sports, Košice region, sports centres, sport activities*

***Kľúčové slová:** Rozvoj cestovného ruchu, Európske mesto športu, Košický kraj, športové centrá, športové aktivity*

**JEL Classification:** L 83

### **Introduction**

Tourism development has a great importance and plays an important role in the development of the national economy; therefore, there is an effort of each country to help to develop this industry effectively [15]. Tourism, as a phenomenon of the third millennium, is attributed to many components that merely emphasize the broad nature. It affects not only the economic aspects but also the social aspects of social life in general. Tourism makes travelling possible, it enables to gain new experiences, to travel without barriers, to escape from everyday stereotypes and to independently realize and disseminate the knowledge [13]. As the interest in knowing foreign countries, recreation, recreation and sport belong to indispensable parts of

the world; tourism is an important attribute of economic development in Slovakia as well as in the Košice region [16]. Its current level of 2.5% of Slovakia's GDP indicates its low performance compared to the European Union. On the other hand, its strong primary together with secondary potential also speaks of the development assumptions that can be achieved.

Among many benefits of tourism development ideas belong undoubtedly the project and the title of Košice - European Capital of Culture 2016. It is not only an important impetus in the development not only of culture, but also of tourism. Sport has evolved since time immemorial. It becomes standard and necessary part of the day. However, the trend of today's life is trying to put sport in the forefront. It is important to show people that the sports bring positive aspects into daily routine. For some people, it is a normal part of life, for somebody's fun and for some people just hobby. However, sport is nowadays a rapidly growing aspect, and it becomes more and more attractive to people.

### **Characteristics of Košice region**

For tourism development and specific purposes, the territory of the country can be divided into smaller geographical units that may or may not be identical to administrative divisions in the country. Such a division can have several advantages as for instance: easier systematic management, better transparency of the organizational structure, possibility of information databases application and statistics monitoring, better definition of the region's functionality and the development of its concept of development and, last but not least, more rational public resources investing [9]. For Košice region, the division is as follows: Košice region consists of 4 historical and tourist regions. These include Abov, Gemer, Spiš and Dolný Zemplín. This territory is characterized by a diversity of nations, cultures and languages. Each nationality that lives here, whether these are Slovaks, Czechs, Hungarians, Jews, Germans, Ukrainians, Ruthenians, or Roma, has the opportunity to represent their customs, traditions and habits.

The territory spreading in the south-eastern part of the country is bordering to: the Borsod-Abov- Zemplín region (Hungary), in the east with the Trans Carpathian region (Ukraine), in the north with the Prešov region and in the west with the Banská Bystrica region [15]. The Košice Region with its area of 6 755 km<sup>2</sup> is the fourth largest. With the number of inhabitants in total 794 756 is the second most populous region of the Slovak Republic. Košice Region has a slightly higher density than the average of Slovakia. The most enormous are the lowlands, the valleys and the valleys, at least the mountains. The territory of the region consisting of the historical regions of Abov and the parts of the historical regions of Spiš (South), Gemer (Upper) and Zemplín (Lower) can be seen in map 1.

Picture 1. Map of Košice region tourism regions



Source: <https://kosice8.webnode.sk/>

### **Basic geographical concentrations in Košice region**

In the territory of the Košice Region, 4 large-scale protected areas are declared, namely the National Park Slovenský raj and the National park of Slovenský Kras and the protected areas of Latorica and Vihorlat. Among the natural uniqueness of European importance belong the Dobšinská Ice Cave and the Herliansky geysir. Economic and recreational importance have the water reservoirs of Zemplínska šírava, Bukovec, Ružín and Pálmanská Maša. Forests cover two fifths of the surface of the territory, in the most wooded district of Slovakia - Gelnica up to three quarters. They are mainly located in the mountain and foothills of the county in the north and southwestern part of the county. In the south-eastern part of the territory there are floodplain forests, the eastern and southern part is lowland-hilly in nature.

The highest point of the region is 1 476 meters above sea level, the high Stolica in the Slovenské Rudohorie, the lowest one is situated is the place where the river Bodrog flows from the Slovak Republic near the village Klin nad Bodrogom, 94 metres above sea level. The watercourses belong to the lowland, highland and high-mountain rivers. The largest river is Bodrog, which, along with the rivers, drains the easternmost part of the region. Hornádska and Košice basin drain the Hornád River with tributaries, the western part of the Slaná River and the south-eastern part of the territory flows through the Tisa river. Water reservoirs are important for water and recreational use. More significant geothermal springs can be found in the Košice basin (Košice-surrounding district) and in the foothills of Vihorlat (Michalovce district). Kosice Basin is one of the most perspective areas for geothermal energy use. At a depth of 3,000 m, water with a temperature of 150 degrees Centigrade is assumed [14].

From tourism development point of view, 26 municipalities out of the 440 municipalities in the Košice region are associated in regional tourism organizations called "destination management organizations". Mentioned organizations cover the territory of the Košice region, the Dolný Zemplín region, the territory of Slovenský raj and the territory of Spiš region [2]. Košice as a city is the metropolis of Eastern Slovakia. The second largest city of the Slovak Republic, is the largest monument reservation of its kind in Slovakia. The popular place of the Košice inhabitants, whether visitors of the city have become relaxation zones in the park near Immaculate and in the park at the "singing" fountain. Bells and singing fountains are unique

attractions of the city. Fountain with the ability to react synchronously to own music, live music and the bell is another city pride [8].

Košice also has a rich cultural, social and sporting life. The best known are water skiing events or city celebrations in Košice, which take place in May each year. The rich cultural and social life and sports life or the rich hospitality of the inhabitants meet with positive reactions of the tourists [6].

Košice as one of the few places is characterized by a number of archaeological sites, proving the settlement of this territory. These include: Nižná Myšľa, Košice - Barca, Seňa, Milhost', Trstené pri Hornáde, Čaña, Košice - Poľov, Košice - Myslava, Kechnec, Košťany, Valaliky, Šebastovce, Šaca, Haniska, Rozhanovce, Čečejevce, Zádiel etc. The most abundant and the richest historical finds from Košice and the surrounding area come from the Bronze Age. They were gradually abandoned by the people of Koschtian, Ottoman and Pilin culture. The Koschtian one was born in the region of Kechnec - Košice. Gradual building of settlements in this area, (usually on terraces and elevations) was also affected by deposits of raw materials such as copper, gold, silver and iron [3].

### **Košice - EUROPEAN CITY OF SPORTS 2016**

The European Capital of Sports is the title that marks one of the European cities each year. Up to the example of the European Capital of Culture, ACES (European Capital of Sport Association) this title has been awarded since 2001. Every year, one European Capital of Sports (a city with more than 499 999 inhabitants) is selected, followed by several European cities of sports (with 25 000 to 499 999 inhabitants) as well as several European small-scale sports towns (up to 25 000 inhabitants). From 2013 onwards, the European best sports facility is also included into this idea [12].

In 2016, as the European City of Sports was chosen Košice as the first city in Slovakia since the beginning of these titles. A year later, Banská Bystrica was chosen by this title. In 2018 it was followed by the town of Nitra.

Picture 2. Logo of Košice- European City of Sports 2016



Source: <http://www.emskosice.sk/o-projekte>

## **Project ECS fundamentals**

The distinction of the categories of "European City of Sports" (hereinafter only ECS) and "European Capital City of Sport" (hereinafter referred to as the ECCS) depends on the number of inhabitants. Košice was included in the European City of Sports, with a population of category up to 500 thousand. The European Capital City of Sports candidate must meet the condition of having over 500,000 inhabitants. The title of the European City of Sports in 2016 was won by Prague. While the ECCS is given only to one city for each year in, it is necessary to apply for the ECS title together with several cities across the Europe. Košice were awarded by the European City of Sports title on 4.6 2015. The statement was made directly by ACES President Gian Francesco Lupatelli [12].

Košice was forwarding this goal systematically since February 2014 after the visit of partner town Ostrava. Ostrava got the title in mentioned year and invited representatives of Košice as a partnering town to present sports activities at the international Conference of Sports. Preparation time meant a thorough analysis of all sporting events organized by sports organizations, clubs, including the involvement of private subjects and infrastructure used for all-round physical activities. In September 2014, Lukáš Vorel a project guarantor for selected Central European countries and member of the Evaluation Committee from the Czech Republic has visited Košice. Košice did several visits of selected sports facilities, participated in several sports competitions and non-competitive events, including mass events. During these visits, the city's genuine interest in engaging in the title fight was verified. At the press conference, during the Lukáš Vorela observation mission in Košice, the expression of support for the City of Košice ambition to apply for the ECS title in 2016 or 2017 was made.

## **Objective of European City of Sports project**

"Košice - The European City of Sports 2016 aimed to attract the largest number of people of all generations, but also its visitors, to sport and its presentation. By creation of interesting activities, the city wanted to address also the people who have not been doing sports yet or sported only sporadically. Handicapped people or seniors played also important role as well as socially disadvantaged people for who these project activities were free of charge. At the same time, the aim of this project was to make the city of Kosice visible both, in domestic conditions and abroad. By announcing the candidacy, the city received offers from federations and international associations to organize various sports events, what helped in particular to the economic effect, the sporting experience and the motivation of young people for various sports activities [12].

## **Methodology – European City of Sports project in numbers**

The main aim of the survey was to point out at the importance of tourism activities creation or activities in general and their linking with tourism sphere. At the example of the European City of Sports project, it was aim to show the meaning of implementation the project to the city of Košice and the results of its application and activities into the practice. The importance in concrete details of activities is seen not only for the city as mentioned, but for the Košice region as well. The paper represents one part of the survey held based on this project.

The survey was conducted by using several methods of research. The primary method needed for the purposes of this paper and the survey was desk research. It helped to analyse theoretical concept of the Košice city and Košice as the region together with fundamentals of the European City of Sports. The theoretical base was later forwarded by desk research of statistical data. For this purposes the method of synthesis was used. For the evaluation of the tourism performance statistics were used mathematical and statistical methods, using tables, graphs as well as methods of quadratic regression analysis. Statistical data were gained from the official sources of Statistical office of Slovak republic. The results of them can be seen in this chapter of the paper.

## Results of the survey

The project European City of Sports was funded on sports activities creation where the public is invited to participate. At the beginning, it is important to point out the results of the activities that were held up to the months of the year. The most activities were organised in months of May and June. September as a month was also strong for these activities. Concerning the division of activities, the seasonality played important role. This fact can influence the results of the activities. It is possible to say that concerning the number of events versus the days of the year, the number was almost the same. 364 activities or events were held during the year, which allowed wide public to be active.

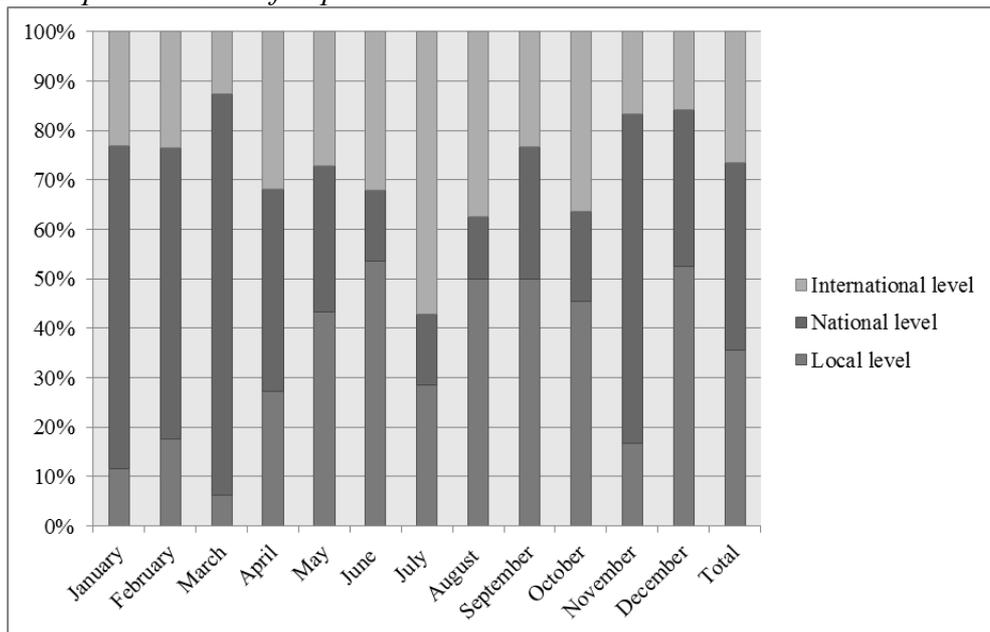
*Table 1. Most attractive sport activities of European City of Sports 2016 project within each month*

<b>Month</b>	<b>Number of events</b>	<b>Participants</b>	<b>Institutions</b>	<b>Audience</b>	<b>Volunteers</b>
January	21	4 162	12	3 540	406
February	18	8 454	12	6 020	140
March	20	5 394	16	4 120	206
April	25	6 485	22	4 440	312
May	49	116 985	38	9 200	472
June	49	7 340	40	6 200	510
July	47	52 990	39	11 320	606
August	33	5 122	26	10 600	412
September	46	28 699	37	20 612	860
October	22	25 230	28	35 350	1820
November	18	3018	12	5126	123
December	16	2 699	12	3 612	102
<b>Total</b>	<b>364</b>	<b>149 593</b>	<b>294</b>	<b>120 140</b>	<b>5969</b>

Source: own processing up to emskosice.sk

Among the most interesting sports activities during Košice- European City of Sports 2016 were included activities such as: the Runway run, the Spartan race in the centre of Košice, Know your town by running, Sports Sundays in the park, Sports Friday on the Main street, Summer and Winter Seniors' Olympic Games (with more than 300 participants of seniors with average age of 72 years), Football joins, Tournament of Roma (gypsies) and homeless people, students and representatives of the city, Sport without barriers, handicapped people and disabled people on wheelchairs, Quadrille - Quadruple, „Retrospartakiáda“, Jumps in the city centre (jumping on bikes, skis and snowboards). The highest number of participants was reached in May, when 116 985 people were active.

*Graph 1. Activities of sports organizations of each month during the European City of Sports project 2016 up to the level of importance*

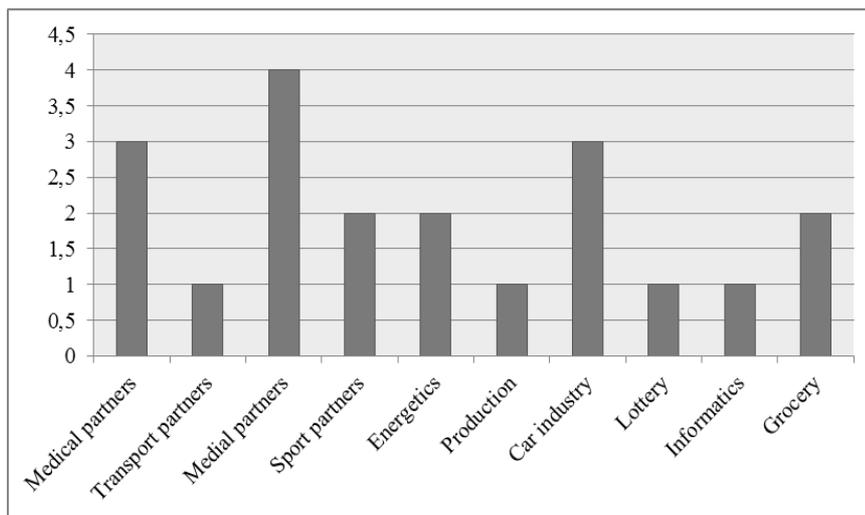


Source: own processing up to emskosice.sk

### **Project partners**

The project Košice- European City of Sports 2016 could be realized thanks to several partners from different spheres. All the partners supported the idea with financial amount in form of sponsorship contributions in total of 460 thousand euro. The structure of partners up to spheres of their origin can be seen in graph 2.

Graph 2. Project partners of European City of Sports 2016



Source: own processing up to emskosice.sk

The implementation of the project has had many positive aspects, not only from the point of view of tourism. Thanks to its realization many sports points and facilities were reconstructed or built (Kolcun 2016). Among the most significant elements of sports possibilities development that can serve as well for tourism development in the city or region can be mentioned:

- Reconstruction of the school oval at Belehradská Elementary School
- Reconstruction of the Red Star Pool
- Reconstruction of school oval at Trebišovská Elementary School
- Construction of 3 workouts
- Construction of IN line oval at Bukovecká Elementary School
- Newly built outdoor fitness park Barca
- Fitness Centre Luník IX for Roma
- Workout playground in Šaca.

The city of Košice financed other sport facilities where 213 000 euros were donated for the reconstruction of these sports facilities:

- Football field in Krásna
- Inline pavement KVP
- Multifunctional playground in Lorinčík
- Table tennis game room in Myslava
- The sports complex in Poľov
- Šebastovce Sports Center
- Football field in Ťahanovce
- Workout playground, petanque field and fencing of Olympia sports complex in Ťahanovce.

During the construction of sports facilities, the city also donated the prizes for the competition "The best urban part of the European City of Sports". The amount was 110,000€.

1. Place -> Ľahánovce - athletic oval
2. Place -> Nad jazerom - outdoor fit park
3. Place -> West Beach Plaza and street football in front of Shopping Centre Galéria
4. Place -> Dargovských hrdinov – workout field (processed by MU Košice)

Thanks to year 2016 and the European City of Sports project, Košice was perceived as one of the most active places in terms of sport. Based on this finding, Košice has great potential for further development of sport in the city in the upcoming years.

### Statistical perception of tourism performance

From the latest statistics from 2017, Košice region in comparison with other Slovak regions was ranked 5th in the number of visitors in accommodation establishments from the point of view of tourism performance (Tab. 2).

Table 2. Number of visitors in accommodation establishments up to regions within Slovakia

	2012	2013	2014	2015	2016	2017
Bratislava region	939 328	1 073 854	954 888	1 194 479	606 153	1 097 333
Žilina region	756 621	819 016	735 470	846 508	447 606	831 732
Prešov region	664 863	700 248	642 706	740 698	394 046	709 026
Banská Bystrica region	401 869	400 251	384 801	448 568	245 904	447 144
Košice region	283 180	314 651	260 494	266 361	347 014	366 142
Trnava region	266 216	263 709	228 359	297 693	145 910	285 789
Nitra region	219 952	238 440	236 875	261 582	128 252	263 264
Trenčín region	244 033	238 336	244 114	274 36	139 818	291 737

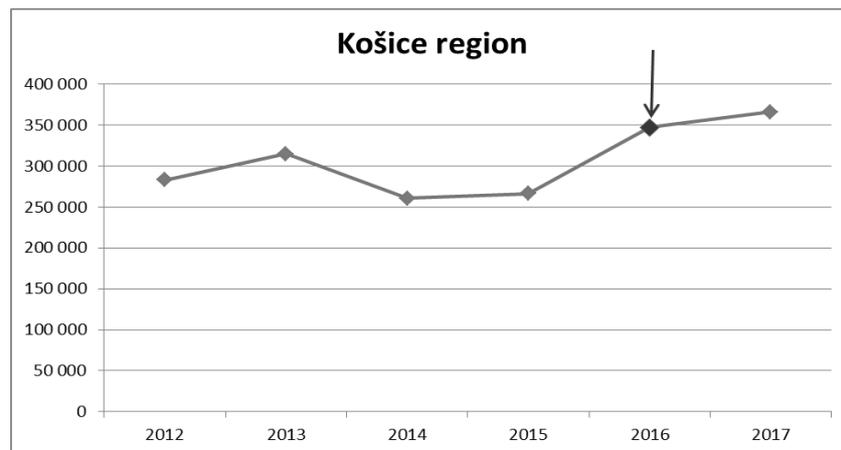
Source: Own processing up to Statistical Office of Slovak republic 2018

As can be seen from the Table 2, the highest number of accommodation establishment visitors up to regions within Slovak regions was recorded in Bratislava region. The number is rational while Bratislava is the capital and centre of business of the country. Global tourism statistics show that usually the region disposing by capital has the highest number of visitors in general. This might be caused by different reasons as business, city tourism sightseeing, localization of the city as a strategic point and many others. In contrary, the lowest number up to regions within

Slovak regions was recorded in Nitra region. For the purposes of this paper Košice region is important. The result can be seen in Graph 2.

As stated on the web pages of Košice region, year 2016 registered a huge year-on-year jump in this region, so it was important to capture this trend for next year. Greta increase of tourism statistics (number of visitors) was achieved, which caused increase also in accommodation revenues, which grew year-on-year by more than 1 million euro to nearly 21 million. It is the result of the efforts of all subjects involved in tourism and especially positive fact for the economy of the region in general. Tourism activities can play important role in development of the region that's why it is more than need to pay attention to it.

Graph 2 Visitors' increase of accommodation establishments in Košice region

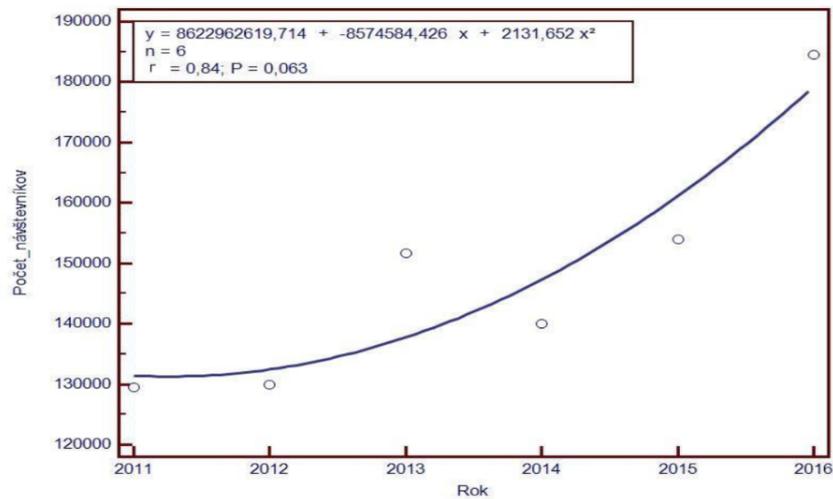


Source: Own processing up to Statistical Office of Slovak republic 2018

From the databases available from Statistical Office of Slovak Republic, it is clear that number of visitors in accommodation establishments increased in the year of European City of Sports. For the evaluation purposes, quadratic regression analysis was used. For better overview of the data flow over time more years were included into this analysis, in concrete 2011-2016.

Year 2016 is the final because European City of Sports is held only for one year. The results can be seen in graph 3 a and graph 4. Because the number of tourists in the city increased, the results concerning number of overnights increased as well. Year 2016 represented successful year with significant tourism performance. This trend was kept for next year and there is an assumption that it was not only general interest that led tourist to the city and the region but also these sport activities that have a great and high quality conditions for public since mentioned year.

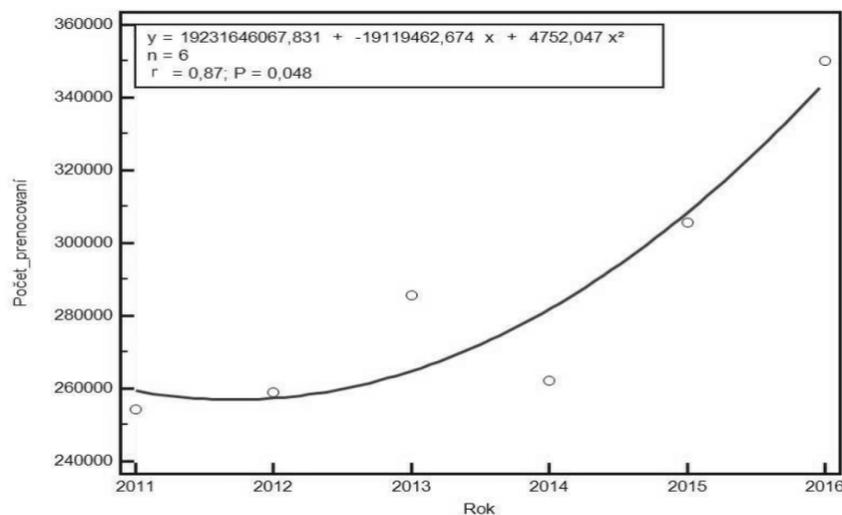
Graph 3 Quadratic regression analysis of the number of visitors in the timeframe from 2011 to 2016



Source: own processing

In case of the year 2016, it can be evident that activities of European City of Sports helped the city to increase in the number of visitors as well as overnights as can be seen in next graph. On the other hand, it is necessary to mention that year 2016 was strong in tourism performance overall the country.

Graph 4 Quadratic regression analysis of overnights in the timeframe from 2011 to 2016



Source: own processing

## Conclusion

The results of the survey show that implementation of the project brought positive reaction of the tourism participants and the number of performances in individual areas has increased. The importance in concrete details of activities is seen not only for the city as mentioned, but for the Košice region as well. These results are important for new activities as a theoretical base for next project plans in the future. Sports always played important role also in tourism sector

and this project confirms it by the results. The added value of this project for the city as well as for the region is the sustainable development and preservation of these events for the future.

The character of events can be changed and the periodicity can be adapted up to the need of the city. As the results show, in mentioned year the material as well as technical base of tourism sphere has improved a lot. The number of accommodation establishment and facilities increased. These accommodation establishment based on this fact could host more tourists. This was confirmed by evidently higher number of visitors together with the higher number of overnight spent in Košice city. Even the fact and statistics of tourism income weren't included for the purposes of this paper, but it is to possible just to mention that this increased tourism performance brought also Košice as a second largest town (city) in Slovakia has several activities that form the motives of visitors to come.

One of the important facts is that the business sphere in Košice encourages the arrival of foreign visitors the most. Motives of all tourists that visited Košice are not recorded, but from the partial statistics we know, that many tourists took part in them. Evidence of such projects and activities is important for the future. On the example of them of good practices, it is possible to adapt aims and focuses for the future plans.

The project continues and seeing, pointing out and sharing experience, result, performance but as well as threats and weaknesses might be very helpful for other cities that are willing to apply for this title of the European city of Sports in upcoming years. Based on activities of the project many cities start new era and try to keep and develop more events. As we see, the situation in the world warns that the population reduces the amount of healthy rate of movement and doing the exercise daily. By developing places, facilities, possibilities and keeping them in good conditions, we can keep at minimum local inhabitants of the city active. The interest of taking part in sports activities depends also on the sporting potential and facilities. If the city disposes by them, there is a strong assumption that people will use these possibilities at the present but also in the future. Košice fulfilled this idea. By the implementation of the European City of Sports project, it created wide scale of Sports establishments that can serve also for the purposes of the tourism sphere in the context of sport tourism.

## References

- [1] CIELE PROJEKTU EMŠ, 2016. [online]. [2018-11-12]. <http://www.emskosice.sk/o-projekte>
- [2] DZUROV VARGOVÁ, T., 2018. Stav cestovného ruchu v Košickom kraji. In: Medzinárodný vedecký časopis Mladá veda Young Science. Vol. 6 (4), p. 1-16, ISSN 1339-3189.
- [3] GAŠPAR, J., 2011. Košice pohľady do histórie mesta. 1.vyd. Poprad: Region Poprad s.r.o. ISBN 978-80-969344-6-1.
- [4] HISTÓRIA PROJEKTU EMŠ, 2016.  
<http://www.emskosice.sk/o-projekt>
- [5] KOLCUN, M. a KOL., 2016. Košické detaily I. 2.akt.vyd.Košice: JES. ISBN 978-80-88900-84-9.

- [6] KOLCUN, M. a JIROUŠEK A., 2014. Potulky mestom Košice. 4.akt.vyd. Košice: JES ISBN 978-80-88900-73-3.
- [7] KOLEKTÍV AUTOROV, 2015. Stratégia cestovného ruchu Košického kraja do roku 2020. e- PRO group a. s. 2015.
- [8] LEHOTSKÝ, L., 2006. Košický samosprávny kraj 2001-2005. Prešov: Vydavateľstvo Michala Vaška ISBN 80-7165-517-1.
- [9] MICHÁLKOVÁ, A. a KOL., 2013. Regionálny cestovný ruch. Praktikum. 1.vyd. Bratislava: Ekonóm. 108 s. ISBN 978-80-225-3604-2.
- [10] MINISTERSTVO HOSPODÁRSTVA SR, 2005. Odbor cestovného ruchu: Regionalizácia cestovného ruchu v Slovenskej republike. (Regionalization of tourism in Slovak republic).
- [11] MOJE SLOVENSKO, 2012. Región Košice. <http://www.mojeslovensko.sk/kosice-region>
- [12] O PROJEKTE EMŠ, 2016. [http://www.emskosice.sk/o\\_projekte](http://www.emskosice.sk/o_projekte)
- [13] ŠAMBRONSKÁ, K., MATUŠÍKOVÁ, D. GALLO, P., ŠENKOVÁ, A. a MITRÍKOVÁ, J., 2016. Hotel Services - Quality Base Of Dimension Of Service. BK 2: Political Sciences, Law, Finance, Economics and Tourism Conference Proceedings, Vol. IV., pp. 307-314, ISSN 2367-5659.
- [14] ŠTATISTICKÝ ÚRAD SLOVENSKEJ REPUBLIKY, 2017. Regionálna databáza. [online]. [2017-11-23].
- [15] UHER, I., PILIS, A., LITAVCOVÁ, E. 2014. *Functional Fitness, Quality of Life and Living in the Moment*, Senior Population Study In: Kultura Fizyczna. ISSN 1895-8680. s. 157-166
- [16] UHER, I., ŠVEDOVÁ M. a ŠENKOVÁ A., 2013. Úvod do problematiky rekreácie turizmu a sprievodcovskej činnosti. Prešov: Bookman s.r.o ISBN 978-80-89568-92-5.

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## **IMPACT OF THE SPECIALIZATION OF SELECTED ECONOMIC SECTORS ON THE VOLUME OF CROSS-BORDER MERGERS AND ACQUISITIONS IN THE COUNTRIES OF THE EUROPEAN AREA**

### **VPLYV MIERY ŠPECIALIZÁCIE VYBRANÝCH SEKTOROV EKONOMIKY NA OBJEM CEZHRAŇIČNÝCH FÚZIÍ A AKVIZÍCIÍ V KRAJINÁCH EURÓPSKEHO PRIESTORU**

***Abstract:** The main aim of the paper is to quantify the impact of the specialization rate calculated on the basis of the Michael Index on the volume of realized cross-border mergers and acquisitions in the target countries of the European area in the monitored period 1998-2015. This paper focuses on the degree of specialization (Michaelyho index), which is defined as the difference between the proportion of the studied commodity groups in the total national exports and the share of commodity groups surveyed in the national import. Over the reporting period 1998-2015, countries such as Bulgaria, Greece, Hungary, the Slovak Republic and Cyprus have achieved an average degree of specialization in the manufacturing and service sectors, where the business environment has been gradually improving.*

***Key words:** Competitiveness, export, import, Michaely index, cross-border mergers and acquisitions*

***Kľúčové slová:** Konkurencieschopnosť, export, import, Michaelyho index, cezhraničné fúzie a akvizície*

*This paper was compiled as a part of the project project Vega No. 1/0661/20: „Trends in development and determinants of cross-border mergers and acquisitions in the European area“.*

**JEL:** F15, F21, F23

#### **Introduction**

Over the twentieth century, mergers and acquisitions (M&A) activities have expanded and become more and more interesting, mainly because of the growing interest of foreign investors in countries in transition [1]. Most M&A studies use a micro-economic perspective and

scientific research on macro-economic determinants of M&A whose focus is inadequate, especially as regards the provision of empirical evidence on cross-border M&A determinations targeting European countries [2].

Globalization, liberalization, industry consolidation, privatization, increasing competition as well as rapid technological change are global phenomena that have supported the company's strategies for external growth, strengthening the competitiveness and inherent key positions of companies in the market. Capital allocation is becoming increasingly complex within and between countries [3]. According to Ferencikova et al. (2013) [4] is taking place in an environment of increasing simultaneous fragmentation and globalization of markets, a rapid pace of change and the elimination of tariff barriers worldwide, in an environment that is a natural driving force for the growth of multinational corporations in different sectors. M&A is a form of organizational concentration that is part of the growth strategies of companies worldwide [5].

According to Bobáková, Hečková (2007) [6] whatever the approaches to the definition of competitiveness, it is certain that the factual content of this concept is a different value of the commodity on the foreign market depending on the influence of various factors that determine the country's competitiveness. This is ultimately reflected in economic growth, price policy and employment. The qualitative characteristics of the sources of competitive advantage significantly influence the long-term sustainable growth performance of the economy.

The concept of competitiveness is inherently linked to economic development in a market economy [7].

Bové, Thill (1992) define competitiveness as the ability of the national industry to innovate and modernize to the next level of technology and productivity. They describe four basic competitiveness factors of [8]:

- strategy, structure and rivalry as conditions for the creation, organization and management of enterprises,
- demand conditions, including market size, exposure of goods, services and ideas,
- related industries,
- conditions of the factor such as natural resources, level of education and experience and wages.

According to Ubrežiová (2008), the competitiveness of individual countries must be assessed according to theories such as [9]:

- Comparative advantage developed by David Ricardo based on the theory of absolute advantage developed by Adam Smith.
- Heckscher - Ohlin theory of production factors.
- The impact of the life cycle of an international product.
- Theory - the first on the market.
- Porter's theory of competitive advantages - conditions, demand, composition and strength of competition, role of opportunities, obligations of government.
- Openness of the economy as a source of labor productivity growth - rapid change of enterprises, reduction of market prices, changes in prices, revenues from scale of production, impacts of new technologies and assessment of competitiveness of countries.

## Data and methodology

This paper discusses the degree of specialization (measured by the Michael Index) and its impact on the volume of cross-border mergers and acquisitions realized in the European area countries in the manufacturing and services sectors during the reporting period 1998-2015. The dataset containing the records of mergers and acquisitions in the European area was based on Zephyr (Bureau van Dijk 2016) [10] data, supplemented with data on exports and imports of individual countries from the statistical offices of the countries under review.

This database includes mergers and acquisitions data from 16 source countries<sup>1</sup> to 25 target countries<sup>2</sup> within the manufacturing sectors<sup>3</sup> and service sectors<sup>4</sup>.

Michael Michaely (1962, 1967) [11] constructed a so-called Country Difference Index in order to measure the overall difference in the composition of the commodity trade. The index value ranges from 0-1; the higher the index value, the less similar are the export and import composition of the country under review.

The Michael Index (MI) has a wide range of applications. Its use is recommended when measuring the degree of similarity of business models, eg. comparison of the country's import and export models, the export and import models of two countries or a group of countries, etc. The index is an excellent indicator of the dynamics of the country's export structure, i. dynamics of the revealed comparative advantage. It indicates the intensity of change rather than its direction [12]. The Michael Index is also used as a measure of specialization in international trade at sectoral level [13].

The Michael Index assesses competitiveness at the sectoral level based on the difference between the share of the surveyed commodity group in total national exports and the share of the surveyed commodity group in national imports [14]:

$$MI = \frac{X_{ij}}{\sum X_{ij}} - \frac{M_{ij}}{\sum M_{ij}}, \text{ while:}$$

$X_{ij}$  - export of commodity group and country  $j$ ,

$M_{ij}$  - import of commodity group  $i$  country  $j$ ,

$\sum X_{ij}$  - total national export,

$\sum M_{ij}$  - total national import.

---

<sup>1</sup> Belgium, Republic of Cyprus, Denmark, Finland, France, Greece, Netherlands, Luxembourg, Republic of Malta, Federal Republic of Germany, Republic of Poland, Portuguese Republic, Republic of Austria, Spain, Italy, United Kingdom

<sup>2</sup> Belgium, Republic of Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Netherlands, Republic of Lithuania, Latvia, Luxembourg, Hungary, Malta, Federal Republic of Germany, Portuguese Republic, Republic of Austria, Romania, Slovak Republic, Republic of Slovenia, Spain, Italy, Turkey, United Kingdom

<sup>3</sup> Chemical, Rubber, Plastic & Non-metallic Products, Construction, Food, Beverages & Tobacco, Gas, Water & Electricity, Machinery, Equipment, Equipment & Recycling, Metals & Metal Products, Textiles, Clothing & Leather

<sup>4</sup> Banking, Hotels and Restaurants, Insurance Companies, Post and Telecommunications, Transport

The formulation of results achieved depends on the achieved index value.

For Michaely index:

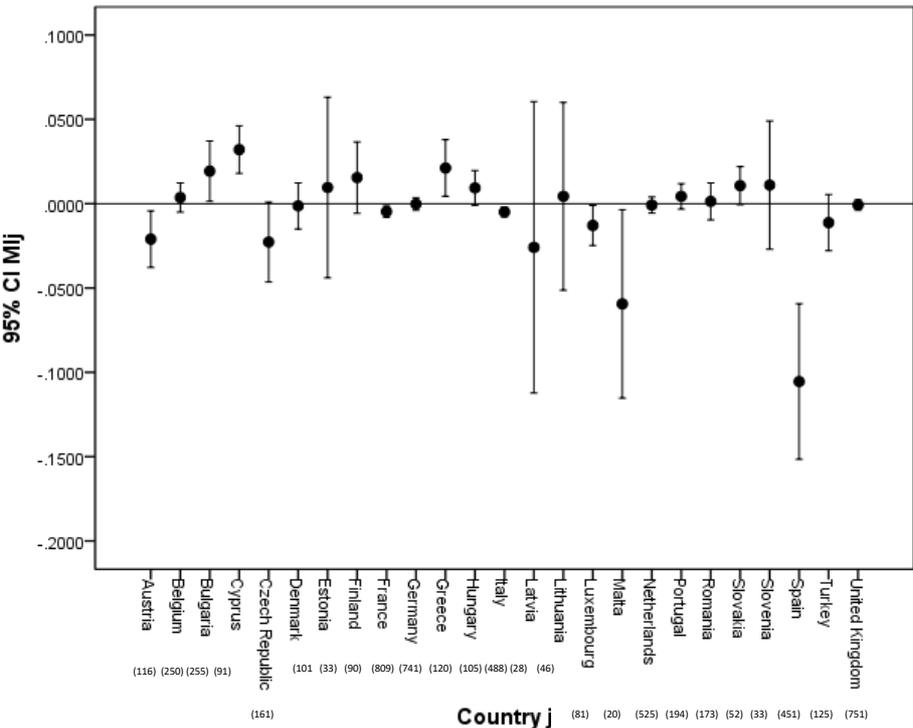
$0 < M_{ij} < 1$  points to a certain degree of country specialization in a given commodity group,

$-1 < M_{ij} < 0$  indicates insufficient country specialization in the commodity group.

**Analysis and results**

The main objective of the paper is to quantify the impact of the specialization rate on the volume of cross-border mergers and acquisitions realized in the target countries of the European area in the monitored period 1998-2015.

We measured the degree of specialization of the manufacturing and service sectors in the countries of the European area during the period 1998-2015 by using the above mentioned Michael index. We calculated the Michaely index from the data obtained on exports and imports of the individual manufacturing and service sectors in the countries of the European area, as shown in Figure 1.



Legend: the numbers in ( ) are the numbers of M&A in each target country in all sectors

Picture 1 Average values of realized cross-border mergers and acquisitions within sectors in the target countries of the European area in the reference period 1998-2015 (Michaely index)

(Source: own processing)

The mean values with the 95% confidence interval of the Michael Index for the target countries, ie countries to which cross-border mergers and acquisitions were directed, are shown in Figure

1. For countries whose average Michael Index values are below a straight line (with the  $y = 0$  guideline), we are talking about a lack of average country specialization. Conversely, for countries whose average Michael Index values are above the straight line (with the  $y = 0$  guideline), we are talking about the country's average specialization in the sectors we consider (production and service sectors). Extreme values are formed by Malta, Spain and Belgium, where the Michael Index is below 0 and therefore countries do not have narrowly specialized production and service sectors. During the reporting period, 20 transactions were carried out in Malta in the form of cross-border mergers and acquisitions, which means that the number of transactions in the country decreased as the specialization rate decreased. There were 260 cross-border M&A transactions in Belgium and 451 cross-border M&A transactions in Spain. In these countries, the specialization rate did not affect the number of cross-border mergers and acquisitions realized. In 2009, Spain was among the three most important European regions for the development of investment activities, which could have had a positive impact on the number of cross-border mergers and acquisitions in the country. The calculated Michael's index, which is higher than 0 in Bulgaria, Greece, Hungary, the Slovak Republic and Cyprus, indicates the average specialization of countries in the manufacturing and service sectors. Using the T bars (T bars), which show us the 95% confidence interval of the Michael's average value estimate, we see that the highest number of cross-border M&As realized was in Bulgaria and Greece, which could be due to lower taxes in Bulgaria and Greece, improving the business environment. The essence of specialization is that European countries can increase their standard of living and real income precisely by specializing in producing and delivering the services they can produce and deliver with the highest labor productivity and the lowest cost. It is with such products and services that a country will enter into foreign trade relations with other countries in order to obtain from them goods and services that are more advantageous for it than to produce and provide at home. The highest number of cross-border M&A transactions in the reporting period was in France (809), Germany (741), Italy (488), the Netherlands (525), Spain (451) and the United Kingdom (751). The number of cross-border mergers and acquisitions implemented in these countries could have been influenced by the high-quality business environment, developed infrastructure and scientific and technological advances.

Table 1 Competitiveness of production and service sectors in the target countries of the European area in the reference period 1998-2015 analyzed by the Michael Index

		Banks	Chemicals, rubber, plastics, non-metallic	Construction	Education, Health	Food, beverages, tobacco	Gas, Water, Electricity	Hotels & restaurants	Insurance companies	Machinery, equipment, furniture, recycling	Metals & metal products	Other services	Post and telecommunications	Primary Sector (agriculture, mining, etc.)	Publishing, printing	Textiles, wearing apparel, leather	Transport	Wholesale & retail store	Wholesale & retail trade	Wood, cork, paper
		Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij	Mij
Austria	Mean	-0.06	-0.20	.	.	0.02	0.00	0.01	.	-0.03	0.00	-0.01	0.00	.	0.01	0.01	0.01	0.00	0.14	0.00
	Count	14	5	0	0	6	4	1	0	24	4	43	2	0	3	1	1	1	3	2
Belgium	Mean	-0.06	-0.07	0.01	0.00	0.00	0.02	0.00	0.00	0.01	0.04	0.02	-0.01	0.00	0.01	0.00	0.00	0.01	-0.02	0.02
	Count	20	11	2	1	11	10	9	3	14	8	131	3	1	1	1	11	2	12	2
Bulgaria	Mean	0.18	-0.02	-0.04	.	0.00	0.09	0.02	0.01	.	-0.03	0.01	.	-0.07	-0.02	-0.03	0.00	-0.01	-0.06	-0.02
	Count	20	9	3	0	10	11	3	5	0	2	143	0	5	1	4	1	6	5	1
Cyprus	Mean	0.02	.	-0.02	-0.02	0.00	.	.	0.00	-0.06	-0.04	0.10	0.03	.	.	.	-0.01	.	-0.02	.

	Count	51	0	1	3	4	0	0	1	1	3	22	1	0	0	0	3	0	1	0
Czech Republic	Mean	0.20	0.26	0.01	0.00	0.01	0.02	0.01	0.05	0.01	0.03	0.03	0.06	0.00	0.00	0.01	0.15	0.00	0.22	
	Count	18	14	9	0	9	10	1	3	13	9	46	3	1	1	2	4	3	12	1
Denmark	Mean	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.06	0.01	0.03	0.00	0.12	0.00	0.00	0.01	0.01	0.00		
	Count	3	5	1	0	5	0	0	0	19	2	47	0	1	1	0	6	0	7	1
Estonia	Mean	0.03	0.34	0.08	0.22	0.04	0.03	0.01	0.01	0.01	0.01	0.12	0.09	0.01	0.01	0.01	0.01	0.03		
	Count	2	1	2	0	3	5	0	0	1	1	12	0	0	0	1	2	0	2	1
Finland	Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.04		
	Count	2	2	0	0	3	2	0	0	11	0	47	0	0	0	0	11	1	6	3
France	Mean	0.07	0.02	0.01	0.01	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.04		
	Count	30	34	14	1	32	21	14	10	76	14	424	6	2	22	18	25	5	40	13
Germany	Mean	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.02	0.01		
	Count	30	47	13	2	23	18	9	14	125	15	343	1	4	6	5	25	1	26	21
Greece	Mean	0.07	0.04	0.18	0.00	0.00	0.00	0.06	0.02	0.07	0.01	0.01	0.02	0.01	0.01	0.02	0.03	0.00		
	Count	47	4	0	0	2	3	0	5	2	1	37	3	0	3	0	3	1	7	1
Hungary	Mean	0.05	0.02	0.01	0.07	0.00	0.01	0.05	0.00	0.01	0.00	0.04	0.00	0.02	0.02	0.02	0.02	0.07		
	Count	16	5	4	1	6	8	2	4	4	2	34	1	5	0	0	6	0	4	2
Italy	Mean	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.03		
	Count	84	19	3	2	21	24	18	15	43	12	158	11	1	3	6	19	4	20	4
Latvia	Mean	0.31	0.01	0.09	0.08	0.03	0.04	0.05	0.22	0.05	0.22	0.05	0.22	0.05	0.22	0.05	0.22	0.05		
	Count	3	3	0	0	2	1	1	2	0	0	10	0	4	0	0	0	0	2	0
Lithuania	Mean	0.16	0.15	0.00	0.07	0.00	0.07	0.00	0.03	0.03	0.23	0.03	0.23	0.03	0.23	0.03	0.23	0.03		
	Count	8	9	0	0	8	0	0	3	1	0	14	0	1	0	0	2	0	0	0
Luxembourg	Mean	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.00	0.03	0.01	0.02	0.01	0.02	0.01	0.02		
	Count	17	1	0	0	0	0	0	2	1	3	49	1	1	2	0	1	1	1	0
Malta	Mean	0.03	0.29	0.10	0.04	0.02	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12		
	Count	4	0	0	0	0	0	0	1	0	1	11	1	1	0	0	1	0	0	0
Netherlands	Mean	0.02	0.03	0.01	0.04	0.01	0.01	0.00	0.06	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01		
	Count	25	27	6	2	14	8	6	15	35	11	288	6	10	14	1	22	2	27	3
Portugal	Mean	0.04	0.03	0.01	0.02	0.00	0.01	0.01	0.00	0.01	0.00	0.02	0.04	0.02	0.00	0.00	0.02	0.00		
	Count	43	23	3	2	12	16	1	2	1	4	56	0	3	4	0	8	1	6	9
Romania	Mean	0.05	0.04	0.02	0.02	0.00	0.02	0.00	0.06	0.12	0.01	0.00	0.02	0.10	0.03	0.03	0.03	0.04		
	Count	34	13	7	0	13	9	3	13	11	7	39	1	4	0	3	1	3	4	3
Slovakia	Mean	0.02	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.02	0.16	0.00	0.03	0.04	0.00	0.00	0.00		
	Count	16	4	0	0	4	4	0	1	1	1	12	1	2	0	0	2	1	3	0
Slovenia	Mean	0.08	0.02	0.00	0.05	0.06	0.01	0.05	0.06	0.01	0.08	0.14	0.01	0.08	0.14	0.01	0.08	0.14		
	Count	11	0	0	0	3	2	0	0	2	1	5	0	0	0	0	3	0	3	1
Spain	Mean	0.05	0.51	0.01	0.03	0.10	0.22	0.06	0.07	0.29	0.06	0.05	0.01	0.00	0.01	0.32	0.17	0.01		
	Count	38	22	8	6	21	33	8	21	30	8	171	4	4	5	4	16	2	36	6

Turkey	Mean	0.03	-0.08	-	-0.05	0.02	0.03	0.03	-0.02	0.01	-0.01	0.01	-	-0.02	-	0.02	-0.02	-0.37	0.00	-0.02
	Count	15	13	0	1	10	2	2	7	5	7	35	0	5	0	1	1	3	8	2
United Kingdom	Mean	-0.04	-0.02	0.01	0.00	0.02	0.01	0.00	-0.02	-0.02	0.01	0.01	0.00	0.00	-0.01	0.00	0.00	0.01	0.00	0.02
	Count	54	33	4	2	28	19	15	10	88	20	360	5	14	15	10	20	4	31	8

(Source: own processing)

The average values calculated by the Michaely index in the target countries of the European area in the production sector and in the service sector in the reporting period are shown in Table 4. The values of the Michaely Index are marked in red and green in the table. The red color indicates 25% of the lowest values of the Michael index and the green color indicates 25% of the highest values of the index. For each country of European territory, an indication of the number of cross-border mergers and acquisitions carried out in that production or service sector is recorded. Above-average observations with values higher than 50% of observations are highlighted in yellow in the table. As in the source countries (Table 3), the target countries in the banking sector in Austria, Belgium, France, Italy and the United Kingdom have a Michely index lower than 0 and hence do not have an average specialization in the sector. The difference between source and destination countries is the number of cross-border mergers and acquisitions implemented. It can be seen that in the target countries the highest number of cross-border M&A transactions was carried out only in Italy and the United Kingdom, where the lack of specialization in the sector does not affect the implementation of M&A. In the chemical, rubber, plastic and non-metal sectors, the Michaely Index indicates that if the index is lower than 0, countries do not have an average sector specialization, and therefore the number of cross-border mergers and acquisitions is decreasing (Austria, Belgium, Greece, Hungary). , Luxembourg) and vice versa, if the Michaely index is higher than 0, the countries have an average specialization in that sector and therefore the higher the index value, the greater the number of cross-border M&As implemented (France and Germany). For the sector, other services Austria, the Czech Republic, Denmark, Romania and Spain are not narrowly specialized in the sectors of the sector, but despite the fact that more cross-border mergers and acquisitions have been channeled into the sector over the period under review. the sector involves different sectors. The Michaely Index indicates the average specialization in the other services sector in Belgium, Bulgaria, Finland, France, Germany, Italy, the Netherlands, the United Kingdom and Cyprus, which represents a higher country specialization in the sector as well as a higher number of cross-border mergers and acquisitions. to countries. There are extreme cases in Germany, France and the United Kingdom, where the index tells us a value slightly higher than 0, which means that countries do not have above-average specialization, but an excessive number of cross-border M&A has been channeled to countries. strong cultural influences and quality of the environment. Countries in Europe in the remaining manufacturing and service sectors, based on Michael Index calculations, do not indicate significant industry specialization and were therefore not relevant to investors from other countries during the reporting period.

## Discussion

Based on the results of calculations of the MI (Michaely Index) according to MI, we can conclude that the manufacturing and service sectors in the target countries of the European area in the reporting period 1998-2015 achieved a specialization rate in some target countries

(Bulgaria, Greece, Hungary, Slovak Republic). Republic, Cyprus). Countries that have achieved a degree of specialization have been considered appropriate countries for several forms of investment, for example. cross-border mergers and acquisitions. Source countries have seen the attractiveness of the target countries mainly due to the country's increasing competitiveness, low taxes and an improving business environment. The most attractive sectors that were the main target of the merger are considered eg. banking, chemical, rubber, plastic and non-metallic products, other services. Countries that have achieved a degree of specialization in the manufacturing and service sectors need to be viewed from two angles. On the one hand, the individual sectors of the European space countries are facing increasing competition from other developed economies, particularly in the high-tech sector. On the other hand, multi-sector production is increasingly moving to low-cost economies, some of which focus on higher value-added segments

## **Conclusion**

At present, it is crucial for the countries of the European area to establish themselves and maintain themselves in global markets. Continuous growth in competition, increasing demands and demands from companies are manifested in mergers or acquisitions, thus limiting opportunities for weaker and less competitive companies in the target countries. Based on the results of the effect of the specialization rate (MI) in the target countries of the European area over the reporting period on the volume of cross-border mergers and acquisitions realized, we can conclude that the degree of specialization of the target countries seeking business as an investment opportunity.

## **Záver**

V súčasnosti je kľúčové pre krajiny európskeho priestoru presadiť sa a zároveň sa udržať na globálnych trhoch. Neustály nárast konkurencie, zvyšujúce sa nároky a požiadavky od obchodných spoločností sa prejavujú spájaním formou fúzií či akvizícií a tak obmedzujú príležitosti pre slabšie a menej konkurencieschopné obchodné spoločnosti v cieľových krajinách. Na základe výsledkov vplyvu miery špecializácie (MI) v cieľových krajinách európskeho priestoru za sledované obdobie rokov na objem realizovaných cezhraničných fúzií a akvizícií, môžeme konštatovať, že miera špecializácie cieľových krajín, ktoré vyhľadávajú obchodné spoločnosti ako investičnú príležitosť.

## **References**

- [1] BHAGAT, S., MALHOTRA, S., ZHU, P. C. Emerging Country Cross-Border Acquisitions: Characteristics, Acquirer Returns and Cross-Sectional Determinants. *Emerging Markets Review*. 2011, vol. 2(1), p. 250-271.
- [2] ANTONIOU, A., PHILIPPE A., HUAINAN Z. (2006). The Effects of the Cross-Correlation of Stock Returns on Post Merger Stock Performance. [online], New York, Social Science Research Network, 2013, [cit. 10.03.2020], <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=493882](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=493882)>
- [3] VOCHOZKA, M. and MULAČ, P. *Podniková ekonomika*. Praha : Grada Publishing, 2012, p. 570- 576. ISBN 978-80-247-4372-1.
- [4] FERENČÍKOVÁ S., et al. *Medzinárodná expanzia firiem: stratégie, partnerstvá a ľudské zdroje*. Bratislava : Iura Edition, 2013. p. 364. ISBN 978-80-87- 532-1

- [5] SMRČKA, L. Ovládnutí a převzetí firem. Praha: C. H. Beck, 2013. p. 121-157. ISBN 978-80-7400-442-1.
- [6] BOBÁKOVÁ, V., HEČKOVÁ, J. Analýza konkurencieschopnosti slovenského spracovateľského priemyslu. In Politická ekonomie: teorie, modelování, aplikace. 2007, vol. 55, p. 490-493. ISSN 0032-3233
- [7] VITURKA, M. et al. Kvalita podnikatelského prostředí, regionální konkurenceschopnost a strategie regionálního rozvoje České republiky. 1. vyd. Praha: Grada, 2010, p.232. ISBN 978-80-247-3638-9
- [8] BOVÉE, C. L., THILL, J. V. Marketing. Vyd. b.m., Bonnie K. Binkert and Bob Greiner, 1992, p. 661, ISBN 0-07-006734-1
- [9] UBREŽIOVÁ, I. Medzinárodný manažment a podnikanie. Nitra: SPU 2008, p.13. ISBN 978-80-552-0069-9
- [10] BUREAU VAN DIJK. 2006. Zephyr (purchased data from the BvD database for the period 1998-2015).
- [11] MICHAELY, M. 1962. 1967. Concentration in International Trade, Contribution to Economic Analysis. Amsterdam: North-Holland publishing company.
- [12] COTO-MILÁN, P. 2004. Essays on Microeconomics and Industrial Organisation. Germany: Physica-Verlag Heidelberg.
- [13] KELD, C., LAURSEN, S. 1998. "Revealed Comparative Advantage and the Alternatives as Measures of International Specialisation". Danish Research Unit for Industrial Dynamics. Working Paper. Vol. 98-30, p. 1-24.
- [14] HEČKOVÁ, J. 2008. *Súčasný stav slovenského priemyslu a perspektívy jeho ďalšieho rozvoja*. Vyd. Prešov: Prešovská univerzita v Prešove, 2008. p. 162. ISBN 978-80-8068-746-5.

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## **FRAUD INTRA-COMMUNITY TRANSACTIONS VAT AND NEGATIVE IMPACT ON THE STATE BUDGET**

### **PODVODNÉ INTRAKOMUNITÁRNE TRANSAKCIE S DPH A ICH NEGATÍVNY DOPAD NA ŠTÁTNY ROZPOČET**

***Abstract:** The most frequent tax fraud with a negative impact on the state budget is the so-called carousel fraud, which is primarily performed in carrying out cross-border operations. Abroad, the type of tax evasion in question is referred to as the fraud of a missing trader, the so-called MTIC, consisting in the abuse of VAT rules in cross-border transactions within the EU. In the presented article, we analyze the most common possibilities of committing VAT fraud in cross-border trade, which is carried out within the European Community with quantifying the negative effects on the balance of the country's state budget.*

***Key words:** intra - community transactions, cross - border trade, VAT, state budget.*

**Kľúčové slová:** intrakomunitárne transakcie, cezhraničné obchodovanie, DPH, štátny rozpočet.

**JEL Classification:** F39

#### **Introduction**

Value added tax is one of the main sources of government revenue, but the complicated way, how it works also makes it vulnerable to fraud. Before we buy any product as final customers, it goes through a distribution channel, for example in the form of manufacturers, distributors and traders. Although the entire VAT will be paid by the final consumer in the price of the product, it is gradually paid to the state by entrepreneurs on individual sections of the distribution channel (Jusková, Jenčová 2018).

The VAT Act regulates the registration of persons who become taxpayers. Registered taxpayers are obliged to pay tax to the state on their taxable transactions, which are object to tax and at the same time have the right to deduct tax, unless they carry out tax-exempt activities. It also regulates the registration of persons, who do not have the status of VAT payers, but are required to pay tax on the acquisition of goods from another Member State without the right to deduct tax or supply or acquire a service from another Member State and have not yet achieved turnover for VAT registration (Široký 2016).

Persons registered under the VAT Act are assigned a Slovak VAT identification number. Businesses carrying out taxable transactions in several Member States are assigned a VAT identification number in each Member State, if they are required to apply for registration. In terms of the VAT Act, the right to deduct tax arises from goods and services to the taxpayers on the date on which the tax becomes chargeable. The right to deduct tax arises only to taxpayers. The right to deduct tax also arises in the case of the payment of the tax to the customs authority upon importation of the goods. If the tax liability does not arise, there is no right to deduct tax. The tax becomes chargeable on the day the goods are delivered or the day the services are provided or the advance payment is received (Benko 2016).

The generally accepted technique of calculating the tax liability is based on the payment of the balance of value added tax, which arises as the difference between the tax paid in the invoices

of suppliers (pre-paid tax) and the total tax liability of the payer. The principle of VAT therefore consists in the registration in the relevant accounts of the value of the tax paid to the supplier and the value of the tax invoiced to his customers, and the difference between the balances of the two variables is entered in the tax return. Králik, Grúň, Balko (2001) present the basic scheme of taxation, which is based on the payment of the tax balance:

$$\begin{aligned} \text{Taxable turnover} \times \text{tax rate} &= \text{gross tax (output tax)} \\ \text{Gross tax (output tax)} - \text{pre-paid tax (input tax)} &= \text{net tax (tax liability)} \end{aligned}$$

If the value of the pre-paid tax exceeds the output tax, a negative balance arises and the taxpayer is entitled to a tax refund.

### **Intra - community trade**

Intra-community trade is a supply of goods between value added tax payers, based on the principle that the trade is object to tax in the supplier's country, where it is exempt and the object of the tax is also in the state of the customer, where the obligation to pay the tax arises. The term intra-community trade refers to the supply or acquisition of goods or services between entities registered for VAT within EU countries (Sedliak 2016).

If a taxpayers supplies goods or services from the domestic to a customer, who is a VAT payer in another country within the EU, he issues an invoice without VAT. Another task of the supplier is to indicate the delivery in the recapitulative (summary) statement. The customer's task is to make self-taxation. The principle of the state of destination applies here - the business is taxed in the state of the customer (Rolick Consult 2018).

Conditions for tax exemption for intra-community supply of goods (Schultzová 2011):

- both the supplier and the customer are VAT payers,
- the customer orders the delivery of goods under VAT ID,
- it must be physically transported from domestic to another Member State,
- it must be a return delivery;
- an invoice must be issued for the delivery in accordance with the Value Added Tax Act.

### **VAT system for production-distribution chain with impact on the state budget**

In Table 1 we present a classic example, all Slovak companies are VAT payers and in the production and distribution chain deduct input VAT paid from the purchase price. Output VAT is calculated from the tax base = (purchase price + value added) x tax rate. The difference (output VAT - input VAT) is the tax liability, that they pay to the state budget. In the following examples, we will consider a basic VAT rate of 20%.

**Tab. 1: Example (domestic trade - companies in the chain are VAT payers)**

Companies	Purchase price	Input tax	Added value	Tax base	Output tax	Tax liability	Selling price
A - SK	**	**	1 000	1 000	200	<b>200</b>	1 200
B - SK	1 000	200	1 000	2 000	400	<b>200</b>	2 400
C - SK	2 000	400	1 000	3 000	600	<b>200</b>	3 600
consumer	<b>3 600</b>						
<b>Total tax burden of the product</b>					<b>600</b>		

(Source: own processing)

The consumer pays the final product selling price with VAT, which is 3,600 €. A specific product is burdened with value added tax, in our example 600 €, which was transferred to the state budget by companies in the production and distribution chain (tax liability, which was gradually paid by three VAT payers of 200 € each), as shown in Tables 1 and 2.

**Tab. 2: Domestic trade with an impact on the state budget balance**

Companies	Input tax	Output tax	Tax liability	Excessive deduction	Revenue SB	Expenditure SB	Balance SB
A - SK	**	200	200	**	200	**	+ 200
B - SK	200	400	200	**	200	**	+ 200
C - SK	400	600	200	**	200	**	+ 200
consumer							
<b>Impact on the state budget + 600</b>							

(Source: own processing)

In Table 3, we present a classic example of cross-border trade, all Slovak companies and company from the EU are VAT payers and in the production-distribution chain deduct input VAT paid from the purchase price. Output VAT is calculated from the tax base = (purchase price + added value) x tax rate. The difference (output VAT - input VAT) is a tax liability, that they pay to the state budget. Company C-SK does not sell the goods to the final consumer as mentioned in (Table 1), but sells the goods abroad to company D-EU without applying VAT on output.

**Tab. 3: Example (cross-border trade - companies in the chain are VAT payers)**

Companies	Purchase price	Input tax	Added value	Tax base	Output tax	Tax liability	Selling price
A-SK	**	**	1 000	1 000	200	200	1 200
B-SK	1 000	200	1 000	2 000	400	200	2 400
C-SK	2 000	400	1 000	3 000	**	**	3 000
D-EU	3 000	**	**	**	**	**	**
<b>Total tax burden of the product 400</b>							

(Source: own processing)

A specific product is burdened with value added tax, in our example 400 €, which was transferred to the state budget by companies in the production and distribution chain (tax liability, which was gradually paid by two VAT payers of 200 € each), see in tab. 3 and 4. The company C-SK sells goods abroad to the company D-EU, which is a VAT payer in its country. In cross-border sales VAT is not charged on the price of goods, but the company C-SK requests a refund of input tax, when buying goods from B-SK in the amount of 400 €, which ultimately has an impact on the state budget balance (Table 4).

**Tab. 4: Intra - community transaction with an impact on the state budget balance**

Companies	Input tax	Output tax	Tax liability	Excessive deduction	Revenue SB	Expenditure SB	Balance SB
A-SK	**	200	200	**	200	**	+200
B-SK	200	400	200	**	200	**	+200
C-SK	400	**	**	400	**	400	- 400
D-EU	**	**	**	**	**	**	**
<b>Impact on the state budget 0</b>							

(Source: own processing)

When comparing the state budget balance (Table 2, Table 4), we see how the balance of the Slovak Republic changes when a foreign customer from EU countries enters the distribution channel, all in the functioning of valid European regulations and laws.

**VAT system for carousel fraud with impact on the state budget**

One of the most widely used tax fraud is the so-called carousel fraud. In most cases, it is an organized group of people who form a confusing network of companies and white horses, in

which the control authorities are easily lost. The White Horse is an entrepreneur-trader, who acts on the market as a serious company, but his name is usually mentioned by violence, extortion or agreement, when registering a business or founding a company. These are people with no education or front men. At detection of crime they are in the position of the offender and the victim (Denník N 2019).

In a tax carousel it all stands and falls on three pillars. They are:

- white horse (trader),
- company (broker),
- EU VAT payer.

The whole process of tax fraud is shown on a simple model (Table 5), in which the company A – EU, so called the fictitious intermediary, is established in an EU country. Its activities have no direct negative impact on the state budget of Slovakia, but on fraud participates in the chain. In fact, carousel shops have several tens or hundreds of intermediaries (companies selling the same goods) to eliminate the risk of detection. Company B – SK, so called disappeared trader, buys goods from abroad from the company A-EU, while if he files a tax return for VAT declares the acquisition of goods, declares acquisition tax and is also entitled to deduction - there is self-tax - for the state budget 0 €. When selling these goods to company C-SK, it calculates an output tax of 24,000 € (Table 5) to be paid to the state budget. Company C-SK is a company, that creates the impression of a reliable trader, who buys and sells goods on the domestic market with a minimum mark-up. In the VAT return, it will report a high input and output tax on sales with a minimum tax liability of 200 €, which it will also pay to the state budget (Tables 5 and 6). The company C-SK (bumper) is a company inserted into the tax carousel in order to obscure and slow down the tax investigation.

**Tab. 5: Intra-community transaction**

Companies	Purchase price	Input tax	Added value	Tax base	Output tax	Tax liability	Selling price
A - EU	**	**	**	**	**	**	100 000
B - SK	100 000	**	20 000	120 000	24 000	24 000	144 000
C - SK	120 000	<b>24 000</b>	1 000	121 000	<b>24 200</b>	<b>200</b>	145 200
D - SK	121 000	24 200	0	121 000	**	**	121 000
G – EU	121 000	**	**	**	**	**	**
<b>Total tax burden of the product 24 200</b>							

(Source: own processing)

Company D-SK (trader) is the final element of the chain, that benefits from the scheme. It simulates the delivery of goods to another EU state with a tax exemption and applies a high excessive deduction from its purchase in domestic from the company C-SK, in our example 24,200 € (Table 6).

**Tab. 6: Intra - community transaction with an impact on the state budget balance**

Companies	Input tax	Output tax	Tax liability	Excessive deduction	Revenue SB	Expenditure SB	Balance SB
A - EU	**	**	**	**	**	**	**
B - SK	**	<b>24 000</b>	<b>24 000</b>	**	<b>24 000</b>	**	<b>+ 24 000</b>
C - SK	24 000	24 200	200	**	200	**	<b>+ 200</b>
D- SK	24 200	**	**	<b>24 200</b>	<b>0</b>	24 200	<b>- 24 200</b>
G - EU	**	**	**	**	**	**	**
<b>Impact on the state budget balance 0</b>							

(Source: own processing)

Table 6 represents the impact on the state budget balance, if the company B-SK (white horse) in the first round of the tax carousel actually paid VAT in the amount of 24,000 €. The balance of the Slovak Republic from this cross-border transaction would be 0 €. In table 7 points to the calculation of the negative balance of the state budget, if company B-SK does not fulfill its VAT liability and the trader - white horse disappears. Ultimately, the state budget shows red numbers from this cross-border transaction, as it has to return an excess deduction of 24,200 € to company D-SK.

**Tab. 7: Intra-community transaction with an impact on the state budget balance**

Companies	Input tax	Output tax	Tax liability	Excessive deduction	Revenue SB	Expenditure SB	Balance SB
A - EU	**	**	**	**	**	**	**
B - SK	**	<b>24 000</b>	<b>24 000</b>	**	<b>No Pay</b>	**	<b>0</b>
C - SK	24 000	24 200	200	**	200	**	+ <b>200</b>
D- SK	24 200	**	**	<b>24 200</b>	<b>0</b>	24 200	- <b>24 200</b>
G -EU	**	**	**	**	**	**	**
<b>Impact on the state budget -24 000</b>							

(Source: own processing)

From the beginning to the end of the chain, however, this is only a fiction, there is no real supply, only invoices are issued in order to fraudulently obtain real money through excessive deductions of the country. Companies C-SK and D-SK are willing to cooperate with the tax administrator, submit various evidence to their claims and the excessive deduction of company D-SK will be paid, despite the fact that VAT on this transaction was not paid by company B-SK. Because the company B-SK is non-contact, the tax office has serious difficulties in proving that taxable transactions are intentional, planned and fraudulent.

## Conclusion

The Financial Administration of the Slovak Republic carries out inspections and measures in case of suspicion of illegal trade and inspections of excessive VAT deduction. Another important tool for detecting carousel transactions is the VAT control statement, thanks to which the Financial Administration obtains data from both the supplier and the customer and can detect illegal trade based on unpaired payments. Carousel fraud also involves other legally operating entities, some of them in an effort to reduce their tax liability, and in some cases, even without company awareness, becoming part of a chain of fraudulent activities. Intra-community trade is the supply or acquisition of goods or services between countries in the European Union, the aim of which is to amend the VAT law in order to achieve harmonized rules for all EU countries.

## Záver

Finančná správa SR pri podozrení na nelegálny obchod a pri previerkach nadmerného odpočtu DPH robí kontroly a opatrenia. Významným nástrojom pre odhaľovanie karuselových obchodov je aj kontrolný výkaz k DPH, vďaka ktorému Finančná správa získava dáta od dodávateľa i odberateľa a na základe nespárovaných platieb dokáže odhaliť nelegálny obchod. Do karuselových podvodov sa zapájajú aj inak legálne podnikajúce subjekty, niektoré v snahe jednorazovo si znížiť svoju daňovú povinnosť a v niektorých prípadoch sa tak stane dokonca bez vedomia spoločnosti a stanú sa tak súčasťou reťazca podvodných aktivít. Intrakomunitárny obchod predstavuje dodanie alebo nadobudnutie tovaru alebo služby medzi krajinami v Európskej únii, ktorej cieľom sú nové úpravy a doplnenia zákona o DPH k dosiahnutiu harmonizovaných pravidiel pre všetky krajiny EU.

## References

- BENKO, J., 2016. Prečo pri nákupe z Alza.sk od 1.1.2016 fakturuje český dodávateľ podnikateľom tovar bez DPH. In: *Podnikajte.sk*. [online]. [cit. 2020-04-22]. Available from: <https://www.podnikajte.sk/dan-z-pridanej-hodnoty/alza-fakturacie-bez-dph-2016>
- DENNÍK N, 2019. Karuselové podvody. In: *Neotax*. [online]. [cit. 2020-04-22]. Available from: <https://neotax.eu/sk/sk/blog/karuselove-podvody>
- JUSKOVÁ, M. and S. JENČOVÁ, 2018. Systém DPH a vplyv platcovstva dane na predajnú cenu. In: *Dimenzie konkurencieschopnosti, trendy a výzvy*. Prešov: Bookmans. s. 33-40.
- KRÁLIK, J., GRÚŇ, L. and L. BALKO, 2001. *Základy daňového, poplatkového a colného práva*. Bratislava: Právnická fakulta UK. ISBN 80-7160-150-8.
- ROLICK CONSULT, 2018. *Samozdanenie – intrakomunitárny obchod – reverse charge*. [online]. [cit. 2020-04-22]. Available from: <http://rolick.sk/sk/blog/10/samozdanenie-intrakomunitarny-obchod-reverse-charge>
- SEDLIAK, M., 2016. Intrakomunitárne obchody. In: *Ekonom.sk*. [online]. [cit. 2020-04-22]. Available from: <https://www.ekonom.sk/dph/intrakomunitarne-obchody/>
- SCHULTZOVÁ, A. et al., 2011. *Daňovníctvo – daňová teória a politika I*. Bratislava: Iura Edition.
- ŠIROKÝ, J., 2016. *Základy daňové teórie s praktickými príklady*. Praha: Wolters Kluwer ČR.
- Zákon č. 222/2004 Z.z. o dani z pridanej hodnoty v znení neskorších predpisov
- Zákon č. 431/2002 Z.z. o účtovníctve v znení neskorších predpisov

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**ASSESSMENT OF SELECTED DETERMINANTS OF BURNOUT SYNDROME AND COPING STRATEGIES IN TERMS OF DEMANDING SITUATIONS IN MANAGERS**

**POSUDZOVANIE VYBRANÝCH DETERMINANTOVSYNDRÓMU VYHORENIA A COPINGOVÝCH STRATÉGIÍ Z HĽADISKA ZÁŤAŽOVÝCH SITUÁCIÍ U MANAŽÉROV**

**Abstract**

*Burnout syndrome may affect anyone of us, what is more, certain differences in its occurrence are noticeable, especially in personality traits, in gender and often in the behavior of managers. The main aim of the article is to assess the signals of burnout syndrome and coping strategies in terms of demanding situations in managers. The main determinants of burnout syndrome, Depersonalization, Emotional Exhaustion, and Personal Accomplishment were included in the Maslach Burnout Inventory, which consists of twenty-two questions, separately dealing with the mentioned, individual determinants. The Brief Cope Inventory was used to find out, which coping strategies individuals choose in demanding conditions or how they behave during stressful situations. It outlines fourteen approaches about how to cope with uncomfortable and chaotic situations. The research was carried on a sample of 113 respondents. The final outcomes of the analysis have confirmed the existence of statistically significant links between the determinants of burnout syndrome and coping strategies in terms of demanding situations in managers. What managers say matters, because every word matters. Those who are aware of this, use the right words to influence coping skills of employees in a positive way.*

**Keywords:** *Coping strategies. Burnout syndrome. Maslach Burnout Inventory, The Brief COPE*

**Kľúčové slová:** *Copingové stratégie. Burnout syndróm. Maslach Burnout Inventory, The Brief COPE dotazník*

**JEL classification:** *M5, A140*

**Introduction**

Nowadays, burnout syndrome has become a serious problem and we can see, that humankind tends to experience feelings of being alienated, withdrawn, disturbed, unstable or angry, which can lead to often conflicts at the workplace [20]. Burnout is a psychological syndrome, which appears among persons, who work with other people in some capacity [21]. It mainly concerns responsible, capable, proficient, ambitious people who are used to put the greatest effort into their passion or work. It is like a gamble for persons so-called high achievers, who do not realize or ignore that they work for a very long time, they take on burdensome tasks and exert pressure on themselves [5]. The burnout syndrome is characterised by a model of emotional suffering.

It includes the three main categories of symptoms, the first aspect is Emotional Exhaustion (EE) described as the feeling of being emotionally drained, depleted, includes symptoms of fatigue, increased sensibility to stressors from the external surrounding or feeling of having very low energy, the second aspect is Depersonalization (DP) or cynicism, represents negative feelings, having a lower empathy towards people, bad perceptions about the clients, patients, colleagues with the attempt to be distanced from them. This perception of the others, who are considered to be callous or dehumanized, may lead members of staff to see the clients, colleagues, patients, etc., as somehow deserving of their troubles. The third aspect is Personal Accomplishment (PA) characterized as a negative self-evaluation, loss of satisfaction and motivation, and overall by a low efficiency on work-related actions [12]. The Harvard medical school study reported that about ninety-six percent of senior executives feel burned out. The remaining percent describes the state as an extreme burn out [23]. There exist a three types of burnout syndrome, overload syndrome – frenetic, due to perpetual demands and responsibilities, then under-challenged syndrome – demotivating, produces feelings that everything is developing in the bad direction, then it comes total apathy, and the last one is worn-out syndrome – wear out, brings chronic or repeated need to avoid or ignore all duties [17]. Burnout syndrome is considered as the result of being very stressed and not having a good support structure [13]. Beneficial and healthy relationships with an appropriate environment, with a good work organization, and the ability to use a free time properly, learn to be assertive, so all this is a perfect help from the perspective of prevention [18].

Incessantly changing efforts of cognitive and also behavioural character with the aim to manage specific internal or external demands, which are appraised as demanding or exceeding the resources of the person [8]. Or else, almost unmanageable situations or the ability to handle the unusually difficult tasks, characterises the concept of the ability to handle the unusually difficult tasks. The Latin word *colaphos*, known as a blow with the fist, represents the concept of dealing with a difficult situation as a higher level of adaptation that we need to have to cope with an extreme stress situation. Coping is changing for the same human over some time, and also it is changing according to the necessities of the situation [16]. It is described as an effort of an individual to handle difficulties which are perceived as an exceeding force of people [22]. According to [19] the problem-focused coping strategies, are much more effective because of making a direct effort to change or modify stressors from the external environment, as learning innovative skills or finding a new solution, e.g. confrontive coping, solving problem by making a plan [10]. According to [19] the emotion-focused coping strategies, are less effective because it involves the change of individual appraisals of the worrying situation with the main aim to eliminate a necessity to take the actions, as wishful thinking or seeking some emotional support, e.g. distracting, reappraisal in positive way [11]. To learn how to cope with a stressful occasion and how to regulate and control emotions, is like to understand the core aspects of development of human from childhood to adulthood [7]. These skills show how important is the role of them on the overall adaptational outcomes [4].

A negative impact on the mental health of an employees, results from stressful workplace. Links among stress, mental illnesses, unhealthy coping skills are visible afterward, and are considered as a major threat and concern to workforce and its productivity. Success depends on managers with empathy, with a solicitude to remove judgment or stigma, and on those who can understand the importance of the ‘employee-manager’ relationship [15]. The study from authors [1] shows the relationship between the practices of project managers, coping strategies of disposition and

control appraisals, used by project managers while dealing with demanding situations. Results showed that managers use more often Planning and Active coping as successful strategies. Also, it states that the level of maturity of organisational practices is often related to intensified using of coping strategies of Planning. Among managers, a stress develops an unhappy connotation, which implies the weakness. In a professional or corporate environment, an individual becomes vulnerable. The unprecedented necessity in management presents self-management in all fields of manager life [6].

### Research Methodology

The research was conducted through the questionnaires Maslach Burnout Inventory (MBI) and the Brief COPE Inventory. The main aim of this research was to determine the existence of statistically significant links among selected determinants of burnout syndrome (EE, DP, PA) and coping strategies (14) in terms of the demanding situation in managers. The research participated in a total number of 113 respondents, of which 45 were men (39.8%) and 68 were women (60.2%). The respondents in terms of inclusion in the organization, were represented in number of 8 people as top managers (7%), 25 people as middle-level managers (22%), then 25 people as first-level managers (22%) and 55 people as employees (49%). From the point of respondents, we considered as important to find out the number of years of work experience in general, and the number of years of work in managerial practice. The maximum number of years of work experience in general was 37. The maximum number of years of managerial experience was 35. The average number of years of general work experience represented 13 years, and the average number of years of managerial practice represented 5.5 years. The first part of methodologies was focused on the strength of feelings of managers, because the burnout is characterised as a complex construct. The second part of methodologies examined how managers deal with stressful situations and which coping strategies they prefer to use.

**The methodology of Maslach Burnout Inventory (MBI)** consists of 22 questions, items, that are divided into three main subscales, or also known as the aspects or predictors of Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA). The questions are written in the form of proclamation about individuals' feelings or attitudes, e.g. 'I do not really care what happens to colleagues, clients, 'I feel burned out from work' and etc. [21]. The questions are answered by the opportunity to choose from the options on seven-point Likert scale 0 – never, 1 – several times per year, 2 – monthly, 3 – several times per month, 4 – weekly, 5 – several times per week, 6 – daily. For the aspect of Emotional Exhaustion (EE) and for the aspect of Depersonalization (DP) is typical a higher mean score that corresponds to the higher degree of experienced burnout. But in contrast to the mentioned aspects above, the Personal Accomplishment (PA) reaches a lower mean score, which corresponds to the higher degree of experienced burnout.

**Tab. 1: Evaluation key of Maslach Burnout Inventory (MBI)**

<b>Emotional Exhaustion</b>	EE + PE (emotional + physical exhaustion)
low 0 – 16	average value 19,0
moderate 17 – 26	
high 27 and more	state of burnout
<b>Depersonalization</b>	DP (depersonalization)
low 0 – 6	average value 6,6

moderate 7 – 12	
high 13 and more	state of burnout
<b>Personal Accomplishment</b>	PA (personal accomplishment)
high 39 and more	
moderate 38 – 32	average value 36,8
low 31 – 0	state of burnout

Source: Authors

**The methodology of The Brief COPE Inventory** focuses on the detection of coping strategies of stressful situations. It is being detected, which strategies are chosen by individuals in certain stressful situations. The Inventory was designed by Carver in 1997 from the original The Full COPE Inventory. Due to its complexity was gradually reduced into lower number of items. In the research this methodology involves 28 items with four-point scale of answers, 0 – I have not been doing this at all, 1 – I have been doing this sometimes, 2 – I have been doing this often, 3 – I have been doing this a lot. The questions are from the point of content divided into fourteen subscales, that deal with a certain coping strategy, e.g. the subscale of Seeking Social Support is described by following coping strategy: ‘Talked to someone who could do something specific about the problem’ [26].

**Tab. 2: Subscales of The Brief COPE Inventory**

subscale	coping strategy	question number in methodology
1	self-distraction	1 and 19
2	active coping	2 and 7
3	denial	3 and 8
4	substance abuse	4 and 11
5	emotional support	5 and 15
6	instrumental support	10 and 23
7	behavioural disengagement	6 and 16
8	venting	9 and 21
9	positive reframing	12 and 17
10	planning	14 and 25
11	humour	18 and 28
12	acceptance	20 and 24
13	religion	22 and 27
14	self-blame	13 and 26

Source: Authors

In the research, the attention was focused on identifying differences in terms of inclusion in the organization in the assessment of determinants of burnout syndrome (3). Also, the attention was focused on assessing of coping strategies (14) in terms of inclusion in the organization. Information acquired from respondents were verified in a statistical program SPSS 22 by using *t*-test for two independent selections, by which was identified the existence of statistically significant differences in the assessment of selected determinants of burnout syndrome in terms of inclusion in the organization (Table 1) and by which the existence of statistically significant differences in the assessment of coping strategies in terms of inclusion in the organization was detected (Table 2).

## Research results

From the view of the analysis, a statistically significant differences in selected determinants (3) in terms of inclusion in the organization were reported (Table 1). Managers achieved a higher score in the all of three determinants, in Emotional Exhaustion, Depersonalization, and Personal Accomplishment in comparison to employees. Respondents answered mostly with the third option ‘monthly’ and the determinant of Personal Accomplishment, achieved the highest score, because respondents approached the fourth possibility of the answer ‘several times per month’.

**Tab. 3: Differences in the assessment of selected determinants of burnout syndrome in terms of inclusion in the organization**

determinants of burnout syndrome	inclusion	mean	standard deviation	test criterion	significance
Emotional Exhaustion	manager	2,264	0,757	1,999	0,050
	employee	1,969	0,895		
Depersonalization	manager	2,458	0,707	2,232	0,028
	employee	2,112	0,929		
Personal Accomplishment	manager	2,844	0,581	2,443	0,016
	employee	2,525	0,798		

Source: AuthorsA statistically significant differences in terms of coping strategies (14) were reported (Table 2).

In the strategy of Active coping, managers achieved a higher score in comparison to employees, since managers choose the third option of the answer ‘I have been doing this often’. It means that they focus an effort to solve demanding situations actively, probably every day. Managers use a strategy of stress-management to control stressors via appropriately targeted behaviour and embracing responsibility for solving situations by using internal sources, that are available. Employees choose the possibility to answer with the option ‘I have been doing this sometimes’. The second strategy is Venting in which managers achieved a higher score. The answers were at the turn between the options ‘I have been doing this sometimes’ and ‘I have been doing this often’. Venting and its values refers to an unpleasant feeling or expressing negative feelings. It allows to validate and rationalize concerns, dreams, hopes, worries or fears of the managers. Employees achieved values which were very close to the second answer ‘I have been doing this sometimes’.

In the strategy of Positive reframing was achieved a higher score by managers, because they approached the possibility to answer, ‘I have been doing this often’. Developing this coping strategy helps them to build a resilience to stress, improve overall emotional or physical health. Managers use a technique to help them to realise motives and behaviour of the other people in a positive way. Often, they try not to think about the conflict in a negative way. Employees choose the possibility to answer with the option ‘I have been doing this sometimes’. The strategy of Planning achieved a statistically significant difference in terms of managers, since they choose the third option with the answer ‘I have been doing this often’. They take the initiative to plan everything in advance and not to be surprised by unexpected or demanding

situations. For managers, planning means the approach to support a healthy coping strategy, to improve overall well-being, and of course to avoid stress. Employees choose the possibility to answer by the second option ‘I have been doing this sometimes’.

**Tab. 4: Differences in the assessment of selected coping strategies in terms of inclusion in the organization**

<b>coping strategies</b>	<b>inclusion</b>	<b>mean</b>	<b>standard deviation</b>	<b>test criterion</b>	<b>significance</b>
self-distraction	manager	1,224	0,656	0,025	0,980
	employee	1,227	0,651		
<b>active coping</b>	<b>manager</b>	<b>1,879</b>	0,572	2,629	<b>0,010</b>
	employee	1,590	0,593		
denial	manager	0,862	0,590	0,366	0,715
	employee	0,900	0,503		
substance abuse	manager	0,301	0,486	1,248	0,215
	employee	0,190	0,456		
emotional support	manager	1,491	0,672	0,284	0,777
	employee	1,527	0,669		
instrumental support	manager	1,422	0,724	0,262	0,794
	employee	1,454	0,563		
behavioural disengagement	manager	0,741	0,515	1,253	0,213
	employee	0,863	0,522		
<b>venting</b>	<b>manager</b>	<b>1,491</b>	0,678	2,741	<b>0,007</b>
	employee	1,172	0,546		
<b>positive reframing</b>	<b>manager</b>	<b>1,741</b>	0,732	2,321	<b>0,022</b>
	employee	1,445	0,613		
<b>planning</b>	<b>manager</b>	<b>2,146</b>	0,688	4,416	<b>0,000</b>
	employee	1,645	0,623		
humour	manager	0,931	0,824	1,356	0,178
	employee	1,118	0,623		
acceptance	manager	1,698	0,627	0,226	0,822
	employee	1,672	0,571		
religion	manager	1,448	1,142	0,641	0,523
	employee	1,572	0,899		
self-blame	manager	1,336	0,664	0,234	0,815
	employee	1,363	0,572		

Source: Authors

## Discussion

In this research were recorded and investigated the opinions of 113 respondents. Afterward, the answers of respondents were analysed and evaluated in program SPSS 22 by using a *t*-test for two independent selections. Results of the research conducted by methodologies of Maslach Burnout Inventory (MBI) and The Brief COPE Inventory, has brought the conclusion in terms of demanding situations in managers, which confirmed the existence of statistically significant differences in assessing selected determinants of burnout syndrome (EE, DP, PA) and coping strategies (14). The results were conducive to the meaningfulness and to the significance of the contribution considering the increasing worldwide state of burnout syndrome among managers. Research findings confirmed the difficulty of working life in the society of nowadays, which is often over-saturated by many obligations.

In the determinant of Emotional Exhaustion, a higher score in the managers was achieved. They feel in constant pressure and emotionally drained from keeping their employees engaged. Here arises a chance to be more irritated from approaching 'the desk of the manager' by an employee, while a manager looks very busy. There starts to exist a bigger chance to be complaining about a demand of being available for a team all the time. Eventually, managers start to feel that they do not like their job anymore.

The determinant of Depersonalization also achieved a higher score in the managers. The results point to experiencing of losing the ability to concentrate, having a feeling of being disconnected from workers, and being unable to interact with colleagues. Managers suffer from lack of emotional support, but in spite of it, they are forced to put on professional behaviour even while they feel uncomfortable, demotivated, exhausted inside. They fear embarrassing themselves by losing control of the situation.

In the determinant of Personal Accomplishment was achieved a higher score in the managers. They battle for excellence at every level, try to be a suitable example to employees in everything they do. Reasonable managers try not to lose employees due to a bad relationship with them. Managers have a huge potential to influence employees positively. Having happy employees means for managers to become more efficient. Managers are satisfied with people who are able to get ahead in the companies, since they are really glad for inspiring them to make an important influence on the organization. And the managers should be congratulated for work well done.

The strategy of Active coping focusses an effort to solve situations actively, by appropriately targeted behaviour and responsibility for solving circumstances, by using all available internal sources. The strategy of Active coping is a sign, that managers use it for seeking professional help, for seeking information, for changing the environment, for seeking social support, etc. So, managers often rely upon their own resources to cope with many stressors. For the strategy of Active coping exists numerous empirical and theoretical frameworks, many different ways of categorising coping strategies. Generally, the strategy of Active coping refers to the usage of those behavioural and psychological coping efforts, which are described as an attempt to use our own resources to deal with a demanding situation [27].

The coping strategy of Venting means at some point in time a good and necessary feeling for managers. However, managers should be careful because actually they may feel worse. Venting in some way increases a level of anger and stress, instead of reducing it. Unsuccessful ways to cope with failures may seem literally counterintuitive to those managers, who have been taught

to share negative feelings with the aim to ‘purge’ them. Actually, it creates more stress because it keeps angry feelings and aggressive thoughts alive. Of course, managers say about venting that it feels really good, but the feeling does not last for a long time. In the end, it reinforces aggressive impulses. Psychologist Dr. Stoeber from the University of Kent in England, in [14] recommends to find some positive aspects and rethink, what positive happened during coping with a demanding situation. For example, focus on what has been achieved, rather than focus on what has not been achieved.

Via the coping strategy of Positive reframing, a sense of coherence in managers may be affected by a gratitude. With this strategy, managers try to identify the existing gap among two opposite viewpoints, and then to identify the issue which needs to be solved. This fact can help to focus on what really needs a good solution. Managers know some methods how to reframe uneasy situations from a positive perspective. They cannot control all circumstances in their lives, but they can control how they view it. Reframing a challenging circumstance in a positive way can decrease overall level of stress in managers. Afterwards, managers evaluate what they can take from the situation and try to see some useful opportunities in demanding moments, they try to remember to be tolerable, even if the situation is hectic. Managers during Positive reframing try to practice positive self-talk and be kind to themselves, try to be surrounded with positive people and try to use an optimistic vocabulary and in the end, they try to reduce a workload.

The study [24] has examined how perfectionism predicts which coping strategies managers use while dealing with failures, and how coping and perfectionism influence their satisfaction. The study was about differentiating strivings of perfectionists and concerns of perfectionists. The findings have suggested that coping strategies are helpful during dealing with personal failures in general, so Positive reframing is a strategy that works especially well for managers, who are prone to lack of satisfaction, better said for people of high perfectionistic concerns, who want to achieve greater satisfaction at the end of the day.

The strategy of Planning serves as a support for all managers with a tendency to be distressed. They see it as a part of mental health or future wellbeing. Reasonable managers have a tendency to make plans and organize schedules. It involves the setting of aims and being strong-minded to do the best to achieve them. Managers know that the essence of achieving goals is planning.

The study of [2] has reported the relationship between coping strategies of project managers while dealing with three types of stressors, personal health and home, work and the culture of managers. A total of 216 professionals from 30 countries have confirmed, that managers use more strategies of Planning and Active Coping regularly, while they attempt to cope with work, personal health and home, and stressful situations. Planning and Active Coping have positively correlated to the application of the skills of a project manager. The results have also indicated the existence of consistency in how managers choose to cope with stressors. The influencing factors, expressing the consistency, have been unclear from the study, however, the consistency in most general studies is unique. Outcomes have provided an understanding of how project managers cope with stressful situations, and how organizations can support them. In findings of different studies in terms of demanding situations in managers, or from the point of view of gender differences in managers, contrasts basically exist. According to [8] men often have a tendency to use the problem-focused coping strategies e.g., manifestations of behaviour. Women have more often a tendency to use the emotion-focused coping strategies e.g., classical emotional responses. These findings may be relevant to women working as managers. [9] have reported that women, in general, have a higher level of stress, since they are more often exposed

to obligations arising from their social and marital role. Another study has reported the opposite statement, so that women are more problem-focused and more active than men [3]. Research of Project Management Perspective has brought the information about the position of women managers, what requires abilities which are multitasking, reliability, a less number of unfinished projects, more frequent fulfillment of expectations or completed goals, adherence to schedules, good results in the budget the project, etc. [25].

## Conclusion

The research and its results are considered to be beneficial, because it points to numerous cases of increasing burnout syndrome around the world. This research paper has contributed to raising awareness of stress, which may result in a serious problem of mental health.

Several factors of burnout are related to the work and lifestyle of the manager. Some preferences and tendencies to which they are accustomed, contribute to how managers react in demanding situations. Mostly, they are exposed to an increased risk of burnout syndrome, originated from e.g., unfulfilled goals, perfectionism, lack of self-belief, pessimism, bad relationships among colleagues or employees, emotional instability, mutual rivalry, which motivates to achieve better results but usually ends as a failure, loss of motivation, fear of risk-taking, etc. The point is that female or male managers may have a totally different approach to work since they handle the same situations differently. The style of work of every manager could be slightly influenced by previous experience and personality traits. The foundation of every success are strengths of managers, flexible and well-used methodologies, and appropriate coping strategies in the time. As a limit of this research is considered the sample of respondents, but in the future, it is planned to enlarge the research sample by including new respondents. The plan is to enrich upcoming research with a new analysis of personality traits, that expose our society to a possible danger of burnout syndrome.

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## References

- [1] AITKEN, A., and CRAWFORD, L., 2007. Coping with stress: Dispositional coping strategies of project managers. *International Journal of Project Management*, 25(7), 666-673.
- [2] AITKEN, A., 2011. *Coping Strategies of Project Managers in Stressful Situations*. Available at: <https://research.bond.edu.au/en/studentTheses/coping-strategies-of-project-managers-in-stressful-situations>
- [3] BEN-ZUR, H., & ZEIDNER, M., 1996. Gender Differences in coping reactions under Community Crisis and Daily Routine Conditions. *Journal of Personality and Individual Differences*, 20, 331-340.
- [4] BONANNO, G.A., and BURTON, C.L., 2013. Regulatory Flexibility: An Individual Differences Perspective on Coping and Emotion Regulation. *Perspectives on Psychological Science*, 8(6), 591-612.
- [5] CARTER BOURG, S., 2013. The Tell Tale Signs of Burnout. Do you have them? *Psychology Today*. Available at: <https://www.psychologytoday.com/intl/blog/high-octane-women/201311/the-tell-tale-signs-burnout-do-you-have-them>

- [6] COETZEE, J. J. L., 1989. Stress-Coping Styles Among South African Managers. *Stress and Tension Control*, 3, 187-197.
- [7] COMPAS, B. E. et al., 2014. Coping and emotion regulation from childhood to early adulthood: Points of convergence and divergence. *Australian Journal of Psychology*, 66(2), 71-81.
- [8] DAY, A., and LIVINGSTONE, H., 2003. Gender Differences in Perception of Stressors and Utilization of Social Support among University Students. *Canadian Journal of Behavioral Science*, 35, 73-83.
- [9] DENTON, M., PRUS, S., and WALTERS, V., 2004. Gender Differences in Health: A Canadian Study of the Psychological, Structural and Behavioral Determinants of Health. *Social Science and Medicine*, 58, 255-260.
- [10] FOLKMAN, S., LAZARUS, R. S., DUNKEL-SCHETTER, C., DELONGIS, A., and GRUEN, R. J., 1986. Dynamics of a stressful encounter: Cognitive appraisal, coping and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992-1003.
- [11] FOLKMAN, S., LAZARUS, R. S., GRUEN, R. J., and DELONGIS, A., 1986. Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology*, 50(3), 571-579.
- [12] FONTANA, M.C.P. et al., 2020. Burnout syndrome, extracurricular activities and social support among Brazilian internship medical students: a cross-sectional analysis. *BMC Med Educ* 20(81).
- [13] GOLD, Y., 1984. Burnout: A Major Problem for The Teaching Profession. *Spring84*, 104(3), 271.
- [14] GOLIN, S., 2011. Stressed? Venting to a Friend May Make You Feel Worse. *Live Science*. Available at: <https://www.livescience.com/14986-stressed-venting-friend-feel-worse.html>
- [15] HOWATT, B., 2017. *Leading through coping skills*. Available at: <https://www.theglobeandmail.com/report-on-business/careers/leadership-lab/leading-through-coping-skills/article33204586/>
- [16] HYBENOVÁ, V., 2010. *Zvládanie záťažových situácií a relaxačné techniky v práci výchovného poradcu*. Available at: [http://web.saaic.sk/nrcg\\_new/doc/Zbornik/20\\_Kap-5.4.pdf](http://web.saaic.sk/nrcg_new/doc/Zbornik/20_Kap-5.4.pdf)
- [17] JANSEN, J., 2016. *Nevím, co chci, ale rozhodně ne tohle. Praktický průvodce na cestě k povolání vašich snů*. Praha: Albatros Media a.s.
- [18] KOHOUTEK, R., 2018. BURNOUT – stav osobnostního vyhoření. *Psychologie v teorii a praxi*. Available at: <http://rudolfkohoutek.blog.cz/1802/syndrom-vyhoreni-burnout>
- [19] LAZARUS, R.S., and FOLKMAN, S., 1984. *Stress, Appraisal and Coping*. New York: Springer-Verlag.
- [20] MAROON, I., 2012. *Syndrom vyhoření u sociálních pracovníků. Teorie, praxe, kauzistiky*. Praha: Portál, s.r.o.
- [21] MASLACH, CH., JACKSON, S. E., LEITER, M., 1997. *The Maslach Burnout Inventory Manual*. 3<sup>rd</sup> Edition. New York: Consulting Psychologists Press.

- [22] MONAT, A., and LAZARUS R. S., 1991. *Stress and coping: An anthology*. 3 Ed. Columbia university press.
- [23] NISEN, M., 2013. Why Executive Burnout is a such Huge Problem? *Business Insider*. Available at: <https://www.businessinsider.com/ceo-burnout-is-a-growing-problem-2013-5>
- [24] STOEBER, J., and JANSSEN, D. P., 2011. Perfectionism and coping with daily failures: positive reframing helps achieve satisfaction at the end of the day. *Anxiety, Stress & Coping*, 24(5), 477-497.
- [25] TAYLLOR & COX, 2019. *Ženy vs. muži: Kto je lepším projektovým manažérom?* Available at: <https://www.tcox.sk/blog/manager/muzi-vs-zeny-kto-je-lepsim-projektovym-manazerom/>
- [26] VITULIĆ, S. H., and PROSEN, S., 2015. Coping and Emotion Regulation Strategies in Adulthood: Specificities Regarding Age, Gender and Level of Education. *Journal for General Social Issues*, 25(1), 43-62.
- [27] ZEIDNER, M., and ENDLER, N. S., 1996. *Handbook of Coping: Theory, Research, Applications*. Ney York: Wiley.

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