



Faculty of Education  
Catholic University in Ružomberok



## **The Poprad Economic and Management Forum 2017**

Peter Madzík (editor)

Conference Proceedings from International Scientific Conference  
19<sup>th</sup> – 20<sup>th</sup> October 2017  
Poprad, Slovak Republic



Poprad  
2017

## PEMF 2017

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## **PEMF 2017**

PEMF 2017 conference is devoted to presentation of actual problems, trends and challenges from the area of theory and practice concerning management of entrepreneurial and non-entrepreneurial subjects, area of tourism and integrating area of humans' life quality in a modern town/village/region. Exchange of actual theoretical and practical knowledge resulting from the area of holistic management is required and a wider public platform will contribute to fulfilment of the idea of meaningful cooperation of theory and practice, higher quality of university programmes of studies, networking and mutual positive enrichment of experts from practice, scientific and pedagogic workers and last but not least students as well.

The conference is divided into three topical areas with following issues:

### **Session A: Multidimensional approach to processes performance increase**

- increasing of processes performance in conditions of knowledge economy,
- innovation and quality – pillars of companies' competitiveness and fulfilment of expectations of a wide range of interest groups,
- building of management system of organizational units in specific regional conditions.

### **Session B: Human potential development**

- human resources management and development, strategic management, long-life education, job performance management, ergonomics and environmentalism, personnel marketing, personnel audit, knowledge management, social and emotional maturity, company culture,
- company personnel activities, human potential education and development, human resources management process, social care of employees, information systems in personnel work.

### **Session C: Tourism – history, present time and future**

- milestones in development of tourism in Slovakia since the 2nd half of 19th century,
- potential of tourism development in Poprad in dimensions of the High Tatras regions, foothill, Spiš, Liptov and Zamagurie,
- potential of tourism development of Poprad in dimensions of Slovak – Polish cross-border region,
- cooperation of private and public sector in the area of tourism,
- quality of citizens' life in relation to tourism development.

#### **Conference website:**

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## Foreword

The International Scientific Conference is organized annually by the Department of Management, which is the part of the Faculty of Education of the Catholic University in Ružomberok. This is its 10th year, which is organized for the first time under the integrated name The Poprad Economic and Managerial Forum 2017. During the history of the Management Department three conferences were organized:

- International Scientific Conference - **The Messages of John Paul II. in economics, management and human life** (1st - 9th year in 2008 - 2016),
- International Scientific Conference - **A knowledge-based organization in the period of globalization and internationalization** (1st - 6th year in 2009-2014),
- International Scientific Conference - **Marketing Trends in the Knowledge Society** (1st - 4th year in 2011-2014),

During this period, the external environment that formed the university education changed significantly and this influenced the strategic decision of the Department of Management to organize one integrated conference from 2017 - the Poprad Economic and Managerial Forum. That is why, under this name on 19-20 October 2017, the 10th anniversary conference of the Poprad Economic and Managerial Forum 2017 (PEMF 2017) was held and was aimed at the actual challenges “Trends in Quality of Work, Production, Service and Life”. The conference was held under the auspices of the Ministry of Education, Science, Research and Sports of the Slovak Republic under the auspices of the Rector of the Catholic University, the Dean of the Faculty of Education of the Catholic University and in coordination with the city of Poprad.

The participants of the conference were interested in the papers of important representatives of the state administration and self-government, represented by the State Secretary of the Slovak Ministry of Education, Science, Research and Sports Peter Krajňák and the Mayor of Poprad Jozef Švagerko, representatives of the academic community as the Rector of the Catholic University in Ružomberok Jozef Jarab, the Dean of the Faculty of Education of the Catholic University of Ružomberok Peter Krška, the Dean of the Faculty of Economics of the Technical University of Liberec Miroslav Žiška, representatives of two most important employers of Prešov and Žilina region – the Chairman of the Board of Directors of CHEMOSVIT Group, a.s. Svit Jaroslav Mervart and the marketing director of Tatry mountain resorts, a.s. Liptovský Mikuláš Juraj Chovaňák, the director of the important innovative company Ekoservis Slovensko, a.s. Veľký Slavkov Werner Frank, the member of the European Academy of Sciences and Arts and Chairman of the Supervisory Board of I.D.C. Holding, a. s., Bratislava Štefan Kassay, the Nestor of the Slovak hotelier business František Odložilík or the director of VINO & Tapas, Poprad Peter Sisak whose restaurant project was evaluated in 2017 as one of the top 10 restaurants in Slovakia according to the TREND TOP Restaurant rating.

The conference program was devoted to presenting current issues, trends and challenges in the area of theory and practice of management of business and non-business subjects, tourism and the integrating area of quality of human life in a modern city / municipality / region. Lectures, discussions, and networking have greatly contributed to the exchange of current theoretical and practical knowledge from the area of holistic management and created an effective place to move closer to the mutual cooperation of the academic community and practice.

The ideas that have been developed are further elaborated, and specific results are also known in the form of project proposals and solutions. The wider common platform thus contributed to fulfilment of the idea of meaningful co-operation between theory and practice, to the improvement of study programs at universities, to networking and to the mutual positive enrichment of practitioners, scientific and pedagogical staff, and, last but not least, students.

The conference program was opened by a plenary session, which was attended by all the participants of the conference, and the first scientific journal of the Faculty of Education of the Catholic University, REFLEXIE - Compendium of Theory and Business Practice, was presented and solely introduced to scientific and professional practice. In addition to the greetings of the rare guests, the original scientific lectures of each session were presented and they divided the conference participants to three parallel sessions:

- Multidimensional approach to processes performance increase.
- Human potential development,
- Tourism – history, present time and future,

Poprad, 2017 October

Anna Diačiková

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## **Session A**

**Multidimensional approach to processes  
performance increase**

# Application of the Project's Management in the Business as a Way of Increasing its Performance: Case Study

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## Abstract

Improving performance, productivity and sustainability is a necessity for every business. Nowadays, it is also necessary to respond flexibly to changing customer requirements. Just project management and its application and use in the enterprise allow focusing on priorities, tracking activities, time, overcoming obstacles, anticipating change and adapting. The general basement of project management remains the same. Only the means, the methods that are applied within the project, are changed. Project management focuses on structure, intention, flexibility and coordination in achieving results. Properly chosen strategy, detailed planning and predefined goals are a guarantee of a successful project. Every project manager should think about how to make decisions more effective and enable their people to work more effectively just by knowing and using project management tools and methods. The aim of the paper is familiarizing with the demandingness and responsible work of the project team when implementing a specific project.

Keywords: project manager; project management; project team; product; business performance.

JEL Classification: M11, O22, O32

Article Classification: Case study

## 1 Introduction

Project management involves the management of all the projects that are implemented in the business. Project's management is one of the components or elements of project management of the company. It is aimed at achieving a certain goal within a certain time within the budget, while respecting all functional and technical

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requirements. Organizational units participating in a project must also carry out current functions to ensure the organization operations.

Management of a project is a specific methodology for planning a project and managing its implementation. It is a philosophy of approach to project management with a clear set of objectives that have to be attained at due time, cost and quality, while respecting the determined strategy, while using specific project procedures, tools and techniques.

Recent scientific contributions point to the four P's of project management. "4 P's" are sufficient to describe the culture that occurs within the project teams: 1) P for Plan: refers to all activities that involve planning and forecasting. At this phase, the project and / or elements of the projects have not materialized yet; 2) P for Processes: projects consist largely of a series of predetermined and well-structured processes; 3) P for People: People are an essential component of project dynamics and a number of studies show that people are at the heart of some projects' endemic problems. In particular, the so-called "dreadful combination" refers to a mixture of poor planning and inadequate people; 4), P for Power: describes all lines of authority, decision-maker, policies for implementation etc. (Mesly, 2017).

Project management methods and practices have their justification and are useful for new complex and significant tasks. That will be incorporated into practice in the foreseeable future. If we use these procedures for every routine task that can be easily solved within one department, labor content and costs increase, and employee motivation decreases. For this reason, many businesses have clear rules, from what measurable quantities and complexity of intentions these tasks are addressed as projects and are planned and managed as projects. This group also includes project complexity. Two important dimensions that greatly determine the complexity of the projects are the clarity of the objectives and the addressees of the project results.

The concept of project management is of wider significance. It represents the "superstructure" of individual project's management. Project management is used in project-type organizations in which several projects are implemented at the same time. Project management also means the organization, management and coordination of several projects simultaneously. Project management involves the planning, delegation, control and management of all aspects of the project. Project management does not mean the development / production of results / products of the project. This is the task of the team's experts. It is also important to realize that the project manager is solely involved in managing of the project. From a detailed point of view, there are six dimensions that project management has to manage.

In both, professional and lay public, concepts of project's management and project management are often perceived as synonyms, but their distinction has its significance not only in theoretical, terminological, but also in the practical level. Management generally includes five main activities, which we also find in the field of designing:

- planning
- organizing
- decision making
- leading of people
- inspection.

In terms of project's management, the approach breaks down and manages the work through a series of distinct steps to be completed, and is often referred to as "traditional" (Wysocky, 2013) or "waterfall" (Royce, 1970). Although it can vary, it

typically consists of five process areas, four phases plus control. Typical development phases of a project:

- initiation
- planning and design
- construction
- monitoring and controlling
- completion or closing.

Many companies use variations of these project phases and it is not uncommon for the phases to be renamed (pre-planning, conceptual design, schematic design, design development, construction drawings and construction administration) in order to better suit the organization.

It is noted that phased approaches are not well suited for projects which are large-scaled (Haas, 2017), with ambiguous, undefined or fast-changing requirements (Conforto, 2014), or those with high degrees of risk, dependency, and fast-changing technologies (Waterfall, 2016). The cone of uncertainty explains some of this as the planning made on the initial phase of the project suffers from a high degree of uncertainty. This becomes especially true as software development is often the realization of a new or novel product.

These complexities are better handled with a more exploratory or iterative and incremental approach (Snowden, 2017). Several models of iterative and incremental project management have evolved, including agile project management, dynamic systems development method, extreme project management, and Innovation Engineering (Standford, 2017).

## **2 Material and methods**

Project's management is the application of knowledge, experiences, tools and techniques to project activities with the intention of meeting the needs of the beneficiary and the project's expectations. A set of activities that are necessary for the realization of the project objectives are often called the framework of a project. The project framework is one of the three basic elements which should be kept in balance. Resources, whether personal or technical, are needed for the implementation of the project. However, they all generate costs and expenses and are therefore budget-dependent. The work schedule determines the time and sequence of each step as well as the overall duration of the project. While the timing and sequence of individual steps may be modified as part of the project according to needs, the project financing period is determined by the contracting authority/ grant provider, as defined in the contract. Sometimes, however, it is possible to request an extension of the project to complete the task execution. All these elements are linked. For example, if a specific task does not materialize during the planned period, either staff resources need to be added, or an additional task cannot be done, or the planned funds become unauthorized. This will, of course, result in the narrowing of the project's framework. Naturally, no project is being implemented according to the original plan. Therefore, successful project's management depends on continuous planning and revision, respectively monitoring and evaluating of completed tasks and objectives of the project.

The aim of the submitted paper is to highlight and portray closer the demandingness of the project team's work in the realization of a concrete project, based on the specific application of the project's management in the selected business. The

result is not only the successful completion of the project but also the satisfaction of the sponsor or the client/ customer.

The survey was carried out in June 2017 in an industrial business that has well-developed project's management and successfully engages in project implementation for several years. The observation method as well as the method of controlled interviews with the team leader and also with other team's members was used. The survey included participation in the presentation of the realized and completed project to the sponsor.

### **3 Results**

Effective project management requires effective planning, as management is not possible without planning. The creation of realistic plans generates a base for continuous monitoring progress. Planning is a good opportunity for the project team to pre-judge the progress of the project. This can prevent individual measures from being forgotten or measures are not be implemented twice. It is possible to identify potential hazards and chances. Only after the creation of the project plan can be realistically estimated the duration of the project, the project costs and the reachability of the objectives. Plans are therefore a central element of project documentation and project assignment. Project planning includes the following activities:

- decomposition of project work,
- resources estimation,
- defining the dependence between the individual activities of the project,
- creating a power chart (PERT chart),
- determining responsibility for individual activities,
- assigning authority and responsibility,
- creating a Gantt chart.

#### ***3.1 Organization and Project Management***

The various tasks and responsibilities within the project should be allocated according to individual skills and experience, preferably on the basis of written agreements. Great emphasis should be placed not only on the creation of teams and working or expert groups within the project but also in relationships with wider surroundings.

Project's management at the management's phase is a great appeal for the *project manager*.

- The project manager ensures that the activities planned for quality management, risk management, change management and issue management are implemented and the results are documented.
- In case of deviations, will take corrective actions – if it's possible, always together with the project team. Delegates the person responsible for the work packages or he manages them himself.
- If the difficulty and / or urgency of the deviation exceed his competence, he transfers the decision to the sponsor of the project (and, if established, to the Steering Committee). He prepares this decision with a description and analysis of the problem and submits a recommendation for a decision. Prepares transitions from one phase to another, alternatively milestones and reports to the sponsor.

### *Team Creating*

A key factor in success is motivated teams, whose members are equally interested and can rely on each other. It is also very important to create a model, for example for conflicts solution, dealing with complicated and stressful situations, the possibility of reallocating team roles and responsibilities, etc.

### *Organization of Meetings and Meeting Management*

Most project coordinators agree with the view that meetings within the duration of the project play an important role. Meetings should therefore be organized in a professional manner, also taking into account the international dimension of European cooperation projects. Communication in periods between meetings must also be effectively planned.

### *Monitoring and Evaluation*

If we want to achieve quality, continuous monitoring of the process of work and the fulfillment of tasks as well as the process evaluation is a necessity.

### *Administration and Financial Management*

The administrative part of the project work, especially the financial management of the project, must not be depreciated. Already at the beginning of the project, the partners must have a clear reporting system and clear agreements, benefiting from the experience of other projects.<sup>1 1</sup>

## **3.2 Implementation of a specific project in the selected company**

In a particular company that we chose for our analysis, the project starts with a specific request from a customer and vision of the product manager.

### *Pre-project activities:*

Based on the customer's input or the initial idea of the product manager, the initial product parameters that the product will have in the final phase are defined. With the idea and basic parameters, the product manager comes to the research and development department (R & D). In this phase of the project, R & D has a role to understand the overall parameters that has to have the product which is designed and represented by the product manager.

The meeting ends with the agreement to develop technical documentation for a new product, where R & D has the task of determining the possibilities of realizing the project - design possibilities, electrotechnical parameters and so on.

While the R & D department works on technical implementation, the product manager must conduct several researches to find out how to sell a new product. This process must be carried out even if the R & D department does not approve the technical solution of the project.

The product manager performs:

- 1) Market research. This survey is important in terms of finding a product competitor (whether something similar exists) or product pricing. That is, because of the product's sale price design, but also how much the product price can be, in order to be acceptable for the company in terms of costs.
- 2) Benchmarking. The firm will focus on the basic benchmarking principle. Product managers use the most common customer and then tactical benchmarking. One is focused on customer service and the other one tracks the processes in the industry.
- 3) Voice of customers



- a) Sales. Here the product manager comes into contact with another department. This department is directly linked to individual customer agents or directly to customers.
- b) Participation in fairs and exhibitions in order to introduce new products to potential customers.

Activities mentioned above must be processed by the product manager while waiting for the comment of R & D department.

When R & D processes a project and does not find any obstacle or potential error in product implementation, the product manager can move to the next steps he has to take in the project. If R & D did not approve the project because of problems to meet predefined parameters. There comes along another meeting with the product manager. Here, the decision is made to modify the project or suspend it or stop the whole project. When the whole project is stopped, the project can only be reopened if there is a large customer interest (VOC).

Once the project has been approved, the product manager sends documentation with parameters to create the product simulation. An external company will conduct a study on the properties of the product. This analysis in the form of a product test is also needed at a later stage of the whole project implementation. Once the results have been obtained, they have to define tasks as well as process engineers (PE) who have already got a 3D animation of the product from R & D department. Subsequently, they have to create a preliminary model of the product manufacturing process and a price calculation to create a budget.

After a followed-up report from process engineers, the product manager creates an initial cost calculation for the project.

- Primary samples
- Forms from external suppliers
- Marketing
- All process costs
- Increase of budget - no enterprise has given what the increase should be.

This increase is from a safety point of view and therefore the company in our case gives 10% of the resulting amount.

#### *The first meeting*

The first meeting is the first major test of the project. This session will bring together departments that should work in the future under the auspices of the project manager. The meeting will take on the effectiveness of the project, all the information that has been found so far (customer survey), technical implementation of the process. At this point, modifications can still be made for the production process or the cost of production.

#### *The second meeting*

The second meeting is already under the leadership of the project manager, where TOP management of the company is also present. The role of the product manager is to defend his project, which he has created so far. He:

- Presents product visualization
- Offers pre-sales visualizations
- Defends preliminary project costs
- Offer preliminary possible production (number of pieces)

After the presentation and approval of the project, the budget is approved, which is agreed most often upon the proposal of the product manager. Participants will also discuss a possible end of the project (setting a deadline). After solving the previous topics, the project manager comes to the project.

#### *Real beginning of the project*

The project manager decides to start the project. The project starts from the date of approval of the project by TOP management. The project manager may, however, set a different start date for the project. The project manager creates the initial team of team members.

After identifying the responsible persons from each department, the project manager brings the project to the so-called Q-GATE phase.

#### *PSC process Q-GATE*

The Q-Gate process begins with the product manager, who starts the whole project. The project manager gets into this process only before the Q0 phase. In the meantime, the product manager must have developed all the points up to the second project meeting as described above.

*Q0.* The product manager creates the initial possible product view, all the necessary parameters are defined. They are looking for usability of the product, so we need to know in advance on which markets the product will be distributed. This is based on the long-term monitoring of possible markets. The life of the product is the essential feature, but also the life of the production itself.

#### *Q0 -> Q1*

Once the initial phase of the project has been completed, the product manager submits a pre-roll of parameters to each team member. The team members will start working on the project. In particular, the product manager and the R & D department intervene in this phase of the project. In the next phase, it will be the approval process that must take place to let the project continue.

Product manager creates Ramp up Plan, what is a designation for the planned estimate. This estimation implies:

- Capacity (per month)
- Monthly production plan
- Manual production plan
- Manual Material Planning

*Ramp up plan.* This plan is never left in its original form, it is being recalculated and adjusted according to the complications that have arisen by the project. Or, there is set a timetable for tracking the plan. Projects last on average 2-3 years and these plans change 7 times in average.

*R & D.* The engineering department must create a 3D product version, so there is a need for close cooperation between the product manager and the R & D team. At this point, there is a visual agreement on the product. The product form is requested by the customer or according to the product manager's vision.

#### *Q1 -> Q2 B-SAMPLE Stage*

This step is the first materialization for the product at a scale of 1: 1. Therefore, the R & D department delivers the product model from a 3D printer or from an external

contractor that manufactures the product to the required form. Once the first product is handed over, the R & D department is no longer involved in the project. Only in case of necessary changes in the process that may arise.

The project manager has to deal with timeline fixed. This term means the timing of the project. These are the delays that have arisen due to the complications of the individual segments.

#### *Process development*

Process engineers are also getting involved at this stage, due to produced and delivered sample from the R & D department. The production line is being made. This means reworking of an existing line for the new project purpose or a new production line is being produced. When deciding the monetary background is not the most important one. It is the efficiency of production.

When everything important is done, the project manager gets information about the release of the project to the next stage.

#### *Q2 -> Q3 SAMPLE C*

The vendor selection is at the beginning of the entire C-Sample process. Then comes delivery of materials from selected suppliers as well as their control.

In the C-SAMPLE process, QM supervises the compliance of all requirements.

If there is a serious mistake, production is suspended until the problem is not resolved.

Once C-Sample has been disapproved due to the detection of QM errors, the process must be repeated until there are no errors or errors are at the permissible boundary.

It is important to realize that the Q2 process could not be completed and go to Q3 until a successful C-Sample product is made. Therefore, this process can be repeated several times.

#### *Validation passed*

After a successful C-sample, the first few products leave for the validation process to the company's contract facility. This process is done to obtain sales certificates.

#### *Q3 -> Q4 Pilot production*

After the first products, the entire production line must be ready for use and without any defects that have been reported in previous Q-gates. Pilot production is a fundamental test of the project, and samples are already ready to be sold. Most often, they are provided to SLS and marketing staff as a sample for both potential customers as well as for marketing to create a campaign at exhibitions around the world. After successful pilot production, mass production is being prepared.

#### *Q4 -> Q5 Mass Production and sales release*

After successful validation tests and all necessary certificates for sale obtaining, production and sales are released to 100%.

#### *Q5 Final Phase*

Phase Q5 ends at the moment the project manager makes a recapitulation of the project. He also manages project budget review. Primary sales and production statistics are presented to TOP Management. After this presentation, the project ends and the project team is dissolved, or sometimes the project is unfinished and remains opened. This situation occurs with very successful projects (products) where sales exceed

expectations and there is space for upgrading new product generations. Then the budget for innovation is increased and a new project is not being created. The responsible team members from each department remain the same. This step is decided by TOP Management.

#### 4 Discussion

Each project always hides risks. Risks of a project, i.e. potential results with the impact on the objectives of the project need to be identified, evaluated and subsequently managed. There should always be a risk register where all team members record the identified risks. Here are also the follow-up steps for analysis, planning and implementation documented. The project is dynamic shape and so do not remain static. Existing risks are changing and new ones are emerging. Care must be taken to ensure that the risks are regularly reviewed and updated.

The role of quality management is to ensure that the products of the project fit for the intended purpose and that a permanent suitability check is actually carried out throughout the project. Based on customer expectations, the performance features and specific properties that the end product should have to show define are to define in the project definition and project specification.

Project management is not just the use of methods and teamwork. Project management is - and this is one of the tasks of management - primarily communication. Communication, Conflict Processing and Negotiation are project manager's activities that are designed to form the overall project environment actively in the sense of the project. The environment basically decides whether the project will be successful or not. Even after the project expires, the results can be excellent, but when the success report does not reach the right ears - the customer, the sponsors, the superiors, the suppliers, etc., no one knows about it.

Project management and change management are indivisible and they identify the main actors in the change management system. Change management focuses on support of the project and on a good understanding and acceptance of the project by individual interest groups. Well-managed projects do not have separate change management teams or separate change management activities. Change management is an integral part of management for well-managed projects. Closing of the project and the final report are an indispensable part of the project.

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## Synergistic effect of managerial system

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### Abstract

Under the term a requested synergistic effect of managerial system the situation in which two parties having a different view concerning solving difficult challenges and problems, but the parties which respect each other, find a solution whose final effect brings markedly better result than individual alternatives of both parties is understood. Modern philosophies of management present a practical act and a specific demonstration of seeking this better alternative and creating requested synergy. This is a key towards dynamic productivity and processes performance increase. The paper presents a particular application of this philosophy in Slovak environment and also outlines an approach which is applicable in various organizational units.

Keywords: management; system; operations.

JEL classifications: L15, L25

Article Classification: Research article

### 1 Introduction

Globalization brought a necessity to be compared with the world top category, learn from their mistakes as well as positives of others, but also look for own individuality and uniqueness resulting from the own culture and by practice proven values. Globalization brought hyper-competition and a global customer, too. In practical conditions it means targeted fulfilment of customers' requirements as well as of much wider spectrum of stakeholders whose expectations are often different even contrary. Globalization interferes practically all the areas of our lives – politics, law, economy, ecology and other industries and disciplines including management. It brings a requirement to move a paradigm of management and deflection of thinking and acting, according to which the only key criteria of economic success is economic growth. Its

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fetishism on the expense of, for example complex evaluation of source severity or generation of new material and non-material values, is in conflict with the philosophy of strongly promoted sustainable growth. A serious ethical conflict is seen in economic, legal and moral level, when political power is misconducted for account of egoistic and economic benefits and has also a form of low and non-uniform support of productive core of the society, respectively in insufficient sanctions of this part of the society which despite of their ability to work for whatever reasons parasitizes at the expense of relatively healthy productive core of the society.

Management works worldwide in a real time and does not respect geographically butted boundaries. To place capital sources, it is important that they increase the level of their added value in a specific geographical space (Benner, 2002, Zelený, 2011 and others). A dramatic change of living standard in a “more highly developed” part of the world seems to be a very big problem. People have different disposable potentials, whose quality changes during their lives (physical potential goes down, mental and spiritual dimension’s development varies). A numerous group pf people is not able to keep balance between their working and private lives. The number of civilizing diseases goes up, family as the basic cell of the company does not function, natural communication is missing. To look for the main reasons of this situation means to concentrates more on human factor, human potential and its effective utilization, shared values, demographic development and utilization of synergy of national or regional cultures. G. Hofstede (1996, 2003) distinguishes importance of national culture for management at least due to three reasons – political, sociological and psychological ones:

- Nations are political formations having their roots in history, with their own institutions, forms of government, legal systems, school systems and systems concerning associations of employees.
- Nationality (national culture) has a symbolic value for citizens. Everybody deduces a part of own identity from it, it is a part of “who am I”?
- Thinking of a human being is the result of experiences in his early family childhood and later experience from school and organizations which are different in various nations.

Culture is understood as a summary of material and spiritual values which were determined during the development of human society. They are the result of activities of people in the area of education, art, science, upbringing, application and spreading spiritual values. Based on this, we can state that culture is an integral system of meanings, beliefs, manuals for survival, values and social norms, which members of a specific nations follow. Integrity means that different parts of culture create a specific system, they influence, adapt and add each other, and together they create interconnected and continuous style for life. They were gathered during the years by a specific society, are transferred for generation to generation by norms, rules, communication patterns, practices, institutions and that is why they are resistant to external interferences. Events and experience of citizens created and formed their behaviour, thinking and formed also a specific national culture, which has its own specific system of values and norms and which differs it from the other national cultures. Analogically also organizational culture of organizations in these states is influenced by this national culture. Historical experience is seen not only in national cultures but organizational cultures as well. Culture of organizations develops in organizations for a very long time, especially due to execution of other changes in the organization – structural changes and changes of ownership, changes in technologies,

etc. Based on these facts even the best managers are not able to change organizational culture within a short time. At the same time for people from the outside it can be very difficult to break into culture of the organization which often consists of the whole range of values, opinions, “given assumptions”, which are not usually publicly presented and are considered as indubitable or even changeless. Also these arguments support the idea, that development of organizational management system cannot be governed by simple adoption of external samples, or adoption of good or the best practice. Actually it can present an obstacle to achieve a long-term success, because it requires a considerable level of originality, seeking competitive difference and uniqueness in respecting own possibilities (Zelený, 2011). Good organizational strategy on the contrary understand its organizational culture as a necessary source of competitive advantage and obtaining synergy effects.

Under the term a requested synergistic effect of managerial system the situation in which two parties having a different view concerning solving difficult challenges and problems, but the parties which respect each other, find a solution whose final effect brings markedly better result than individual alternatives of both parties is understood. This is the way towards the “third alternative” (Covey, 2013). It is dependent on willingness of both partner (or constructively-conflict) parties to overcome limits of own (conventional) conceptions, to overcome limits of their “own shadow” and enthuse over creation much better reality in comparison to the actual one. So it is not looking for “political” compromises but finding a common better solution as was the solution of any of suggested solution of interested parties. This principle can be used very rationally also in Slovak business environment especially in situation when foreign capital enters Slovak companies. It is a key leading to high, remarkable productivity increase. It is a mental power which exists in the base of almost each really creative act (Vágner, 2015). Application of this approach in an organizational unit does not mean definite negation of seeking improvements in company processes by utilizing small improvements according to the principle (successfully applied in for example Japanese Kaizen system, or a long time ago in Bata’s management system) that everywhere, at each working place there is something what can be improved and that every worker can improve something.

Actual period brings a lot of demands on people. They concern majority of people at majority of working places. The pressure for competitiveness, we mean the global one, pressure for a quick response to customers’ requirements often changes to stress, personal conflicts, which have destructive and not constructive character. This is not a proper way to create synergy effects. But there is also a different way – the way presented by listening to each other, the way of empathy and mutual trust as an impulse of building good relations at workplaces, partner relationships with customers or other interest groups and finally for considering and acting due to the principle win – win. There are a few conditions how to achieve such a state: life optimism and power of positive thinking or recognition and “following the natural moral or ethical rules and laws, which cannot be changed since they are in the base of our humanity and create fundamentals of people’s humanity” (Putnová, 2007).

The principle of synergy offers achievement of more dynamic and innovative improvements within solution of a constructive conflict resulting from difference of national or organizational cultures. The assumption of success is fulfilment of the basic condition, i.e. that people respect each other, respect cultural differences, communicate and want and are able to put themselves in the place of others, respect other people and they must not see only two alternatives, one of which is – wrong. In previous years we did some research aimed at more dimensional view concerning processes performance.



Simultaneous effective sources utilization (effectiveness) and customers' requirements fulfilment (usefulness) in company processes, i.e. an attempt to two dimensional view at performance was finished and got a causal form which can be applied in practical conditions in a company (Budaj, 2013). A few results of our research from 2011 to 2016 show possibilities to increase performance which can be based on various pillars and bases:

- on the base of application of innovations as a system element, including sophisticated utilization of information technologies within the innovative processes: "Reengineering of production system projection" (Budaj, 2011) „Innovations, imitations and batizmus" (Budaj, 2012)
- on the base of quality: "Specifying the use of Taguchi's loss function in manufacturing and service sectors" (Budaj, 2016), "The adequacy of an organisation's measurement system in quality management" (Žižka, 2016)

Due to the above mentioned results, they concern solutions directed more less to the area of so called "hard" management factors. This paper is aimed examination and quantification of managerial "soft" factors, among which one of the most important places is taken by national and organizational culture. There is a clear research gap, and it reflects negatively in managerial practice.

## 2 Methods and methodology

During studies of both domestic and foreign scientific literature with the aim to get compact views concerning the situation of the problems which are being solved a research gap was identified. Although a few studies in abroad as well as relevant theoretical concepts explain this topic, their application into Slovak managerial environment is not sufficiently explored. The goal of the research of the team of teachers of the Department of Management in Poprad of the Catholic University in Ružomberok (Droppa, 2013) was to reduce the gap. The targeted goal – *reviewing the influence of national culture on managerial approaches and behaviour, as well as contribution of national culture into management synergism*, was researched based on the methodology introduced by Hofstede and according to which it is undisputed that national cultures have a remarkable impact on work of managers. Cultural patterns due to its execution determine an individual, since there is a mutual interaction between them and in this way his modal personality is created. That is the reason why an idea that management can achieve the same successes when it uses the same methods and styles in different cultural environment is hardly defensible. Research including 552 respondents – Slovak managers at different levels of management (line, middle and top) and consequent mathematic and statistic expression, evaluation and interpretation of the results make the base to be compared to the reference state (Hofstede, 1996, 2003) – dimensions of several national cultures (see pictures 1, 2 and 3).

## 3 Research results

After 1989 foreign capital entered Slovak (especially) business environment. It brought a lot of positives to management of companies, provided managers and other workers know-how particularly in technological area. In spite of this fact expectations of foreign investors were not and are not met. One of the reasons (confirmed by personal experience of the author) is non-respecting of cultural differences.

In fact, differences in national cultures can become a key factor influencing success of organizational management especially management of multinational, multicultural state or private organizations. In the following pictures from 1 to 3, position of selected countries (Hofstede, 1996) and position of Slovakia for various combinations of dimensions is shown as follows:

- France: blue circle
- Korea: yellow circle
- Germany: black circle
- USA: red circle
- Great Britain: green circle
- Slovakia: white circle

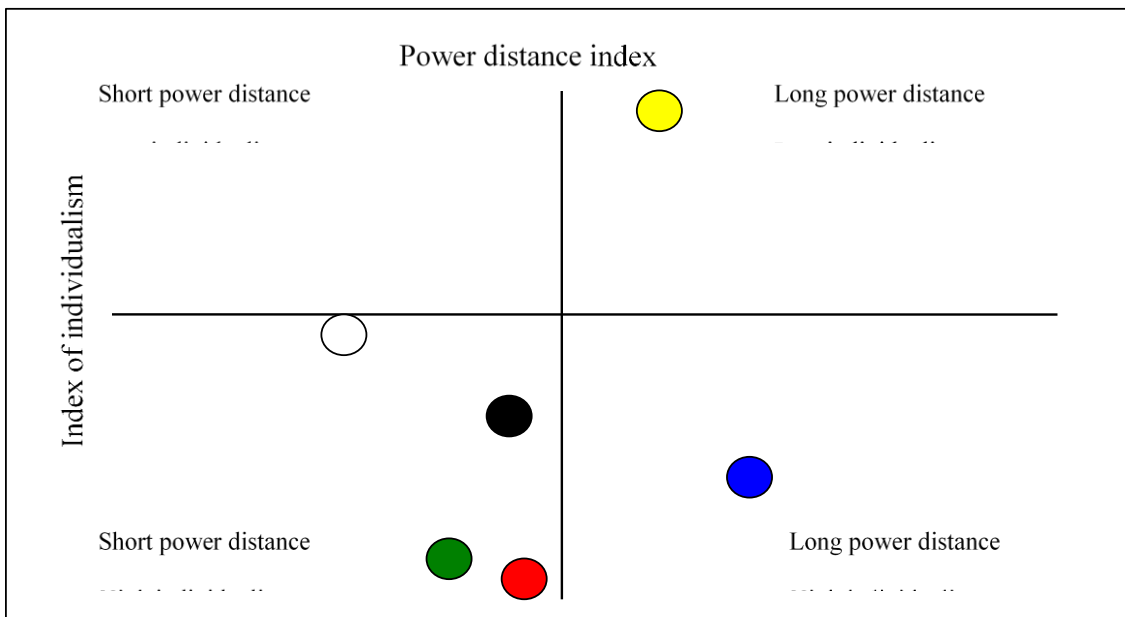


Figure 1 Position of countries at the scales “power distance” and “individualism”

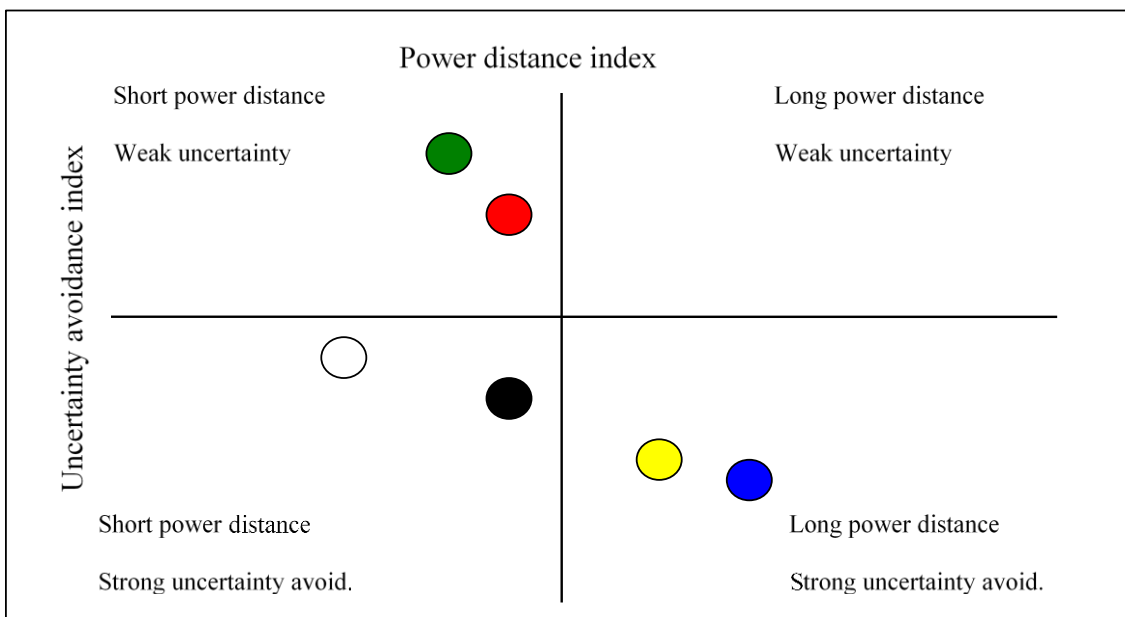


Figure 2 Position of countries at the scales “power distance” and “uncertainty avoidance”

Selection of countries was not done randomly, but based on important entrance of capital from these countries to Slovakia. Big difference of Slovak culture results from

all three pictures and it confirms that adoption of “patterns from abroad” hardly brings managerial success. It was also confirmed by practice when an approach “look at the East” was applied in the past and “look at the West” at present.

To characterize national culture does not mean that each individual of the nation is mentally set in the same or similar way. It can be confirmed by personal experience of the author, who was performing important managerial posts in German – French holding. Based on this experience “white circles would be placed closer to blue or black ones.” National culture which was found out presents only an average model of opinions and values. There is neither “only right” description of characteristics of a given culture nor the only right result.

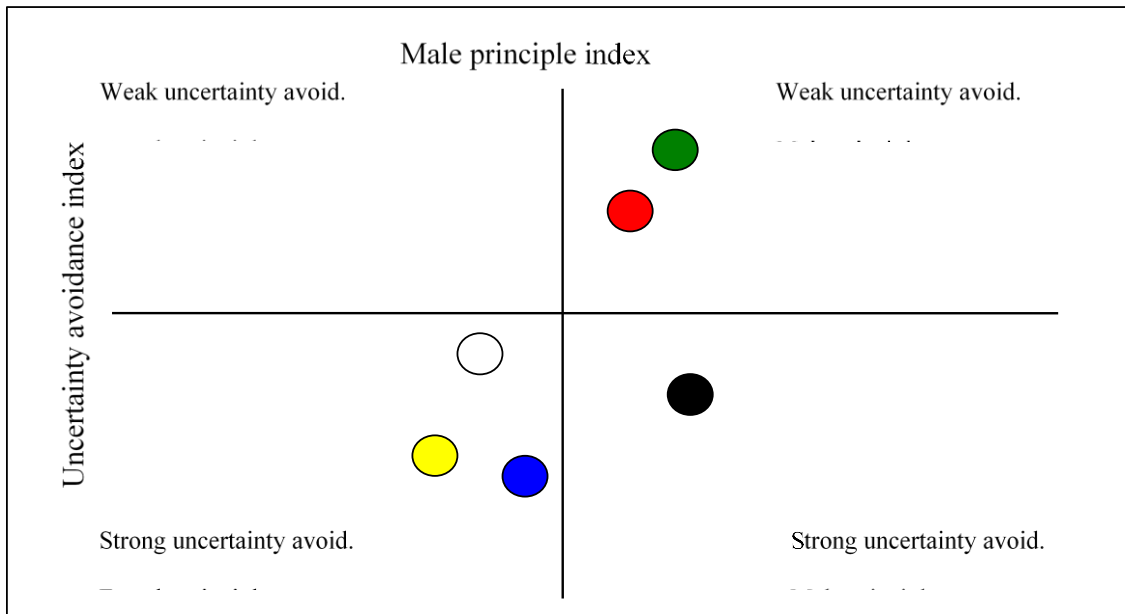


Figure 3 Position of countries at the scales “female principle” and “uncertainty avoidance”

#### 4 Discussion

A change of managerial thinking as the assumption of synergistic effects achievement means to enforce in own organization innovative culture, ability to innovate, to bring new revolutionary ideas and connect them with a permanent success of the organization. Experts who deal with innovations claim that innovations result from synergy. What opportunities to achieve synergistic effects do conclusions of the above mentioned research offer?

Chapter 3 brings a short selection of the research results concerning relation between management system (organization managerial system) and a factor of national (resp. from national culture derived organizational) culture. If organizational culture is rightfully understood as one of the most important factors of effective management, then it is obvious (visually demonstrated in pictures 1, 2 and 3), that probability - that all system elements which function properly in one culture can be transferred without any modification to other cultural environment - is very low. This statement totally corresponds with multiannual experience of the author who worked in textile production, in which German, French and Slovak cultural environment were confronted. Based on this knowledge it is possible to come to a conclusion: do not see diversity of cultures as a managerial obstacle to achieve better business results, see it completely differently. Finding and utilization of strong elements of each culture can bring

uniqueness, competitive difference and a very positive synergistic effect. The reason why it partially does not function in Slovak business environment (honour to exceptions) is that assumptions concerning functioning of the “third alternative” were not fulfilled. The third alternative includes: listening to each other, mutual respect and trust between partners (foreign investors and Slovak workers), or as Covey (2015) identifies: “the biggest and most difficult negotiable obstacle to achieve synergy is pride, which keeps people in mutual isolation and stands in the way of creative connection of their energies utilization.” What is “portability” of building organizational managerial system in the era of globalization with reference to the factor of national culture? The question resulted from a real situation, which actually exists in Slovakia (practically since 1990). After arrival of foreign capital also (sometimes) progressive technologies or working methods were brought and competitive position of companies was strengthened. But there is no general satisfaction, neither investors nor employees are satisfied. The reason is mostly the fact that an investor wants to carry out its activities in the system which results from conditions of its domestic culture. Battle of two cultures which is not “implacable” should not present an obstacle of development but **can be positively used to achieve the synergistic effect**. By our research and conclusions, we tried hard to prove that building its own managerial system which is “tailored” brings benefits to organizations.

Let the “Covey’s” third alternative – not to perceive cultural diversity as a managerial obstacle – become the final topic resulting from this discussion. Seeking and utilizing strong elements from each culture can bring synergistic effect. Not only can, but as the author’s experience shows, it really brings. Right direction of increase of performance so that it brings all-society positive impact, must not forget own (local) culture and ethical dimension, ecological sustainability, social responsibility and other up till now neglected factors. Their harmonization can mean strengthening of the “spirit of trust and institutionalisation of moral authorities” (Covey, 2015) as essential element on the way towards emotional and socially matured society. Growth of consumption requiring growth of production can be called harmful until it is in accordance with ethical dimension, with a satisfied and happy people, with healthy environment. The pope **František** called this phenomenon as fetishism of money and dictatorship of economics, which does not have a human face and does not follow human purposes, which denies primacy of a human being against questionable material idols and which reduces a human being to the only factor – consumption. The direction of our research was in accordance with requirements concerning new needs of management and responded to a declared move of paradigm of management towards principled management and towards new key potentials of management as well. While in the past the accent was put on intellectual potential, especially education, manipulation with information and scientific knowledge, physical potential, particularly working performance and ability to lead others, in recent years we focus on emotional potential, especially self-control, open communication, ability to motivate others and moral potential – honesty, politeness, ethics, following of principles, etc. (Košturiak, 2008). The most important is confirmation of the fact, that if a human being was the most valuable “source” of managers in the past, even globalization or the fourth industrial revolution did not change anything here.

## Conclusion

From the activities on a political scene we are used to compromising and consider them to be a useful result. But both parties lose when they compromise. Based

on “Covey’s” 3<sup>rd</sup> alternative in the area of managerial work we should make towards management which prefers seeking synergistic effects. Current management is too materialistic, trying to achieve high performance of organizations, meaning to achieve “more” (to sell more, to produce more but also to consume more sources). A human being is also often perceived as a source, a thing (a body), his conscience, return to naturalism, his spiritual life and human relations are less emphasized. Change of thinking and realization of new approaches proposed in the paper will probably mean expected (maybe even unsuspected) benefits in all areas of social life and life of individuals and synergistic effect in a form of sustainable growth. Moreover, we also have positive experience based on practice. Practical result and a specific demonstration of looking for the third alternative and creating requested synergy are modern management philosophies. Pressure on simultaneous fulfilment of customers’ expectations related to higher quality as well as continuous more effective utilization of own sources was brought by synergistic effect in a form of building of TQM system – total quality management. Conflict between understanding the stocks as badly invested money and the stocks as a factor of a smooth operation of a production process caused pressure on seeking the third alternative. The result of synergy is the philosophy just – in – time. A similar and even more serious conflict between anthropogenic impacts on environment and an ability of its perfect “self-regulation” brought the concept of sustainable growth.

The above mentioned conclusions are not specific only for Slovak business environment. The prove is a thesis from Chinese business environment: If we are able to learn from each other harmony and prosperity will grow in the whole society. It will be definitely beneficial for Western companies to include the specifics of the Chinese ways of thinking and the core values in their employees’ intercultural training (Kubátová, 2016).

Paradigm of principal management deals with the topic how to help people to find the reason of their existence, based on the fact that the most decisive factor is functioning of super-temporal natural laws which are not influenced by people and mental principles such as consistency of thinking, expressing and particular activities, mental principle of integrity, since their product is trust as a pillar of stability of organization and all society development. There is a huge potential, huge energy hidden in people and if they are properly managed, they can bring achievement of much better results, synergistic effect. Finally, we should appeal to reviewing and interventions with preferred values, value level of culture, artefacts, norms, opinions and assumptions, managerial ethics. In this connection there is a question how to understand increase of company processes performance as a mean of company competitiveness growth. Materialistic (and egoistic) opinion usually assumes that progress must mean only “to produce more”, to have more material goods, or more power “from the position of ownership or function”, more entertainment, etc. In spite of the fact that there is not sufficient social pressure on the change concerning increase of performance, natural laws present such a level of restriction that increase of performance in the context of the era of “wisdom” is directed towards much wider, more dimensional understanding of performance.

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# Methods and approaches to the evaluation of company performance

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## Abstract

Traditional methods and approaches to the evaluation of company performance are fundamental deficiencies in the fact that provide only a retrospective view of the company's competitive position that existed at some point in the past. These analyses are both static and outdated, but in addition also incomplete. Traditional financial indicators do not tell anything, why the overall results are as they are, or that the company's areas must be improve in order to company closer to fulfilment its own strategic objectives. Therefore it is necessary to complement classical financial indicators of a series of more dynamic, non-financial indicators, adapted to specific conditions of competition. At present implementing new approaches to the evaluation company performance, which do in the traditional system, but it added of other aspects. The modern methods company management is possible to imagine that we are talking about the logistics approach to managing a company where company can be understood as a system of flows (information, material and financial) and chains (purchase - production - sale and the resulting triads logistics processes) is an attempt evaluate the performance of the company, i.e. performance of the company logistics system using non-financial indicators. The modern method of evaluation company logistics performance is based on the assumption that the company is efficient if they are able to achieve predefined strategic goals.

Keywords: methods; evaluation; performance; logistics system; company.

JEL Classification: P41, P47, P49

Article Classification: Research article

## 1 Introduction

The aim of this paper is to describe processed an overview of the currently known and used methods of and approaches for the evaluation performance of the company in the general level, in terms of managment company describe a known methods of measurement and evaluation of the logistics performance of company. This

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overview serves as a starting point for the purposes design model of a complex system of measurement and evaluation of the logistics performance of company.

On the basis of the research foreign and domestic literature and generalization of acquired knowledge can be said that the performance of the company is based on the standard economic categories. For the purpose of this paper is however appropriate for this important term to specify more precisely definition of company performance by Šiška and Matýska: "Company performance we understand company success in achieving its primary objective. This is based on factual view in the creation of outputs in the form of products, works and services beneficial to business clients, and at the least possible consumption of scarce resources needed for the operation of the company".

## 2 Material and methods

If we look back thirty years, to the period when the greater abroad began to pay attention to company performance, the measurement and evaluation can be noted that there are several approaches to the understanding of the notion of a performance of the company in the literary sources:

1. Titmama (1988), Zinglaesa-Rajan (1995), Neumaierovci (2002), Maříkovci (2005) prefer financial view of the performance, evaluation of performance through financial indicators.

2. To oppose Bielik (1999), Nenadál (2004), Nepela (2005), Závadský (2005), Susta (2007) put the emphasis to the need to perceive the company performance of the system point of view, i.e. talked about a systemic approach to company performance.

3. Other authors such as Varcholová (2007) understand company performance through the value and economic approach, i.e. value approach is presented using value indicators and economic approach for assessing the performance of the company prefers mainly company owners.

4. There are other various system models, approaches and methodologies measurement and evaluation of the performance such as System performance criteria (Globerson, 1985), Measurement of performance, World-class manufacturing (Maskell, 1989), SMART (Gross and Lurch, 1988-9), Performance measurement questionnaire (Dixon, Nanni and Vollmann, 1990), Cambridge design process performance measurement (Neely, Gregory and Platts, 1995), Balanced Scorecard (Kaplan and Norton, 1992 and 1996) and the EFQM Excellence Model (EFQM 1992).

5. Other areas such as quality management and environmental management have control models and standards, describe the structure and content of the large-scale management systems, i.e. standards ISO 9000, QS9000 and ISO 14000.

Summary of the approaches you can see in the Figure 1 processed by the author of the source data.

### 2.1 *Traditional methods and approaches to the evaluation of company performance*

The traditional method of monitoring company performance is based on evaluation of the company's ability to achieve desired financial indicators - profit, turnover or market share. The company is evaluated as executive when it reaches the projected financial results. Traditional methods and approaches to measuring company performance are fundamental deficiencies in that they provide only a retrospective view of the competitive position of the company, which has existed at some point in the past.



Classic financial indicators do not say anything at all, why the overall results are as they are, or what company areas we need to improve to company approached fulfilment their strategic objectives. It is therefore necessary to supplement the traditional financial indicators on a series of dynamic, non-financial indicators, adapted to the specific conditions of competition.

## ***2.2 Other approaches to measuring the company performance***

### *2.2.1 Performance management system*

Another view of company performance by Zavadsky (2007) is concept of performance management, which represents effective management of employee performance so that, is reached overall performance of the company. This is a connection with the performance of the overall performance of staff and teams, while emphasis is put on employee performance so that most contributes to achieving the objectives the company. The second approach by Bacala (1999) is based on the measurement of organizational performance by measuring the performance of processes, called Performance Management. The common denominator of both approaches is their departure from the company performance evaluation solely on the basis of financial indicators and the widely used other types of indicators (quality and time).

### *2.2.2 Balanced Scorecard*

Balanced Scorecard (BSC) is by Kaplan and Norton (1992, 1996, 2000):

- Balanced Scorecard management system,
- strategic performance management system,
- or a balanced system performance,

which allows company to clarify its vision and strategy, and transfer them into real practice.

## **3 Results**

On the development of measurement and evaluation of logistics company performance influence determinants the development of logistics in company, content metrics of this performance. The current trend is to emphasize for consistency, that is, the continuity of all logistics processes in company logistics system. Measuring and evaluating the logistics performance of company are thus considered to actions and activities to be provided mainly objective, timely, accurate information about the various logistic processes, so that these logistics processes can be in control with a view to meet the set objectives and logistic requirements. The performance of logistics processes directly affects the overall performance of the logistics system and performance measurement and evaluation of company logistics system should gradually become part of the management and logistics performance should be measured continuously. Management of logistics process performance, performance measurement and evaluation of company logistics system should represent continuous process in order reach the objective, synergy effect of the connection and that, the achievement of a controlled and managed the logistics performance of logistics company system in relation to the strategic objectives of company.

Followed early identification of weaknesses in company logistics system, as well as providing information of company management about logistics performance of company can be achieved by effective elimination deficiencies found, increasing the performance of the entire company logistics system and improving the company management system.

### ***3.1 Methods and approaches measurement and evaluation the logistics performance of company system***

Since, as has been previously mentioned, the logistics and the creation of new logistics methods and practices is still under development and it is quite difficult to handle survey of current methods for measuring and evaluating the performance of logistics company.

Notwithstanding this observation was conducted a detailed research of domestic and foreign literary sources, and it must be held that there is no specific methodology for measuring and evaluating the performance of logistics company.

#### ***3.1.1 Logistics audit***

The idea of creating this method has been derived from the existing auditing and audit process that is normally performed in companies. However, as the idea of an audit process to transfer the logistics understanding of company, the logistics approach to business management? The basic idea was, that the logistics audit will be understand as a standardized evaluation process focused on the logistics activities company logistics system. Scope will correspond to complex understanding of the logistics, i.e. concept involving all aspects of management material flow throughout its course of from suppliers to customers. Logistics audit can then be seen as methodology of condition evaluation and performance of company logistics system. For the purpose of evaluating logistics processes were compiled form. Use these forms to evaluate the condition, implementation and level of logistics processes. Logistics audit result is then the definition of tasks and measures for the implementation of a sequence of changes in the logistics system company, which will lead to increased performance of logistics system company, allowing company to achieve higher level of competition. After creating methodologies, conception and logistics audit system continued research at the Logistics Institute of Industry and Transport in the area of new evaluation methods logistics company performance and further applications of the principles into a multicriterial decision making, not only for evaluating performance of logistics company.

#### ***3.1.2 Multicriterial methods for performance evaluation***

The most used approaches to multicriteria evaluation logistics company performance can indicate:

- The simplest and to date the most common method of multicriterial evaluation is the evaluation through questionnaires used by the actual creator of the method of AHP (Saaty, Kearns, 1985). In this type of the questionnaire are performed paired comparisons. The questionnaire was completed by management of company and/or experts. Those then determined based on its assessment of the most important criterion.

- Another approach is based on the analytical calculation of space, it from two to  $n$  - dimensional (area, volume), where the number of criteria is the number of dimensions of space. This definition provides the most important criteria.

### 3.1.3 AHP method

AHP method provides complex and coherent approach to structuring the problem of quantifying the parts that relate to overall objectives, and for evaluating alternative solutions. AHP method can be used in many different areas. It is a suitable method for the evaluation of companies where several criteria lead to objectification of in evaluating them.

AHP method as a flexible model for decision making, clarifies issues that have several possible solutions. AHP is performed by an expert and then a mathematical method, which divides the principal problem into smaller and more detailed elements.

One of the major shortcomings of this method is to load some steps of its application a certain degree of subjectivity. AHP methods of investigation and the detailed analysis, it is concluded that it is possible to use this method for processing and evaluation of data obtained logistics audit.

## 4 Discussion

Based on the results of basic research aimed at use of methods and approaches to performance measurement in companies from Slovak Republic can be concluded that companies prefer (use) mainly these approaches and methods: The system of proportional financial indicators, Quality management systems (TQM, EFQM, FMEA, ISO series of standards ), Process Management, Balance Scorecard, Six sigma and method ABC. It is important to mention that these methods are not mutually exclusive, quite the opposite, rather to complement and support and of course there is the possibility of different combinations of these methods, if the need to measure and evaluate the performance of logistics company.

One of the methods that is not yet elaborated and it appears to be a suitable method approach and inspiration for creating a model of a complex system of measuring and evaluating performance of logistics company is controlling, which could theoretically be applied to logistics. The question is why not?

Controlling offers solutions on how to use the concept evaluation company performance, but so that the new philosophy will not only rely on the financial assessment, but rather move to a different assessment of the qualitative and quantitative evaluation of higher level and logistics processes of logistics chain company. It's a new idea, still not applied in practice, which also creates the possibility to implement the solution set of the problem.

On the basis this statement it is possible logistic controlling or otherwise controlling logistics regarded as the chosen instrument measurement and evaluation of performance of logistics company.

The contribution of this article, processed overview of the currently known and used methods and approaches for the evaluation performance of the company in the general level, from the perspective of management company and describing known methods measurement and evaluation of the performance of the logistics system of the company lies in the coherence of this issue, a complex overview of known methods used and approaches for the evaluation performance of the company in general level,

from the perspective of company management and describing known methods measurement and evaluation of the logistics performance of company.

This coherent and comprehensive overview and the statement, that it is appropriate and necessary to prepare a new method and propose a new approach for measurement and evaluation of logistics performance of company serves as the starting point for the needs of design, an innovative model of a complex system for measuring and evaluating the logistics performance of company.

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# The business performance measurement as a tool of creation of innovative intentions

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## Abstract

Actually is the business performance connected not only with financial indicators but also with innovations and ability to react flexible to customers' needs. In the domestic and foreign theory we can find many methods of the business performance measurement. In our scientific contribution is this issues focused on the method benchmarking, the method of quality costs measurement by the PAF model and the method Balanced Scorecard. We apply these methods in the family business DREVOINTERIÉR KEŽMAROK, Ltd. The contribution benefit is to identify significance of these methods for innovative intentions and then for increasing its competitiveness and customers' satisfaction.

Keywords: business performance measurement; innovations; benchmarking; quality costs; Balanced Scorecard.

JEL Classification: L21, L25, L68, O31, O32

Article Classification: Case study

## 1 Introduction

*“Considering the aim of business is to get and keep customers, the business has two basic functions – marketing and innovation.” /P. Drucker/*

The term “innovation” comes from the latin “innovatio” and it means “revival”. The author of this term is the Austrian-American economist J. A. Schumpeter. According to this author is the main factor of economic development creativity of entrepreneur (the creative destruction). Schumpeter (2006, p. 48) defines innovation as: “new product launch or improvement of quality of the products, new production method, which hasn't been used in economic practice yet, although it isn't based on the new scientific discovery, finding of new or existing markets, using of the new raw material resources, change in production organization, including creation of monopoly or its destruction following to the competition.”

To the theory of innovation contributed other economists, too. The Czech economist F. Valenta followed on Schumpeter's theory but according to him is

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innovation not only the absolute news (the first materialization of the idea) but also the materialization of new idea existing in some sector – the relative news (Vlček, 2010).

The theory of marketing experts Kotler and Trias de Bes (2003) is very similar to theories of Schumpeter and Valenta and these authors differentiate in the theory of innovation traditional (vertical) and innovative (lateral) marketing. The aim of the traditional marketing are mostly incremental innovations (e.g. new colour, smell, taste, structure, ...) and the aim of the innovative marketing are radical innovations, which are results of higher creativity and which bring the entrepreneur higher profit but they are connected with higher risk.

In the theory there are many classifications of innovations. The easiest we can divide it into product and process (technological, organizational, marketing) innovations but mostly are product and process innovations connected together. For comparison and statistical measurement of innovative potential of the European Union countries was created the most common typology of innovations in Oslo (the Oslo manual) in 1993, in which are innovations divided into: product innovations, process innovations (including technological innovations), marketing innovations, organizational innovations, service innovations and innovations of market supply including supply of service and product connection (Čichovský, Boháček, Urban, 2012).

Every organization should innovate to be successful in the market. It is possible to evaluate realization of innovations by business performance measurement methods. According to Sabol and Tkáč (2012) in Slovak companies is typical common way of business performance measurement – by previous financial reports but accounting and finance is only one of many business areas. For business performance measurement are usually used methods of financial analysis (ex post and ex ante), methods of business market position (e. g. PESTE, SWOT, benchmarking – the comparison of our business/product with the best competitors in our branch) and for measurement of marketing indicators portfolio matrix (e. g. BCG, GE).

The specific form of business performance measurement is the measurement of the quality costs, too. The most common model of quality costs measurement is the PAF model (P – costs for Prevention, A – costs for Appraisal, F – costs for Failure or Unquality – for internal and external quality failures) (Šatanová, 2012).

The most common and holistic system of business performance measurement, which is often used in strategic management, is the Balanced Scorecard. This system was developed by Kaplan and Norton (2004) at the Harvard University and it consists of 4 perspectives:

1. the financial perspective (e. g. indicators of financial and economic analysis, profit and cash flow),
2. the customer perspective (e. g. customers' satisfaction, additional services, market percentage),
3. the perspective of internal business processes (e. g. innovative, production and logistic processes),
4. the perspective of learning and growth (e. g. employees' motivation and satisfaction, quantity and quality of innovative suggestions by employees)

## **2 Material and methods**

For beginning of research is very important to set the research aim, the research object and the research subject. Then it is necessary to set the methodical procedure of research, which is often called as part aims of research.

## 2.1 The research aim, object and subject

The research aim is to evaluate importance of chosen methods of business performance measurement for creation of innovative intentions. The research object is issues of business performance measurement and innovations. The research is implemented in the family business DREVOINTERIÉR KEŽMAROK, Ltd. as a case study.

The family business DREVOINTERIÉR KEŽMAROK, Ltd. was founded by Ján Bajus in Kežmarok in 1993. The business subject is design and production of furniture and interior. The customers of this business are not only individuals but also hotel companies and churches. Thanks to the sons of founder, which are executive managers nowadays, is this business very successful. Currently are in the business employed nearly 40 employees. During the business existence were realized many innovations, e. g. CNC – technology, environmental boiler for wood chips, machine for the wood brushing or complex innovation of production process, which was funded by eurofunds in 2015. These innovations increase customers' satisfaction by possibility to produce atypical interior and they increase work effectiveness, too. Since 2014 has this business registered own trademark BAYUS®. Interest in innovations and new trends in branch leads business performers on passive (e. g. Eurocuccina, Milan) or active (e. g. Agrokompex Nitra – Furniture and living) participation on exhibitions.

## 2.2 The methodical procedure of research

The business DREVOINTERIÉR KEŽMAROK, Ltd. is still looking for ways to increasing of its performance and to finding opportunities to innovations. Therefore we use 3 ways to business performance measurement: benchmarking, quality costs measurement by the PAF model and the holistic method of business performance measurement called Balanced Scorecard. We go forward by following ways:

Within the method of benchmarking we compare product of the DREVOINTERIÉR KEŽMAROK, Ltd. (P1) with products of competitors of customized woodworking (P2, P3, P4) according to 5 non – price criteria: the design (the subjective criterion measured in points from 1 to 10), the delivery time (measured in average number of days), the range of designs (measured in number in pieces), the possibility of wood brushing (measured in yes/no) and the possibility of the creation of on-line designs by customers (measured in yes/no). By the execution of benchmarking is important to set weight of all criteria according to significance for customer. In the research is used the method of pair comparison, because of which was distributed 50 electronic questionnaires to potential customers in various age categories. Numerical values of every criterion are in table 1.

Table 1 Competing products and its criteria; own elaboration

Criterion	Unit	P1	P2	P3	P4
1. Design	points	10	9	7	6
2. Delivery time	days	20	15	12	7
3. Range of designs	number	168	175	323	164
4. Wood brushing	yes/no (1/0)	1	0	0	0
5. On-line designs	yes/no (1/0)	0	0	1	1

For business is very important not only compare its performance with competition but also compare the previous and present performance. In the research is suggested some way to measurement of quality costs by the PAF model in the program MS Excel and the way to evaluation, if the percentage of costs for innovations and quality (preventive costs) is improving or not.

Including every perspective of the method Balanced Scorecard are suggested 2 indicators (KPIs), by which could the business measure its performance and the way to measurement of performance every perspective to find weak spots as the opportunities to innovations.

### 3 Results

The research results are represented by results of the benchmarking implemented in the family business DREVOINTERIÉR KEŽMAROK, Ltd., then is suggested the practical proposal for measurement of quality costs by the PAF model in program MS Excel and the practical proposal for the concept Balanced Scorecard. The research results would be serve for business as a tool of creation of innovative intentions in the future.

#### 3.1 The business performance measurement by benchmarking

The first step of the benchmarking is setting of significance of every criterion. It was distributed 50 electronic questionnaires of pair comparison to set criteria weights. For potential customers is the most important criterion Design (27,8 %), in the second place is Range of designs (22,8%), in the third place is possibility of creation of On-line designs (19 %), in the fourth place is possibility of Wood brushing (17 %) and the last and the least important criterion is Delivery time (13,40 %). The final aim was to identify benchmark between competing products by the best value method. In addition to criteria weights (w) is very important to count on tendency of criterion (t), which could be increasing (+) or decreasing (-). It depends on maximization (+) or minimization (-) of criteria. The results of the benchmarking and the final order of competing companies are in the table 2.

Table 2 The results of the benchmarking; own elaboration

Criterion	Unit	t	w	P1	P2	P3	P4
Design	points	+	27,80	x= 10 a= 1 b= 27,80	x= 9 a= 0,9 b= 25,02	x= 7 a= 0,7 b= 19,46	x= 6 a= 0,6 b= 16,68
Range of designs	number	+	22,80	x= 168 a=0,52 b=11,86	x=175 a=0,54 b=12,31	x=323 a=1 b=22,80	x= 164 a=0,51 b=11,63
On-line designs	yes/no (1/0)	+	19,00	x= 0 a= 0 b= 0	x= 0 a= 0 b= 0	x= 1 a= 1 b= 19,00	x= 1 a= 1 b= 19,00
Wood brushing	yes/no (1/0)	+	17,00	x=1 a=1 b= 17,00	x=0 a=0 b= 0	x=0 a=0 b= 0	x=0 a=0 b= 0
Delivery time	days	-	13,40	x=20 a=0,35 b=4,69	x=15 a=0,47 b=6,30	x=12 a=0,58 b=7,77	x=7 a=1 b=13,40
Sum (b)				61,35	43,63	69,03	60,71
Order				2.	4.	1.	3.



Based on the results of benchmarking follows, that the global benchmark is P3 with result 69,03 points. The second in order is P1 – DREVOINTERIÉR KEŽMAROK, Ltd. (BAYUS®) with 61,35 points. In the third place is P4 with 60,71 points and the last is P2 with only 43,63 points. Differences between the results are very low, especially between the second and the third place and every of the products has weak spots in some areas, although they belong to the market leaders in the branch of customized woodworking. Based on these results is possible to focus on innovations of these criteria, in which the family business DREVOINTERIÉR KEŽMAROK, Ltd. is worse than its competitors.

### ***3.2 The proposal for the business performance measurement by quality costs***

The business DREVOINTERIÉR KEŽMAROK, Ltd. is interesting in innovations and continuous improvement of its products and processes but it doesn't quantify its improvement at time. The suitable tool for quantification could be the quantification of quality costs by the PAF model consisted of 4 quality costs groups.

In the business DREVOINTERIÉR KEŽMAROK, Ltd. are internal failures costs represented by e. g. costs of reparation of technological failures. It is necessary to decrease the percentage of these costs.

The second group are external failures costs. These costs are caused due to the claims of unsatisfied customers. Considering to the participation on exhibitions and the introduction of innovative technologies from 2008 to 2015 it is possible to produce atypical interior according to specific customers' needs. Therefore is its percentage lower and it's advantageous for business.

The third group are appraisal costs. To these costs belong e. g. costs of production technology control and costs of OSH control, including control of solid fuel boiler (4 times a year) and chimney cleaning (2 times a year). The appraisal costs according to our research don't achieve any changes and it's recommended by methodics of the PAF model, too.

The fourth group are prevention costs – e. g. costs of innovations or investments in the business development. Prevention contains all business activities to improvement (e. g. purchasing of material for a new product, costs of employees' education about new trends, costs of exhibitions...). The percentage of these costs would be increasing.

According to the double-entry accounting, which is used in this business, belong all quality costs groups to the operating costs. In the DREVOINTERIÉR KEŽMAROK, Ltd. isn't awareness about this model and about the quality economy because of the missing system of quality management but it is possible to use the PAF model.

Our proposal for improvement of review about quality costs is the quantification of the PAF model in the program MS Excel. This proposal is consulted with business managers and with accountant. It is possible to implement it because in this business is the analytic evidence worked out very well. For quantification of these costs we suggest following procedure:

1. to understand the methodics of the PAF model,
2. during the accounting of operating costs to evaluate, which costs are connected with quality according to the PAF model and to write numerical values to the sheets in the program MS Excel,
3. to create a sheet in program MS Excel for every month,

4. to evaluate the percentage of every PAF model groups in the end of every month,
5. in the end of year (or accounting period) is it possible based on the 12 sheets (for every month) to evaluate these indicators:
  - the percentage of every quality costs groups (especially prevention costs);
  - the percentage of all quality costs at total operating costs;
  - differences between every months;
  - the trend of the development of quality costs groups.

For better clearness of this procedure is illustrated figure 1 (these items could contain every sheet in the MS Excel in same year). The numerical values have only informative character because this method hasn't been realized in business yet.

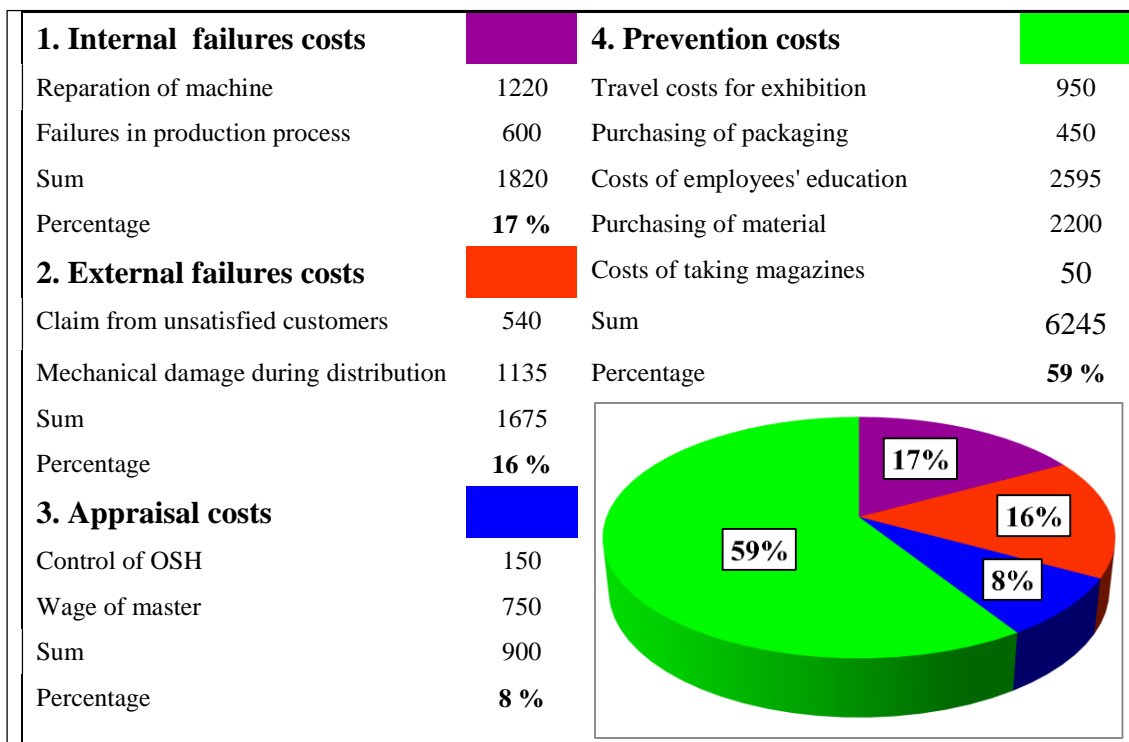


Figure 1 Example values of the PAF model and its illustration, own elaboration

The procedure shows if the business is investing in innovations and improvement or if it eliminates failures only. During the longer using of the PAF model we could also compare years but we should count on inflation and economic crisis, which could distort the results. In addition the results could be distorted by subjective classification of quality costs in groups. This method is very low-costing because of the using of MS Excel.

### 3.3 The proposal for the business performance measurement by Balanced Scorecard

The third of the ways of business performance measurement in the DREVOINTERIÉR KEŽMAROK, Ltd. is the Balanced Scorecard (BSC). It consists of 4 perspectives (financial, customer, internal processes, learning and growth), to which belong strategic goals, KPIs = Key Performance Indicators, goal values and suggestions. It's very similar to the magic macroeconomic tetragon (economic growth, employment, price stability, international trade balance) because it's very difficult to synchronize all goals.

The first step is to create the vision: e. g. “The long-term goal of the family business DREVOINTERIÉR KEŽMAROK, Ltd. is to become the market leader in hotel companies segment and to increase the business attractiveness for following generations.” By the suggestions is counted on this vision and the possibility of the innovative development of business. Suggestions of goals, KPIs and goal values are in table 3.

Table 3 The proposal for the Balanced Scorecard; own elaboration

Perspective	Goal	KPI	Goal value	Unit
Financial	To decrease the debt	Coefficient of debt	30	%
	To increase the preventive costs	The percentage of prevention costs in the PAF model	50	%
Customer	To increase the revenues from tourist companies	The percentage of tourist companies at total revenues	60	%
	To improve the entry consultation with common customers	The percentage of common customers with concrete ideas	75	%
Internal processes	To create new methods for woodworking	The number of new woodworking methods	1	number
	To improve the logistics	Average delivery time	15	days
Learning and growth	To increase the attractiveness of woodworking for young people	The number of dual educated students	7	number
	To increase the employees' creativity	The number of exhibitions and trainings	4	number

This proposal is consulted with the business managers to be consistent and to support not only the innovative development of the business but also the business attractiveness for following generations of the family Bajus. These suggestions are fixed for one year to be compatible with the accounting period because from it follows financial perspective.

In the financial area is for business important to decrease the debt because of the financial stability. We suggest the goal value of coefficient of debt maximal 30 %. The solution could be higher allocations to funds from net profit.

If the business would like to use the suggested the PAF model of quality costs measurement, the percentage of prevention costs (of innovations and improvement) would be higher than 50 %.

The biggest number of complex orders of the DREVOINTERIÉR KEŽMAROK, Ltd. is created by hotel and tourist companies (e. g. Tatry Mountain Resorts - Hotel Kukučka, Grandhotel Praha \*\*\*\*, Chalets Jasná de Luxe...). The business goal is to increase their percentage at total revenues to 60 %. Nowadays is the business planning to reach it by direct contact of new or reconstructed hotels.

Because it's very important to deal especially with more difficult and profitable orders by the target segment (hotels), it's necessary to improve the entry consultation in show room with common customers. They are less profitable with typical interior design needs. The business goal is to increase the percentage of the common customers with concrete ideas at all common customers to the goal value 75 %. It could be reached by on-line designs for simple and less atypical products (e. g. roll-doors).

In the internal processes perspective is for business very important to improve innovative processes e. g. by new woodworking methods. Our goal value is once a year because these innovations are very expensive. The managers should not only know new trends and customers' needs but also count on the financial goal of the debt decreasing. It could be e. g. the method of wood thermising, in which are interested hotels and tourist centres.

The second of the internal processes goals is to improve logistic processes. It would be necessary to shorten the average delivery time from 20 to 15 days, e. g. by on-line designs, which could shorten the projecting of interior in the pre-production stage.

The biggest impact on the innovative business development have employees and their creativity. Nowadays is the interest of young people in woodworking production decreasing and the business would like to realize the dual education. We suggest the number of dual educated secondary school students in the value of 7 per year. This value is consulted with managers in regard to production capacities. It would be realized by the recruitment of primary school graduates. One of the first dual educated students will be son of the production manager.

In the interior design branch is necessary to invest in the creativity of human resources and in their education and trainings. The next business goal is to increase employees' creativity and their interest in new trends in branch. The education doesn't have to be too expensive by external firm. It could be advantageous to educate the employees by passive participation on some furniture exhibitions funded by a social fund. The number of exhibitions and education would be according to manager in value of 4 per year.

In the end of the accounting period is necessary to evaluate these indicators, to compare real values with goal values and to quantify performance of every perspective. Based on the theoretical approaches we suggest following procedure (table 4) how to do it (the numerical values are fictive):

1. to set the significance of every perspective by weights (every perspective has 25 points because the perspectives should be balanced);
2. to set the significance of every goal by weights to be the sum of these weights equal to the significance of perspective (e. g.  $15+10=25$ );
3. to set tendency of indicators (like by the benchmarking) according to maximization (e. g. new orders from hotels) or minimization (e. g. coefficient of debt);
4. to quantify the achievement of goals (real value/goal value by increasing tendency, goal value/real value by decreasing tendency);
5. to quantify the performance of every perspective by the method of the weighted average (e. g.  $(15*0,86+10*1,04)/25=0,932$ , it's 93,2 %);
6. to evaluate the performance of goals and perspectives (if the value of goal achievement is less than 1 and the value of performance of perspective is less than 100 %, it's important to improve this area or to change goals for the next period).

Table 4 The quantification of the performance in the BSC; own elaboration

Perspective	Weights	KPI	Tendency	Goal value	Real value	Achievement	Perspective performance
Financial	25	15	1.	-	30	35	0,86
		10	2.	+	50	52	1,04
Customer	25	14	3.	+	60	65	1,08
		11	4.	+	75	70	0,93
Internal processes	25	16	5.	+	1	2	2,00
		9	6.	-	15	18	0,83
Learning and growth	25	12	7.	+	7	9	1,28
		13	8.	+	4	5	1,25

Considering the business size and the family character we believe, that the number of goals in the Balanced Scorecard is adequate. If the business managers would like to set more goals and KPIs in the future, it would be more effective to use the special software BSC Designer (<http://www.webbsc.com>) or to consult it with the Slovak experts on the introduction of the BSC into the business practice (<http://www.balancedscorecard.sk/>).

#### 4 Discussion

The aim of our contribution was to identify the significance of 3 chosen business performance measurement methods by the planning of innovations. It was about the benchmarking, the PAF model of quality costs measurement and the holistic method Balanced Scorecard. The research was implemented as a case study in the family business DREVOINTERIÉR KEŽMAROK, Ltd. All of these methods have very big impact on innovative potential of the business. The benchmarking is useful for the setting of weak spots in comparison with the best companies in the same branch. The Balanced Scorecard is the modern method of a strategic management and in comparison with the traditional methods of financial analysis it deals with all business areas. By the evaluation of the goal achievement we could find innovative opportunities, too. The PAF model is useful for the quality costs control, if it's really about investments in innovations or about the elimination of failures only. We will show the practical proposal of on-line designs introduction, how it is possible to use these methods in the DREVOINTERIÉR KEŽMAROK, Ltd. synchronously.

Based on the results of the benchmarking follows, that products of the DREVOINTERIÉR KEŽMAROK, Ltd. won the second place of 4 competing companies. It has positive results in these criteria: Design and Wood brushing. It satisfies needs of demanding customers, too. For customers is very important the Range of designs. It would be interesting to make up for the photo-wallpapers, which create a component of the samplers of the competing companies. The negative values the business reaches in these criteria: Delivery time and On-line designs.

Introduction of on-line designs would also meet goals in the customer and the internal processes perspective of the Balanced Scorecard. This possibility would be for

common customers with traditional and typical needs. According to the consultation with the business manager we identified as the typical interiors mostly roll-doors, wardrobes, commodes and beds. The on-line designs would have these possibilities: the possibility of the budget setting, the possibility of the furniture type choice (roll-doors, wardrobes, commodes, beds), the possibility of the measurements setting, the possibility of the material setting according to the range of designs, the possibility of the internal construction choice, the possibility of the external appearance choice, the possibility of the fittings and accessories choice and the possibility of the adding of a photo or a sketch of some furniture in case, that the customer has a concrete idea.

This proposal could mean for the business following advantages: the price calculation and the provisional project documentation based on the on-line design before the personal meeting with customer, the improvement of the logistic processes, the possibility of spending time more with target segments (e. g. hotels, mountain resorts) with atypical needs, the tool for the customer database creation, more free time, less stress in family, the possibility of customers to contribute to innovative business development and know-how (so-called the open innovations) by their ideas.

The introduction of on-line designs requires the innovation of the business website (<http://drevointerier.com/>), too. The current website was created by advertising agency VANOKU 5 years ago. This change should contain input data (parameters of products), from which the customers could create their own on-line design. The innovation of website would increase the percentage of the preventive costs in the PAF model because it's improvement and it also follows from the financial perspective of the Balanced Scorecard. It would also decrease the external failures costs caused by the customers' dissatisfaction.

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# Multidimensional Evaluation of Transport Company Performance

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## Abstract

The article deals with an evaluation of the performance of municipal transport companies in the Czech Republic. The total performance of municipal public transport operators is divided into three components: effectiveness, efficiency and economy. The data are taken from the Annual Reports of the Association of Transport Companies for the 2011-2015 period containing data on the activities of 19 operators of municipal transport in the Czech Republic. Effectiveness is understood to be a company's ability to reach determined objectives. Passenger transport is the main object of municipal transport companies. Efficiency is understood to be the relationship between the input used and the output reached. Economy means avoiding waste during the implementation of business processes. It means procuring input at the lowest possible cost. Total performance is determined by combining all three above-mentioned components. Data Envelopment Analysis was used to evaluate performance and its components.

Keywords: effectiveness; efficiency; economy; performance; transport operators; data envelopment analysis.

JEL Classification: C44, C61, L91, R48

Article Classification: Research article

## 1 Introduction

Increasing business performance is a current management issue. Performance issues can be addressed from different viewpoints. First, from the point of view of the definition of performance itself, and from the point of view of its components and factors influencing it.

The article is divided into two main parts. In the first part, based on literary research, the concept of performance is defined and the methods used to measure performance are presented. Since performance is closely intertwined with effectiveness, efficiency of business processes, and economy of providing inputs, it is necessary to

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undertake multi-criteria evaluation. Data Envelopment Analysis (DEA) appears to be a suitable method for multicriteria performance evaluation. DEA is a multicriteria linear programming method, in which the performance of a company can be evaluated with multiple inputs and outputs. This higher number of indicators from each performance dimension can then be integrated into one global performance score. The benefits of this method include the fact that it defines well and poorly functioning organizations. At the same time, for organizations that have reserves in their performance, they set other peer companies and determine the extent of changes in inputs and outputs so that the organization becomes efficient. A prerequisite, which can be considered as a disadvantage of this method, is the fact that a large number of homogeneous organizations need to be available. This means companies that work with the same inputs and produce similar outputs. Typically, these are groups of companies from a relatively narrow sector. The requirement to collect data on inputs and outputs of higher number of companies often hinders data unavailability, especially for commercial entities. That is why DEA application can often be found in public organizations that are required to publish their activity data. Alternatively, the DEA can be used internally for evaluating a larger branch (or plant) network within any company. The above mentioned limitations had to be taken into account when looking for a suitable set of subjects, on which the proposed multi-criteria performance model could be tested in the second part of the article. Data on the activities of urban public transport operators in the Czech Republic was used to verify the model. From a legal point of view, these are private companies which, however, provide a public service which is largely financed from public budgets. This means that the data on the activity of transport companies is published for the sake of transparency in the management of public finances.

The aim of the article is to design and verify on real-time data the model of multi-dimensional evaluation of urban transport operators' performance in the Czech Republic.

## 2 Literary overview

The concept of performance is very frequent in the literature, but it is inconsistent. Lebas (1995) states that defining performance is even more difficult or even more frustrating than to measure it. Lebas understands the performance as a correct deployment and management of the causal model components that lead to reaching set goals of the company at the right time, within the limits specific to each company. Performance must logically include and harmonize all areas of the company's activities so as to result in a functioning and long-term prosperous company (Knápková et al., 2013). According to Štamfestová (2014), performance is a systematic creation of assumptions for a long-term business survival. Wagner (2009) emphasizes that performance is the way how the surveyed entity performs a certain activity, based on the similarity with the reference method of performing this activity. Carton and Hofer (2006) point to the financial aspect of performance, the essence of which is value creation in order to achieve the continuity of a company. Other analogous definitions can be found in the literature. However, based on the above definitions, performance can be understood as an activity that leads to the creation of assumptions and management of all areas of business activities within the company-specific constraints leading to the achievement of objectives set at the right time. The main goal is to create value for the owners, which will ensure a long-term existence of the business on the market.

Business performance has three basic dimensions - first, doing the right things to achieve a goal; second, do the things right from the point of view of pursuing a certain activity (Wagner, 2009) and third, to minimize resource costs while respecting their required quality (Budaj et al., 2015). The first dimension is called effectiveness, the second is efficiency, and the third economy. Budaj et al. (2015) proposes to complement the fourth dimension with ethics because improvement of processes is not just about coordinating and allocating resources for profit. The integration of ethics into business processes is a prerequisite for achieving the quality of business (Putnová and Seknička, 2005). From a practical point of view, however, the measurement of the ethical dimension of performance is very complicated - both in terms of defining suitable indicators and obtaining relevant data from companies. According to the initial letters of each dimension, such an integral performance evaluation model is referred to as 3E or, 4E by number of dimensions. Performance can then be seen as a suitable combination of these dimensions, emphasizing in particular the first two dimensions - effectiveness and efficiency (Kumar and Gulati, 2010). The article then broadens the issue of performance evaluation to the third dimension - economy. In assessing economy, we ask ourselves whether we can get the same or equivalent inputs at a lower purchase price, whether using cheaper inputs will not jeopardize effectiveness and sustainability, or whether cheaper inputs will not increase maintenance costs over the lifetime of the project (Jackson, 2012).

In order to influence and manage corporate performance, it is necessary to create a system that allows performance to be quantified and compared over time, in industry or with competitors. There are a number of approaches to measuring performance, ranging from simple indicators, pyramidal indicators, composite indicators to multivariate and multi-criterial methods (Žižka and Turčok, 2015). In case of decomposition of performance into several dimensions, the multi-criteria methods should be used for evaluation. This group includes Data Envelopment Analysis (DEA), which represents a specialized model tool for evaluating the efficiency of decision-making units (DMUs). The method was published in 1978, linking to Farrell's optimization methods of mathematical programming from 1957 which measured the technical efficiency under conditions of one input and one output (Charnes et al., 1978). The basic model was derived for the assumption of constant returns to scale (CSR), and is referred to as CCR by initial letters of the surname of its creators. This model looks for such input and output weights to maximize the technical efficiency rate according to the relationship (1). The rate of technical efficiency may take values within the range between 0 and 1. Units with unit efficiency rate are at the efficient frontier and hence, low-level units are inefficient. The model works with any number of inputs and outputs. The input and output weights are unknown in the model. The input-oriented model assumes that the output is constant and that inputs must be modified to maximize efficiency (Cooper et al., 2006).

$$\frac{\text{virtual output}}{\text{virtual input}} = \frac{\sum_i u_i y_{iq}}{\sum_j v_j x_{jq}} \quad (1)$$

Similarly, a model oriented at output can be formulated, assuming the inputs are constant. The rate of efficiency is given by the inverted expression (1). The model looks for such input and output weights to make the efficiency rate greater than or equal to 1. The unit behaves efficiently if the value of the purpose function is equal to one. In 1984, the previous model was extended by the assumption of variable returns to scale (VRS). According to the surname of the authors, the model is referred to as BCC (Banker,

Charnes and Cooper). For the BCC model, the efficient frontier has a convex shape, which means that there may be a higher number of efficient units in comparison to the CCR. The BCC model can also be oriented to inputs and outputs. In addition to traditional models, other variants have been developed; however, they are beyond the focus of this article. They can be found, for example, in Zhu et al. (2014).

### 3 Material and methods

The annual reports of the Association of Transport Companies of the Czech Republic for the years 2011 to 2015 served as sources of operating data on transport companies. The members of the Association are 19 transport companies operating in municipal transport in all regional centres and further in Decin, Mariánské Lázně, Opava, Teplice and in the agglomerations of Most - Litvínov and Chomutov - Jirkov. Financial data from the balance sheet and the profit and loss statement were obtained from the MagnusWeb commercial database (Bisnode, 2017) for the same period 2011-2015.

The research process can be divided into the following steps:

- Definition of the individual performance dimensions and their inputs and outputs** - the overall performance was evaluated in terms of effectiveness, efficiency and economy. Effectiveness means the ability to achieve set goals. The main purpose of transport companies is passenger transport. In the first dimension, therefore, companies convert inputs (fleet, human resources) to outputs - transport outcomes (in vehicle-kms and seat-kms and line lengths in km). The second dimension, efficiency, expresses the ability to maximize outputs (in this case, sales and transported persons) for a given volume of input factors. These input factors are offered transport outcomes from the previous dimension. Efficiency, therefore, expresses how the company is able to commercialize its outcomes. The last dimension, economy, measures the ability to obtain inputs at the lowest cost. Wages, depreciation and consumption of materials and energy (especially fuel and electricity) were selected as the main cost items. Total performance is then a combination of all the dimensions listed, see Figure 1.

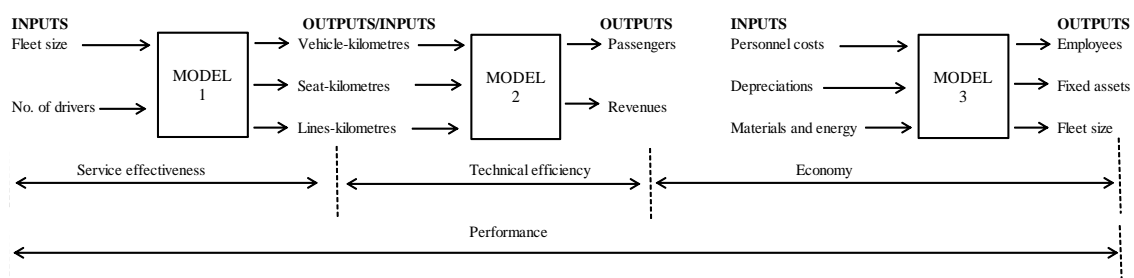


Figure 1 Composition of models

- Building DEA models** - all performance dimensions were evaluated using Data Envelopment Analysis. Since previous research (Žižka, 2017) has shown that transport companies operate mostly under conditions of decreasing or increasing returns to scale, the BCC variable returns to scale model was used. Model orientation to inputs was selected because transport is a sector with a derived demand (Jitsuzumi and Nakamura, 2010). This means that in transport, an appropriate supply of services must be created first and that stimulates the

potential demand of passengers. The systems of equations of the basic BCC model are presented in relations (2) and (3), see, for example, Jablonský and Dlouhý (2004). The symbol  $x_j$  is used to mark inputs,  $y_i$  is output,  $u_i$  is the weight of output,  $v_j$  is the weight of input and  $z$  is the value of the purpose function. The variable  $\mu$  represents the condition of the model convexity. In the BCC model, this variable value can be arbitrary.

$$\text{maximize } z = \sum_{i=1}^r u_i y_{iq} + \mu \quad (2)$$

$$\text{subject to } \sum_{i=1}^r u_i y_{ik} + \mu \leq \sum_{j=1}^m v_j x_{jk}, k = 1, 2, \dots, n$$

$$\sum_{j=1}^m v_j x_{jq} = 1 \quad (3)$$

$$u_i \geq \varepsilon, i = 1, 2, \dots, r$$

$$v_j \geq \varepsilon, j = 1, 2, \dots, m$$

$\mu \in R$ ;  $\varepsilon$  – very small non Archimedean number ( $> 0$ )

- **Effectiveness, efficiency and economy scores calculation** - effectiveness score  $E_1$ , efficiency score  $E_2$  and economy score  $E_3$  were determined for each company in the 2011-2015 time series. Furthermore, the arithmetic mean of the respective dimension in each year was calculated, together with the geometric mean for each company over the entire reference period in the given dimension. Specialized DEAP software (Coelli, 1996) was used to address all the models.
- **Determination of the overall performance score** - the overall performance of a company  $P_k$  was determined as the product of the scores of all dimensions according to the relationship (4).

$$P_k = E_{k1} E_{k2} E_{k3} \quad (4)$$

- **Division of companies into performance groups** - based on the overall performance score, companies were divided into 4 groups (with maximum performance, above average performance, average performance and below average performance). With the exception of the first category, in other groups it can be identified which dimension is the cause of worse performance.

## 4 Results

The average score of service effectiveness over the entire reporting period was relatively high (see Table 1). Transport companies would need to reduce their inputs by only about 7% on average to reach an efficient frontier. This means that companies were able to utilize the available inputs to offer transport services in an effective way. Out of the total of 19 transport companies, up to 11 companies (7 companies in 2015 and 11 companies between years 2011 and 2013) were on the efficient frontier in the monitored period. Throughout the five-year period, 5 companies - the transport

companies Teplice, Prague, Liberec-Jablonec nad Nisou, Pardubice and Ostrava - were considered to be benchmarks or peer units for other transport companies.

Table 1 Service effectiveness scores; own elaboration

Operator	2011	2012	2013	2014	2015	Mean
TP	1.000	1.000	1.000	1.000	1.000	1.000
A	1.000	1.000	1.000	1.000	1.000	1.000
KV	1.000	0.910	1.000	1.000	0.790	0.936
CV	1.000	0.879	0.938	0.822	0.890	0.904
LB	1.000	1.000	1.000	1.000	1.000	1.000
MO	0.724	0.702	0.673	0.641	0.718	0.691
BM	1.000	1.000	1.000	0.946	0.993	0.988
CB	0.885	0.851	0.874	0.886	0.837	0.866
DC	1.000	1.000	1.000	1.000	0.855	0.969
HK	0.833	0.854	0.872	0.814	0.859	0.846
JI	0.909	0.872	0.893	0.869	0.859	0.880
OL	0.888	0.849	0.847	0.831	0.873	0.857
PA	1.000	1.000	1.000	1.000	1.000	1.000
UL	1.000	1.000	1.000	1.000	0.899	0.979
OV	1.000	1.000	1.000	1.000	1.000	1.000
ZL	0.956	0.943	1.000	0.862	1.000	0.951
ML	1.000	1.000	1.000	1.000	1.000	1.000
OP	0.855	0.848	0.899	0.805	0.825	0.846
PM	0.853	0.847	0.888	0.877	0.847	0.862
Mean	0.942	0.924	0.941	0.913	0.908	0.926

Notes: Table legend TP – Teplice, A – Praha, KV – Karlovy Vary, CV – Chomutov and Jirkov, LB – Liberec and Jablonec nad Nisou, MO – Most and Litvinov, BM – Brno, CB – Ceske Budejovice, DC – Decin, HK – Hradec Kralove, JI – Jihlava, OL – Olomouc, PA – Pardubice, UL – Usti nad Labem, OV – Ostrava, ZL – Zlin and Otrokovice, ML – Marianske Lazne, OP – Opava, PM – Plzen.

On the other hand, the level of technical efficiency in the second dimension was significantly lower. Analyzed companies would have to reduce inputs (transport outcomes) by up to 30% in this dimension in order to be efficient (see Table 2). Alternatively, it would be necessary to increase outputs (passenger numbers and sales) by an average of about 42%. This shows that transport service is not always sufficiently used by passengers. From the perspective of the second dimension, only two transport companies (Prague and Marianske Lazne) were located at the efficient frontier for the whole monitored period and can be considered benchmarks for other companies. In 2014, the transport company in Teplice also reached the unit value of the efficiency score. From the point of view of the development over time, it is also an unfavorable fact that the efficiency score is continuously decreasing - in the monitored 5 years by about 10 percent.

Table 2 Technical efficiency scores; own elaboration

Operator	2011	2012	2013	2014	2015	Mean
TP	0.824	0.810	0.795	1.000	0.614	0.799
A	1.000	1.000	1.000	1.000	1.000	1.000
KV	0.678	0.766	0.742	0.663	0.585	0.684
CV	0.857	0.801	0.759	0.727	0.707	0.768
LB	0.634	0.644	0.677	0.698	0.621	0.654
MO	0.639	0.623	0.634	0.609	0.605	0.622
BM	0.851	0.761	0.754	0.767	0.752	0.776
CB	0.674	0.633	0.637	0.612	0.594	0.629
DC	0.649	0.686	0.711	0.713	0.660	0.683
HK	0.703	0.635	0.695	0.611	0.603	0.648
JI	0.996	0.957	0.946	0.941	0.931	0.954
OL	0.850	0.762	0.694	0.700	0.706	0.740
PA	0.570	0.560	0.541	0.516	0.506	0.538
UL	0.694	0.723	0.663	0.617	0.646	0.668
OV	0.390	0.393	0.410	0.372	0.350	0.382
ZL	0.729	0.678	0.668	0.640	0.635	0.669
ML	1.000	1.000	1.000	1.000	1.000	1.000
OP	0.562	0.535	0.523	0.501	0.499	0.523
PM	0.682	0.599	0.561	0.587	0.573	0.599
Mean	0.736	0.714	0.706	0.699	0.662	0.703

Table 3 Economy scores; own elaboration

Operator	2011	2012	2013	2014	2015	Mean
TP	1.000	1.000	1.000	1.000	1.000	1.000
A	1.000	1.000	1.000	1.000	1.000	1.000
KV	0.974	0.978	0.951	0.940	1.000	0.968
CV	1.000	1.000	1.000	0.964	1.000	0.993
LB	1.000	1.000	1.000	1.000	1.000	1.000
MO	0.958	0.972	0.969	0.990	1.000	0.978
BM	0.990	1.000	1.000	1.000	1.000	0.998
CB	0.925	0.904	0.891	0.890	0.873	0.896
DC	0.947	0.966	1.000	0.932	0.977	0.964
HK	0.994	1.000	1.000	1.000	1.000	0.999
JI	1.000	1.000	1.000	1.000	1.000	1.000
OL	0.984	1.000	1.000	1.000	1.000	0.997
PA	1.000	1.000	1.000	1.000	1.000	1.000
UL	0.987	0.951	0.978	0.957	0.978	0.970
OV	1.000	1.000	1.000	1.000	1.000	1.000
ZL	0.998	0.984	0.986	1.000	1.000	0.994
ML	1.000	1.000	1.000	1.000	1.000	1.000
OP	1.000	1.000	1.000	1.000	1.000	1.000
PM	0.855	0.852	0.982	0.955	1.000	0.927
Mean	0.980	0.979	0.987	0.980	0.991	0.983

From the third dimension point of view, the companies behave economically and there are no major differences among them. This is probably due to the fact that all operators buy similar inputs in similar price ranges. On average, it would be sufficient to reduce input costs by only about 2% to achieve an efficient frontier. The average value of the economy score over the period remained basically constant. The only exception is the Ceske Budejovice transport company, which shows a deterioration in the economy score. However, the difference from other companies is not so significant (the average economy score of this company is 0.896).

The overall performance score was obtained by the product of individual dimensional scores. Only 2 transport companies achieved the highest performance score over the entire reporting period - these are the Prague and Marianske Lazne transport companies and in 2014 also the Teplice transport company. Other companies can be divided into three groups. The first group consists of companies with above-average performance (average performance score between 0.70 and 0.90), including the Jihlava, Teplice and Brno city transport operators. The second group are the companies with average performance (performance scores between 0.50 and 0.69) which included the following operators Chomutov-Jirkov, Liberec-Jablonec nad Nisou, Děčín, Ústí nad Labem, Olomouc, Zlin-Otrokovice, Karlovy Vary, Hradec Kralové and Pardubice. The last group includes Ceske Budejovice, Plzen, Opava, Most-Litvinov and Ostrava which achieve below-average performance (performance score less than 0.5).

Table 4 Total performance scores; own elaboration

Operator	2011	2012	2013	2014	2015	Mean
TP	0.824	0.810	0.795	1.000	0.614	0.799
A	1.000	1.000	1.000	1.000	1.000	1.000
KV	0.660	0.682	0.706	0.623	0.462	0.620
CV	0.857	0.704	0.712	0.576	0.629	0.689
LB	0.634	0.644	0.677	0.698	0.621	0.654
MO	0.443	0.425	0.413	0.386	0.434	0.420
BM	0.842	0.761	0.754	0.726	0.747	0.765
CB	0.552	0.487	0.496	0.483	0.434	0.489
DC	0.615	0.663	0.711	0.665	0.551	0.638
HK	0.582	0.542	0.606	0.497	0.518	0.548
JI	0.905	0.835	0.845	0.818	0.800	0.840
OL	0.743	0.647	0.588	0.582	0.616	0.633
PA	0.570	0.560	0.541	0.516	0.506	0.538
UL	0.685	0.688	0.648	0.590	0.568	0.634
OV	0.390	0.393	0.410	0.372	0.350	0.382
ZL	0.696	0.629	0.659	0.552	0.635	0.632
ML	1.000	1.000	1.000	1.000	1.000	1.000
OP	0.481	0.454	0.470	0.403	0.412	0.443
PM	0.497	0.432	0.489	0.492	0.485	0.479
Mean	0.683	0.650	0.659	0.630	0.599	0.644

## 5 Discussion

From the DEA analysis results, it is clear that there are significant differences between the groups of companies. Based on the overall performance score, transport

companies were divided into 4 categories. In the first category, there are 2 companies with a maximum performance score (1.0). It is the Prague transport company which is a major operator providing urban transport in the capital with dependent and independent traction (underground, trams, buses). On the other hand, the Mariánské Lázně transport company is a small operator (in terms of staff, fleet size and transport outcomes) operating urban transport in a smaller city (buses and trolleybuses).

The second group consists of 3 transport companies with above-average performance (above 0.70). All of these companies achieve high economy score; however they differ in other dimensions. The Jihlava operator has a fairly high efficiency score, but in the given group the effectiveness dimension is the worst. This means that it has a reserve in the use of technical inputs - with the fleet and the number of drivers it could offer more transport outcomes. This conclusion is in accordance with the previous research (see Žižka, 2017) when the given operator was found to have increasing returns to scale. A lower rate of effectiveness can be solved by the increase in the range of operation. The operators in Brno and Teplice have a reserve in efficiency - their transport offer is not sufficiently used by passengers, whether in terms of a number of transported persons or sales.

The third group includes 9 transport companies with average performance (between 0.50 and 0.69). Lower performance, compared to the previous categories, is mainly due to worse efficiency in the second dimension. They should, therefore, focus on improving the quality of offered services from the point of view of passengers or, partially reduce the range of offered services. Transport companies Hradec Králové and Olomouc also have more significant reserves in the effectiveness dimension. Thus, they use an excessive range of inputs for a given range of transport outcome. In other words, they should realize a wider range of outcomes with available inputs. Also, these two operators are in a situation of increasing returns to scale.

The last group consists of 5 operators with below-average performance score (below 0.49). The transport company in Ostrava has a specific position in this group as it shows maximum values in terms of effectiveness and economy and at the same time the lowest value of the efficiency level among all the companies surveyed. In order to increase the efficiency level, this would require a significant increase in the number of (paying) passengers and sales. Very low efficiency is probably related to a large number of deliberately not paying passengers, which is a long-term problem. For this reason, in 2017 the company intensified control activities (Lesková, 2017). The remaining 4 operators have reserves, in particular, in the efficiency dimension and partly also in the effectiveness dimension. The lowest effectiveness rate in this group is reported by the Most-Litvínov transport company which should have 40% less inputs on the existing range of services. The transport companies of České Budějovice and Plzeň also have reserves in the economy dimension. The former company should, therefore, reduce the costs by 10% and the latter by 7%.

## **6 Conclusion**

Data Envelopment Analysis is a relatively simple method for comparing performance of industry-homogeneous companies. The overall performance score can be easily broken down into partial scores which in this case represented effectiveness, efficiency and economy. In each dimension, peer companies were set for other units that have a reserve in that dimension. The performance evaluation of urban transport companies showed that the companies have the largest reserve in terms of technical efficiency. This means that the transport services offered are in some cases



insufficiently used by paying passengers. However, this dimension is also most affected by social policies of the respective cities. In some cities, relatively large population groups are transported free of charge, which has a negative impact on sales from urban public transport. Therefore, when assessing the second dimension (efficiency), it is necessary to take into account that urban transport is a public service where the aim is not to maximize sales from passengers. In the other two dimensions - effectiveness and economy - the average evaluation is favorable. However, even in these two dimensions, there are transport companies which - compared to other operators - have reserves both in the fleet utilization and in the purchase of inputs.

In terms of wider research relevance, a three-dimensional model of total performance assessment was formulated in the paper. These three dimensions represent the decisive factors affecting the performance of the business. It is clear that the indicators used to characterize the individual performance dimensions will vary from sector to sector. From the point of view of further research we can consider extending the model of the fourth dimension - ethical or social responsibility. In the transport sector, for example, it could take into account the environmental aspects (use of low-emission vehicles), accessibility for certain population groups (low-floor vehicles), preservation of cultural heritage (historical and museum vehicle care), as well as aspects related to the efficient use of public funds.

The fact that the model of multidimensional performance evaluation of the companies was tested in one sector – urban public transport – is one of the limitations of the research. Further research could focus on model validation of companies in other industries. This model can also be extended to the issue of exploring the shift of the efficient frontier in the industry over time using the Malmquist index.

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# Implementation of information technologies in the process of environmental impact assessment

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## Abstract

The paper deals with the Slovak system of Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA). It implements the application of knowledge management (KM) and information and communication technology (ICT) to the processing of EIA/SEA studies (reports) and innovative proposals how can be performed future EIA/SEA processes. It examines inclusion of analyzes of climate variability in the processes of EIA/SEA and their use for green growth projects and activities with a focus on green infrastructure projects in water management. The solution results in preparation of methodologies for environmental impact assessment, as a basis for further legislative direction issues, taking into account current legislation and using more exact methods of environmental assessment. The research activities are based on methodological developments in the application of environmental assessment in environmental practice. They include planning and management in terms of assessing the impact of activities on the environment and strategic environmental assessment, both in connection to public participation.

**Keywords:** Environmental Impact Assessment; Strategic Environmental Assessment; knowledge management; information and communication technology.

**JEL Classification:** K32, F64, O44

**Article Classification:** Research article

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## **1 Introduction**

The most serious problems facing the world today – fiscal crises in key economies, structurally high unemployment/underemployment, water crises, severe income disparity, failure of climate change mitigation and adaptation, greater incidence of extreme weather events (e.g. floods, storms, fires), global governance failure, food crises, failure of a major financial mechanism/institution, profound political and social instability (World Economic Forum, 2014) – either stem from environmental mismanagement or inequality, or both. The key question is if (and how) environmental goals can be reconciled with growth and poverty reduction in the developing world. The report *Green Growth and Developing Countries* (OECD, 2012) asserts that these goals can indeed be pursued simultaneously in a mutually-reinforcing way through green and inclusive growth. This growth is ensuring by environmental impact assessment of projects and activities also known as environmental assessment.

Environmental assessment is currently desirable particularly in terms of mitigation measures in response on climate change, extreme events occurrence and biodiversity loss, which is recognised across Europe and around the world. To make progress towards combating and adapting to climate variability, and halting the loss of biodiversity and the degradation of ecosystems, it is vital to fully integrate these issues in the plans, programmes and projects implemented across the EU.

Impact assessment of any activity is a significant decision-support process used in virtually all nations around the world. The oldest, most legislatively well-established aspect of impact assessment (IA) is Environmental Impact Assessment (EIA). Increasing concerns in developed economies about the impact of human activities on human health and on the biophysical environment led to the development of the concept of EIA in the 1960s, and to its adoption as a legally based instrument later in that decade. The National Environmental Policy Act (NEPA) in the USA, which became effective on January 1, 1970. The European Union approved a Directive on EIA in 1985, the latest amendment was in 2014, what emphasis for continuous development. The need to apply IA to strategic levels of decision-making (e.g., policies, legislation, plans, and programs) led to the development of Strategic Environmental Assessment (SEA). The European Union approved a directive on the environmental assessment of plans and programs in 2001 (amended in 2003 and in 2014).

In 2014, 20 years have passed since the adoption of the first legislation on the assessment of environmental impact in the Slovak Republic, namely Act no. 127/1994 Coll. on the assessment of environmental impacts. Since the adoption of Law on the assessment of environmental impacts in the Slovak Republic to 31.12.2016 in the EIA process has been completed about 7,000 projects. In terms of economic and industrial fields the most represented is Infrastructure. A significant part of them went towards the water management. In terms of SEA increase occurred at year 2006 with the adoption of the new law and also the SEA was a big part of the assessment of the documents linked to the area of water management. environmental and strategic impact assessment of proposed activities is currently carried out according to the law no. 24/2006 Coll. on the assessment of impacts on the environment and on amendments to certain laws amended, which came into force on 1 February 2006.

Experiences with the implementation of the Law on the environmental impacts assessment confirm that the technical and urban development of Slovakia must go from the start hand in hand with knowledge how much influence will cause new activity, new strategic document in a particular area as a potential negative impact on the environment should be minimized. It is expected that the EIA will continue to act as an effective tool to prevent the application of such investments in Slovakia, which, by their

degree of environmental damage multiple outweigh their benefits (Luciak, 2012). The effectiveness of the EIA process depends primarily on the quality of data on the affected environment for transparent information on the proposed activity, and in particular the correct prediction of the effects of actions. It should be noted, however, that the prediction and assessment are not among the exact sciences and contain many uncertainties. It is important, therefore, a detailed description of these uncertainties in the effluent EIA documentation (Morris and Therivel 2009).

The research will be implemented by an innovative approach, but will also take into account the methodologies existing in the world and in Slovakia, European Union legislation (2001/42/EC, 2011/92/EC, 2014/52/EC) and the Slovak and international conventions (especially the Aarhus Convention, Espoo etc.).

The solution of the research will result in the development methodology of environmental impact assessment (as a basis for further legislative direction issue) that takes into account current legislation and exercising more exact methods and procedures prevailing quantitative and cumulative impacts assessment.

## **2 Material and methods**

In defining the strategic direction of research we considered trends abroad, the need to develop theoretical foundations and environmental aspects. The implemented research is highly up-to-date from the worldwide point of view. The high scientific level of the research is ensured by experts in key areas of basic research, who will oversee the application of scientific methods in the research and use of scientific tools.

Below are briefly characterized the key scientific methods which are necessary to be used in the research.

### ***2.1 Knowledge Management and Information Communication Technology***

Knowledge Management(KM) is now becoming a key element of any thriving state economy. The transition from traditional management models of each process, such as the process of environmental impact assessment, and their shift towards process management constitutes one of the prerequisites for the successful application of knowledge management. Jackson (2007) analyses how good knowledge management techniques might improve the quality and effectiveness of the EIA process. Knowledge management techniques includes following: Classification tools, Bibliometrics, Brainstorming, Business intelligence, Case based reasoning, e-Learning platforms, Internet search engines, Project management tools and others. Knowledge management is the result of effective use of existing and familiar information technologies that facilitate collecting, sorting, storing and presenting relevant information in a way that will help stakeholders to obtain information from a particular area, to solve problems, the selection of the optimal alternative and subsequently successful decision-making process. For effective implementation of those EIA/SEA elements, free information exchange in a user-friendly mode is vital. In the conventional paper reports, the environmental information is presented in the form of text, photos and charts, and the real-life 3-dimensional environmental conditions are compressed into 2-dimensional, non-interactive tables and diagrams. The technical information on the environmental impacts and the proposed mitigation measures may not be so interesting and easy to be understood by the general public. We are cognizant of the negative and positive role Information Communication Technology (ICT) can play in environmental sustainability. We believe that ICT has a central role to play in tackling climate change

and we are not alone as this article in e-Week Europe confirms: “Although ICTs are part of the problem, they can also be an important part of the solution.”

## **2.2 Environmental Assessment**

Methods of Environmental Assessment (EA) of impacts are general term which includes all kinds of environmental impact assessment, ie. includes processes SEA and EIA (Pavličková et al., 2009). This systematic process monitors the registration and evaluation of information on potentials, capacities and functions of natural systems and resources as a basis for anticipating and managing adverse effects and implications of the proposed investment, which assists in the planning of sustainable development of the country. To date been developed many methodologies enabling the identification of potential impacts of the proposed project / strategic document and also methodologies for their subsequent evaluation of the various aspects (importance of action, duration, etc.). The most famous ones are: Life Cycle Analysis (LCA) (Tukker, 2000), Village (community) mapping (Sharpe et al., 2000), Socio-economic Impact Assessment (SIA), Environmental Risk assessment (ERA) (Robu et al., 2007; Zeleňáková, Zvijáková, 2017), Appropriate assessment (AA), Ecological Impact Assessment (EcIA) (Latimer, 2009), Quantitative Risk Assessment (QRA) (Zeleňáková, Zvijáková, 2015), Integrated Biodiversity Impact Assessment (IBIA) (Slootweg et al., 2010).

Selection for specific evaluation is always purposeful. Tools that are used at projects: Checklists, Matrix, Network Analysis, Modeling, Questionnaires, Analysis of trends, Expert Systems, Scorecards, Mathematical and statistical methods.

Particular attention is paid to environmental assessment methods to determine use of cumulative effects, namely: Spatial Analysis, Landscape-ecological analysis, Interactive nuts, Expert opinion, Analysis of disruption of the country limits, Multi Criteria Analysis (MCA) Social analysis of impacts (according to Walker and Johnston, 2001; Ramachandra et al., 2006; Pavličková and Vyskupová, 2015). Furthermore, an Appropriate Assessment (AA), which is the issue of impact assessments of proposed activities on Natura 2000 and under Article 6 of the Habitats Directive applies to all states of the European Union (DG Environment, 2001). Since Slovakia is not yet developed methodology for Natura 2000 localities assessment; for the research we use "Methodology of evaluating the significance of the impact when assessing under § 45 of Act no. 114/1992 Coll. on nature and landscape protection as amended "(Bulletin of the Ministry of Environment of the Czech Republic, 2007) as a basis for the preparation of our proposed methodology for the construction of water management.

## **2.3 Risk Analysis**

Risk Analysis (RA) methods include (Tichý, 2006): Expert methods - use the experience of experts to express verbal or numerical estimates of the investigated problem. These are used where decisions are loaded with uncertainties. Some examples of these methods are: Failure modes and effects analysis (FMEA), Failure Modes, Effects and Criticality Analysis (FMECA), Universal matrix of risk analysis (UMRA), Cost-benefit analysis (CBA), Strengths, Weaknesses, Opportunities, Threats (SWOT).

## **2.4 Multi-Criteria Decision Analysis**

Multi-Criteria Decision Analysis (MCDA) is a general term for systematic and transparent approaches to analyze complex problems involving multiple criteria

(Keeney, 1992; Belton and Stewart, 2002; Gregory et al., 2012). MCDA provides great potential for supporting environmental planning processes including a structured framework for evaluating the impacts of alternatives and for combining stakeholders' subjective views about the criteria with objective measurement data about the alternatives.

## 2.5 Evaluation of the methods

High scientific quality of the research is provided by experts in key areas of basic research, who will ensure the application of scientific methods in solving the research and the use of scientific instruments is referred to in the scheme in figure 1.

Those methods support the evaluation of projects and activities emphasizing sustainable green infrastructure. According to the OECD green growth is a way of supporting economic growth and development while protecting natural resources, so that we can continue to use resources and environmental services on which our prosperity depends. It is therefore necessary to promote investment and innovation, which will be the basis for sustainable growth and enable the emergence of new economic opportunities. Upstream planning and policy making for inclusive green growth must also translate into downstream decision making and implementation processes to ensure that project level investments are designed in a manner that enhance environmental and social benefits and manage potential risks.

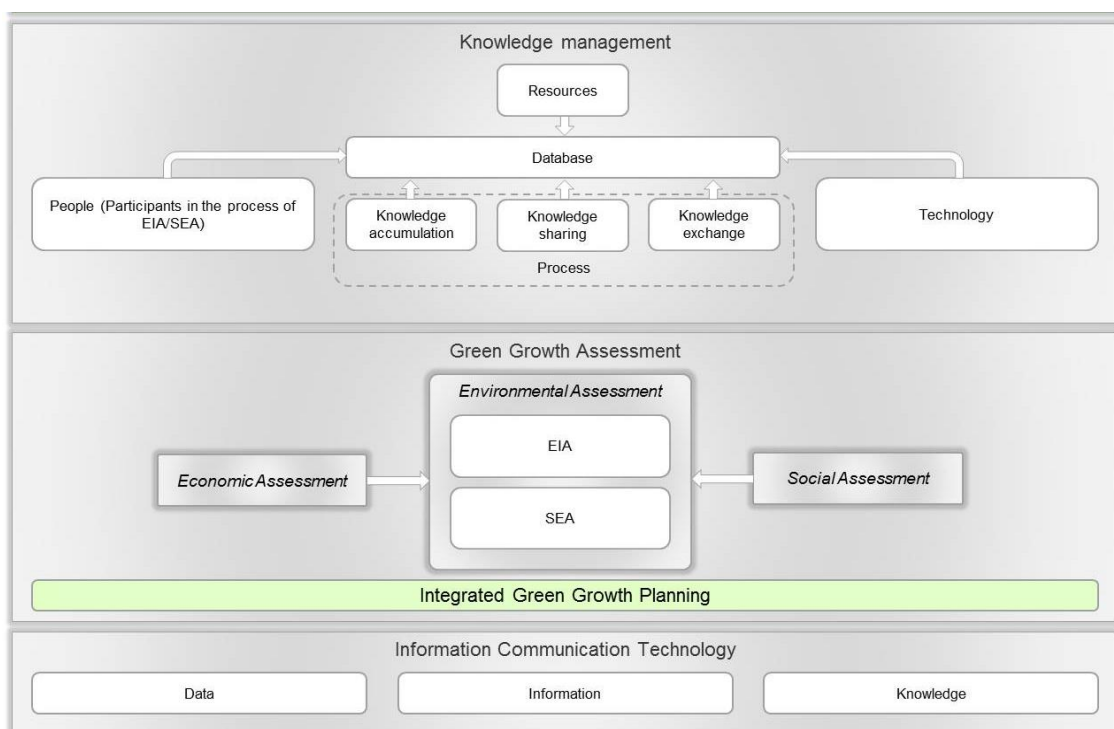


Figure 1 Scientific methods, tools and mechanisms used in research

EIA is now a well-established practice and is increasingly included in national legislation it can provide a key entry point for addressing social impacts as well through an integrated approach. While it is indeed best practice to include social and health issues in any environmental assessment, the degree to which this is done is variable. There are also several spin off approaches to research level impact assessment, such as Social Impact Assessment (SIA), Health Impact Assessment (HIA) which may also provide entry points and tools for integrating inclusive green growth approaches into

research level design and decision making. Institute of SEA as a comprehensive, systematic and transparent assessment of the environmental consequences of development documents or updates to ensure that environmental aspects (but according to the latest trends in the social, health, economic aspects and possibly other effects on sustainable development) were given to decisions plane. Similar to the EIA is in fact necessary based on well-established practice.

### **3 Results**

It follows that the paper addresses the highly topical issue of science and technology from a global perspective, has clearly defined scientific objectives that are in line with the latest international trends in research in this area, achieving the objectives represents a lasting contribution in the field of scientific research and knowledge.

#### ***3.1 Information technologies and scientific methods***

High scientific level of the research ensures the use of information technologies – software:

- For complex modelling of integrating different modeling standards – process management (at the level of modeling strategies, objectives, risks, processes, etc.).
- For statistical evaluation using the tools of Statistica and Business Intelligence and following prediction of subsequent impacts of water constructions to the environment.
- For predicting and evaluating impacts of alternatives of proposed activities, constructions will be used analysis conducted using geographic information systems.

Usage of information technologies is indispensable in the present technical period as well as in the new proposed methodologies in the field of the environmental impact assessment.

The overall objective of the research is to transfer best practices and methods of MCDA, RA, KM and ICT in EIA and SEA. The research also aims to increase cooperation and information exchange between EIA / SEA, MCDA and participatory planning professionals (authorities, planners, consultants and researchers).

For the time being there are no uniform criteria for environmental impact assessment of water constructions. One of the research's objectives is to create a multicriteria system of environmental impact assessment of water constructions through multicriteria evaluation of options, with respect to cumulative impacts, the result of which should lead to the selection of future activity quantified with minimum risk to the environment. Comparison of variants and designation of the optimal variant will be implemented based on selected criteria which objectively describe the characteristic lines of the planned variants and their impact on the environment. The scientific objectives of the research are intended to:

- develop a systematic, transparent and participatory methods and practices that integrate the principles and practices MCDA, RA, AA, KM and ICT in EIA and SEA processes;



- creation of new modeling tools process management EIA and SEA integrating online collection of structured information, public opinion questionnaire and MCDA methods; and
- compilation of guidelines for integrated and interactive use of MCDA principles and tools, RA, AA and KM in the EIA / SEA process.

The main objective of the research is to take advantage of opportunities for improving the standardization and objectification process of assessing the impact of activities and projects on the environment with emphasis to climatic variability and green growth what is priority of the presence.

Traditional professional activity is unidirectional, entailing the issue of proclamations to the public by people claiming professional expertise on matters of public concern. But environmental and social impact professionals can also be multidirectional, as professionals not only seek to impart expertise to publics from professional as well as scientific work, but take the experiences, activities, and knowledge to a lay public as important factors in the development of professional knowledge and activities. Parts of the proposals will be methodology for communications with the public for the purpose of meeting the Aarhus Convention.

### 3.2 Information technologies and environmental impact assessment

The future of impact assessment should not be left to politicians and economists to decide; the impact assessment community can advocate and promote the process as a central component of environmental and resource management, whatever the prevailing economic ethos. That may involve seeking improvement in institutional arrangements, but it will also require reasserting the good practice models of impact assessment.

Other emerging opportunities for the future of impact assessment include: an increasing focus on climate change, incorporating both mitigation and adaptation concerns and further incorporation of concepts such as systems dynamics, resilience and ecosystem services into impact assessment.



Figure 2 Concept of research

Timeliness, scientism, originality and integration of the above is expressed by the following figure 2.

Throughout evolution process of EIA, observation tells that the effective management and transformation of EIA/SEA “data”, “information” and “knowledge” is a key towards the success of EIA/SEA. In this regard, Knowledge Management (KM) concept and Information and Communication Technology (ICT) are two useful implementation mechanisms and tools for the EIA/SEA. The KM concept emphasizes a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. The ICT can be applied to process, and then to distill a vast amount of data and information to formulate EIA/SEA knowledge. In addition, ICT can also serve as an electronic platform, allowing easy access to information as well as true interaction between the public and experts, the project proponents and the authority.

The research discusses the Slovakia’s EIA/SEA system, summarizes the application of KM concept and ICT in processing EIA/SEA studies, and projects how future EIAs/SEAs may be carried out and to incorporate climate change analysis in EIA/SEA to inform decision-making about green growth planning of infrastructure projects – green infrastructure.

The research brings original proposal address the problem, has clearly defined the original concept and methodology solutions. The proposed concept of the research following the preliminary results thus far involving profiling of scientific, research and training activities of research team is expressed by the following scheme in figure 3.

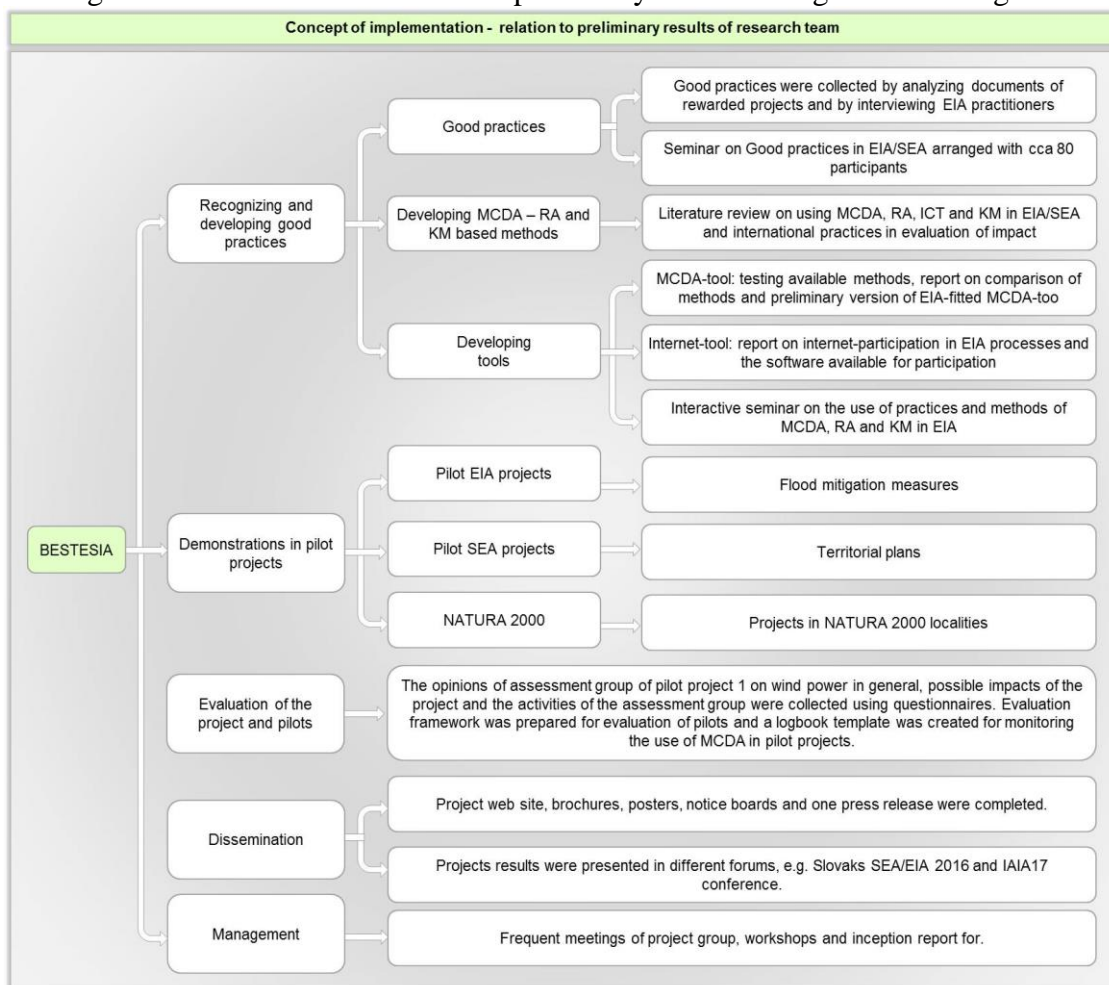


Figure 3 The proposed concept of implementation

From a methodological point of view in recent years is attention paid to the quality of EIA reports. The quality is necessary to constantly improve. Analyses of obtained knowledge and experiences pointed out that in these procedures are applied primarily landscape-ecological methods. New scientific approach to the research is the use of MCDA, RA methods with the application of innovative features implemented in a scientific approach (KM techniques and ICT tools) for methodological processing components of the EIA process. To further enhance the EIA/SEA roles on collaboration, conflict resolution/problem solving and creativity, the exploration and application of Knowledge Management (KM) skills and new Information Communication Technology (ICT) are essential. It is necessary to built a concept of solutions based on global and local know-how in the field of environmental impact assessment using its own experience of research activities and implemented projects.

The implementation and optimization of practical performance of environmental impacts assessment process in the Slovak Republic will pay attention to in the conclusions and recommendations Ist, IInd and IIIrd international conference SEA / EIA in 2010 / 2012 / 2014 / 2016, which, inter alia, pay attention to methodological manuals and methodological guidelines within which is necessary:

- revise current guidance materials in connection with the development of new techniques and methodologies as well as the practical experience gained from the process of EIA / SEA in Slovakia and abroad (especially in the UK, the Netherlands, Sweden, Germany, Austria and the Czech Republic);
- develop guidance materials, respectively procedures and guidelines for issues which have not yet been resolved (eg. risk analysis, guidance on the issue of reasonable alternatives and the process for the selection and monitoring of the effects of plans and measures strategic document on the environment and health guidelines for the assessment of cumulative and synergistic effects, integration issues climate change into the EIA and SEA).

Methodological issues of impact assessment were discussed in the years 1992 to 2016 in several scientific and scientific-technical projects. The first was the scientific and technological project Impact assessment of buildings and construction activities on environmental quality (duration: 1991-1993), whose coordination was assigned to landscape ecologists (Kozová et al., 1993). Their further work is reflected in the design of methodology in the years 1993 - 1998, when a series of methodological manuals has been were developed dealing with not only the process of assessing impacts of proposed activities, but also the methodologies and methods of assessing the effects of specific sets of activities on the environment. These were processed within the scientific and technological project: “Developing guidance manuals for the application of Law on Environmental Impact Assessment” (the coordinator of the project was PEDOHYG Bratislava, coordinator of the preparation of methodological manuals was EIA Centre at Department of Landscape Ecology, Faculty of Natural Sciences, Comenius University in Bratislava, and the customer was the Ministry of the Environment). In subsequent years, several projects have been processed (mainly by Slovak Environmental Protection Agency), which included general guidelines without specifying the economic area.

In the years 2012 to 2013 was conducted the International Visegrad Fund project with the title "Assessment of environmental quality in the V4 countries"(Galaš et al., 2014; Galaš et al., 2015). Aim of the project was to promote the improvement of environmental assessment process, as regards to mutual cooperation and exchange of

knowledge in the Visegrad countries. Current methodologies were reviewed in relation to the development of new methods and methodologies, as well as practical experience with the process of environmental impact assessment of the proposed activities. Within the project was conducted questionnaire survey. Respondents were asked whether issued methodical manuals for EIA are sufficient. Slovak respondents differ in opinions. Up to 52% of the respondents answered that partially, 32% of respondents answered negatively, and only 13% of respondents answered positively. The results of the project were published in a monograph (Galaš et al., 2014).

#### 4 Discussion

This paper includes developing systematic, transparent and participatory practices and procedures by integrating principles and practices of MCDA, RA, AA, ICT, KM into the EIA/SEA processes with emphasis on climate change and green growth planning.

In order to better meet the objectives of the EIA/SEA directive, we develop approaches to enhance public participation in the EIA/SEA procedures, integrating climate change into EIA and SEA, increasing the sustainability of the projects and ensuring the role of impact assessment as an integrative tool in environmental green growth planning. We analysed literature review and discussions with EIA/SEA and MCDA, ICT and KM experts in workshops and interviews and we predict that MCDA, ICT, KM can be used to bring forward the differences among the alternatives, improve communication and common understanding about the impacts among stakeholder. Our next step will to apply the proposed MCDA+ICT+KM approach and its practices and tools in four pilot EIA and SEA projects.

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## **Sharing in entrepreneurship**

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### **Abstract**

Shared business of enterprises in practice can be described as a transformed approaches to economy and to managing of businesses. It represents a set of activities associated with searching, creating, using of corporate production factors, and with forming of other various socio-economic relation ships, business processes and their results, which may be the subject or the object of sharing. The aim of the article is to create a definition of shared business in theory, the content of which converges to the real, true description display of contemporary society life. The definition will reflect the implementation of new approaches and expressions of entrepreneurship in business practice. The result is a theoretical concept of shared business model, created under concretization of his signs. Concretization of shared business signs in practice is ensured by self-exploration, by acquisition and by results data processing of formalized, personal and electronic interview with owners and managers of small businesses and other stakeholders. The interview is aimed at identifying the extent, rate and the dynamics of the approaches implementation associated with characteristics of shared business, in the environment of shared economy. Separately is interested in the function of business center of services. Methods of investigation are based on multidimensional analysis, sorting of psychographic criteria and on creating of positional chart, they are intended to create a chart of shared business.

**Keywords:** business center of services; business; entrepreneurship; sharing; shared economy.

**JEL Classification:** D22, L26, M21

**Article Classification:** Research article

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## Introduction

Using intelligent technical electronic things as well as the internet allows for households, businesses and the state increasingly fast and cost-effective mutual transactions. The new terms of exchange are quite different from that, what we have seen on the market so far. Participating entities, non-entrepreneurial too, actively demonstrate their entrepreneurship, mutually agree on transaction terms and communicate through various Internet applications. The extent of such transactions and the resulting effects is so huge, that it becomes impossible to accurately measure and control them in any type of national and world economy. Many transactions are mainly outside the regulated market, it is not clear whether this activity is business or not. State institutions were not prepared for situation, when entities to be willing to share their belongings and share other resources, give up their exclusive property rights and provide them temporarily to other entities, often without any financial compensation. Only in recent years governments are recognizing sharing, discovering what's new in the market and in the business environment, and they preparing the first adjustments to the laws. Even the theoretical knowledge of the principles of market functioning did not know such phenomena. The intention is in practice, in a geographically close social and business environment, to explore and confirm the features of shared business, to create concepts that will be clearly defined by it.

## 1 Current state of knowledge

The issue of sharing and doing business is difficult, because it requires understanding the origins of different disciplines of science and their interconnection. Therefore, it is appropriate to give both positive and negative definitions of business entities and characters. The principles of sharing are a base for collaborative platform economy, they are as agenda of political apparatus of the European Union like the digital economy.

### 1.1 Entrepreneurship

Entrepreneurship in the European environment means "systematic activity carried out independently by the entrepreneur in his own name and at his own responsibility for the purpose of achieving profit". [I]

All acts of entrepreneurship ability of natural persons (individuals) or legal persons (businesses) are like doing business only if they are implemented by law. The law requires for this persons holding of officially a business license issued by a public authority and to carry out the obligations associated with it. If a person doesn't have permission, it isn't a business. [II]

Legal and economic independence are the basic features of business. Legal autonomy expresses responsibility for the course and results of the business. Economic autonomy is, according to the law, linked to the designation of an enterprise and its assets, which is a set of tangible, personal and intangible components of business, affairs, rights and other property values, which are owned by a business entity and used for business purposes.

Subjective property right is the most complete and broadest right of the owner to hold, use and dispose the estate by owns discretion and decision-making. The content of the business is the ability of an authorized person or multiple persons to combine the production factors, that represent the inputs or resources, to be used to convert them to

outputs. For providing a smooth transformation process in a company certain elements are required, creating links between them and also links to the outside environment. (Majdúchová and Neumannová, 2008)

All components of property may be involved in the process as the object of sharing in varying amounts and varying degrees.

## 1.2 Sharing

„Sharing economy is the product of a new age where underutilized assets become peer-to-peer services for hire, enabled by the Internet and smartphones. Sharing economy is a market which satisfies the following conditions (Olson and Kemp, 2015):

1. Users are individuals, businesses, or machines;
2. There is excess supply of an asset or skillset and sharing creates economic benefit for both the sharer and the user;
3. The internet provides means for communication and coordination of the sharing.

Sharing economy „started off with sharing unused resources between individuals, and then extended to consumer to consumer (C2C/P2P) and supplier to consumer (B2C) collaboration. At the same time the shared resources extended from tangibles to intangibles (Choi et al. 2014), and the list of products and services that can be shared is potentially endless (Posen, 2015).“ (Kosintceva, 2016)

By M. Mesík (2016) "Asset sharing often takes place at a time when the owner of the property doesn't need it and therefore doesn't bring any benefits." Although the property was not acquired for the primary purpose of generating profits, sharing makes it a profitable asset without losing its original function.

One of the largest US banks, JP Morgan, has analyzed over 260,000 accounts over three years to see exactly how lucrative work can be for companies such as Uber or Airbnb. The Bank has found out, that a shared economy can raise people's income by up to fifteen percent, despite Uber's average of 470 euros a month, through Airbnb 280 euros, ... (Kušnířová, 2016)

Arun Sundararajan (2016) argues, that internet platforms, that make it easier for individuals to sell their products and services to others, are the forefront of a new kind of capitalism, and it is important to separate the changes in the way, how we organize economic activity over the past, because today will be in a better position, to be the provider through platforms than a full-time employee. When an employee works full-time, he has much less bargaining power.

The issue of the information society, the digital and shared economy is also addressed by the European Union's political apparatus. Even in 2013 was set up the European Commission's Action Plan for Entrepreneurship 2020 "Re-Encouraging the Entrepreneurial Spirit in Europe", which included measures to improve the use of information and communication technologies to develop new businesses. The plan has declared that European small and medium-sized enterprises (SMEs), which use information and communication technologies as web entrepreneurs, grow two to three times faster. The Economic Policy Commission had already been discussing a proposal for a shared economy in October 2015, which it identified as a kind of business that is built on sharing resources. Rapporteur Benedetta Brighenti said: "Shared economy is the growing part of the economy that is not only aimed at maximizing our own profits but can also have a positive impact on the social, economic and environmental spheres. No doubt there is a need for some regulation but we need to find a balance, So as not to suppress economic innovation." [III]



Table 1 lists the specific legislation adopted by the European Union (EU) institutions in the last two years. The binding legal act includes regulations, directives and decisions; Non-binding includes recommendations and opinions and other tools.

Table 1 The EU institutions' legislation of the period 2016-2017 relating to the topic of sharing; <http://eur-lex.europa.eu/homepage.html> (accessed 15 May 2017)

Year	Title of legislation	Relationship to topic
2017	EP and Council Regulation 2017/0003 on respect for private life and the protection of personal data in electronic communications	Ensure the free movement of data from e-communications and e-communication electronic devices and services
	Commission Regulation (EU) No 808/2004 on Community statistics and on Information Society	Enterprise and Information Society
2016	EP and ER 2016/0288, establishing the European Electronic Communications Code	Development of market structures, new types of market participants: over-the-top, virtualization, digital single market
	Commission Notice Online platform and digital single market Opportunities and challenges for Europe	Online platforms, digital market
	EP and Council Regulation 2016/0286 establishing the Body of European Regulators for Electronic Communications of the Single European Digital Market	Strategy for 2015 and the regulatory framework
	EP and Council Directive on the change to the provision of audiovisual media services	New business models: online broadcasting services on the Internet

Abbreviations: EU = European Union; EP = European Parliament; ER = European Council

For the three most recent EU initiatives, we can identify: 1. shared / collaborative economy, 2. cycling economy, and 3. support for advanced startups. An important principle of a shared economy is the idea that having access to things is better, than owning it, because it is cheaper and greener. The 2016 Eurobarometer analysis shows that roughly half of Europeans know the services / products of the shared economy and every sixth of them have already taken advantage of. Collaborative economy, peer economy or sometimes sharing economy are business models where business activities are supported by collaborative platforms open market for the temporary use of goods and services, includes three categories of actors:

1. Service providers (private peers or professional service providers) who share their assets, resources, time or capabilities together,
2. Users of sharing - services,
3. Intermediaries linking providers with users via the online platform and simplifying their mutual transactions ("collaborative platforms").

New business models also open new challenges and challenges, in particular: market access, liability regimes, consumer and user protection, individual entrepreneurs and taxation. (Filus, 2017)

### **1.3 Business Service Center**

The Business Service Center (BSC) is a branch of a foreign or domestic company that provides in-house services to its parent and affiliates or to third parties in the fields of finance, IT services, purchasing, sales, and more. The development of the BSC is mainly related to the globalization of the world economy. In 2015, more than 40 BSCs operated in Slovakia, employing more than 30,000 people. In terms of customer relationship, there are two types of enterprise service centers in Slovakia: 1. Shared Service Centers (SSCs) that implement specific in-house processes; 2. Business Process Outsourcing (BPO) centers are companies that provide business processes for third parties. [IV]

## **2 Material and methods**

A proprietary qualitative survey of the views of potential sharing actors was carried out to identify features for sharing. The results should specify the extent, pace and dynamism of introducing new approaches to sharing as a manifestation of entrepreneurship. All respondents were interviewed personally or electronically, not anonymously. Respondents were pre-divided into two groups - entrepreneurs and non-entrepreneurs, and for each group another type of questionnaire was used. The results were evaluated separately for each type of questionnaire and respondent, then together for all. Each questionnaire contained a comment that precisely defined sharing so that the term was not interchangeable for other activities. A total of 94 respondents were involved in the survey and 73 questionnaires (78 %) were filled in and used correctly. All respondents came from towns and villages that belong to or are geographically closest to the Poprad district in the Slovak Republic. There were 60 people in the non-business group, 48 questionnaires were processed. In the group of entrepreneurs 34 subjects were approached and 25 questionnaires were processed. Through the questionnaire, aspects of sharing were identified: subject, object, conditions - timely, economic, technical, procedural, causal.

For the evaluation of the actors involved in the sharing, which is mainly done electronically, the DPT profiling method has been taken and used according to demographic, psychological and technological factors (Lakhani, 2010). The survey on demographic factors includes: entrepreneur or non-entrepreneur, age: person/business, kind of business, achieved education. Psychological factors include personality-motivating features in their dichotomic spectrum: entrepreneurship ability – non-entrepreneurship ability, speculation - justice, modesty - vanity, altruism - egoism, credibility - mistrust. Technological factors express the engagement of people in sharing: active - inactive; Physically or electronically: users, intermediaries, providers. From the results of the multidimensional analysis, selected reasons for the involvement of the actors in the sharing were selected for the creation of the positional map. The actors determined the significance (x-axis) and the satisfaction (y-axis) with the individual factors, for reason of sharing and measure of satisfaction, by average values (Figure 1).

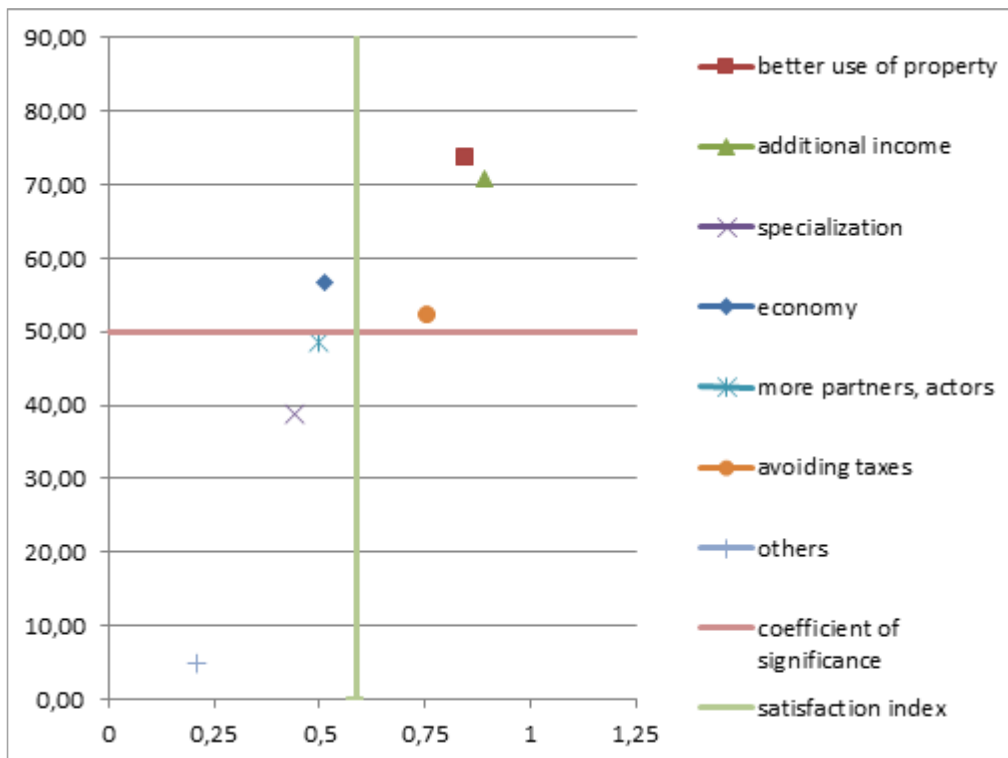


Figure 1 Positional map: Reasons of sharing by survey results – answers of all respondents  
 Explanatory notes: x-axis: coefficient of significance; y-axis: satisfaction index

### 3 Results and discussion

For the primary sorting of questionnaires from entrepreneurs, the first three questions were used, according to which we found out that out of a total of 34 entrepreneurs, they have never used and are not interested in sharing even 9 entrepreneurs in the future, whose responses are further monitored. The sharing of those involved in the sharing was mainly: information (15 enterprises), buildings or premises (14), money (13); Minimum workforce (4). In the future, entrepreneurs plan to share in: particular information, buildings and money (15), services and land (14), but also answers for machines and equipment (10) and workforce (8). According to the current value of corporate factors of production, they are not willing to share resources at all with a value of more than a thousand euros. Most are willing to share resources worth up to 300 euros (16 enterprises), followed by sources up to 500 euros, which are willing to share 7 entrepreneurs. Entrepreneurs share, in particular, with other entrepreneurs (11), entrepreneurs and non-entrepreneurs (8), with at least non-entrepreneurs (6). In determining reasons for sharing, the order of the three most common responses was created: Better use of property (20), additional income (16), it is cheaper (14). Interestingly, seven said, that they did not need to tax that money. Up to 13 entrepreneurs have said, that sharing is a completely new kind of business for them, and 9 said it was not a business at all, because it's just a replacement and lending of property. Only 8 of them use foreign services from other centers. Others do business on their own. In DPT profiling, we found that, according to demographics, firms that have been active in the market for more than five years and their managers have completed university education (14 companies) have been among the respondents. Most of them were from store (11), then from production (8) and then from services (6). According to their own survey, were 18 individual entrepreneurs and 7 business companies there. In the group of psychographic factors dominated the features, that were in the offer and the

entrepreneur had to assign themselves to them: Entrepreneurship (25), Trustworthiness (21), Modesty (19), Justice (14), Altruism (14). In the case of technological factors, all active entrepreneurs are evenly divided: they share more physically (13 enterprises) or electronically (12). Of these, 23 were identified as users, 2 as intermediaries and 21 as providers.

Out of the total of 60 non-entrepreneurs, 12 businessmen are not interested in sharing, we have only evaluated the answers of just 48 questionnaires. The object of sharing was in particular: buildings, spaces (41 persons), money (30), machinery and equipment (29), material and raw materials in general. In the future, they plan to share the same objects, the increase in the number of responses was in the services and plots. According to the current value of the property, up to three respondents are willing to share resources, assets worth more than 5,000 euros, but most want to share up to 500 euros (27 people), followed by a value of 300 euros. People, non-entrepreneurs, share mainly with non-entrepreneurs (35), or at the same time with entrepreneurs and non-entrepreneurs (11), least with entrepreneurs (2). The reason for sharing is three answers: additional income (38), better use of property (31), income is unpaid (29). According to 21 people, sharing traditional business with the use of the Internet and applications, for 8 people is a totally new kind of business. Only 1 person doesn't consider sharing for business. In DPT profiling, we found, according to demographic characteristics, respondents under the age of 25 (29) were university-educated (28). Most of them work in the store (19), then evenly in production and service. In the group of psychographic factors dominated the characteristics: entrepreneurship and credibility (39), modesty (32), egoism (25), justice (21). In the case of technical factors, all active persons stated, that they more than physically share electronically (27), of whom 32 were identified as users, 7 as intermediaries and 26 as providers.

The common feature of the profile of the two groups of respondents is: an individual with a university education who works in a business, the reason for sharing is better use of property and additional income, entrepreneurship, credulity, modesty and justice are needed to successfully participate in sharing.

Different features of the entrepreneur's profile include: Entrepreneurs are professionally senior, sharing information and other resources in three hundred euros with other entrepreneurs, even without the use of electronic means, being an entirely new kind of business, which requires altruism.

Different features of the non-entrepreneurial profile include: are professionally younger, they share buildings, premises and other resources up to five hundred euros with other non-entrepreneurs, using electronic means, sharing them with a traditional business, requires egoism.

The position map in Figure 1 shows the relation between reasons for sharing and satisfaction of actors, all respondents. The best placement in the upper right corner (highest significance and satisfaction) are factors for better use of property, additional income and no tax payments.

A total of 55 users (75 %), 47 (64 %), and least (9) are the providers, which is a 12 % share. The ranking of market share participants according to their stake in the group is as follows:

1. business user (92 %),
2. business provider (84 %),
3. individual user (67 %),
4. individual provider (54 %),
5. individual intermediary (15 %),
6. business agent (8 %).

It is clear, from the results, more users and intermediaries come from a group of entrepreneurs. However, it is interesting that individuals make more use of electronic services as entrepreneurs and are willing to share higher value resources. Sharing was successful earlier in communities. Entrepreneurs share, mainly on the basis of their own experience and personal contacts, physically with entrepreneurs who know and trust them. Individuals who are not entrepreneurs are more oriented towards groups of citizens and apparently use social networks and smartphones. It is advantageous for them to perform activities, which resemble a business but are not authorized to do so. Interestingly, none of the respondents mentioned a typical transport service as a sharing object. Traffic services today are shared through smartphone applications.

One of the difficulties in exploring was the additional explanation of concepts, because respondents in practice share some items and services, but they can not correctly name these processes. They don't know, that they are involved in sharing.

According to the results of the research, it will be necessary to further intensively investigate the characters of actors and sharing processes in the future. In this situation, theory will follow practice and the definition of sharing will be corrected in line with the introduction of innovations into practice. New technical means and practices will also change the character of the entire business environment, and it will be necessary to define new types of business that haven't been here yet. Even though up to 24 respondents think, that sharing the nature of business doesn't change. State control authorities will have to begin to fulfill their innovative regulatory functions. Then, sharing actors will have new responsibilities that they will have to follow. In the meantime, this market will be relatively free, without large barriers to entry and high costs. Actors can still abuse the situation and don't need a business license, many don't pay taxes, and dissatisfied users will not be able to do their job. Bookkeeping remains an open topic. It is possible, that a new group of asset protection resources will be added to the balance sheet and, in addition to our own and foreign sources, we will also charge shared resources.

## **Conclusion**

From the results of the study of the current state of the art in theory and in practice, we have reached a definition of sharing, whose content converges to a real, faithful description of the image of the contemporary life of society and which is useful for the enrichment of theoretical knowledge:

Sharing is a new type of activity, manifested in the entrepreneurship of individuals and groups, they may or may not be institutionalized as businesses, that use intelligent technical electronic means and tools to communicate with each other, allowing them to execute in a very short time a non-mediated infinite number of transactions, in which providers temporarily renounce ownership of their resources or provide services for agreed compensation, that doesn't constitute a profit, but usually covers only part of the costs associated with it and generates savings.

As a result of the research, the theoretical concept of the shared business model is based on the concretization of its features, in particular according to the DPT profile, graphically described in Figure 2:

- Sharing entity: an individual or an enterprise as an entrepreneur or a non-entrepreneur in the position of a provider and / or user, an intermediary;  
Requirements: A wide range of psychographic factors: the ability to use electronic devices and applications, action, trust, economy, sense of justice, and effective use of property and other resources;

- Sharing object: resources as tangible and intangible assets;
- Sharing process: Entrepreneurship Act; The Provider, by itself or through an intermediary and its online platform, offers its assets and other resources to the user, creating collaborative platforms. Businesses can share through enterprise service centers. This process is incomplete, subject to the interest and competence of stakeholders.

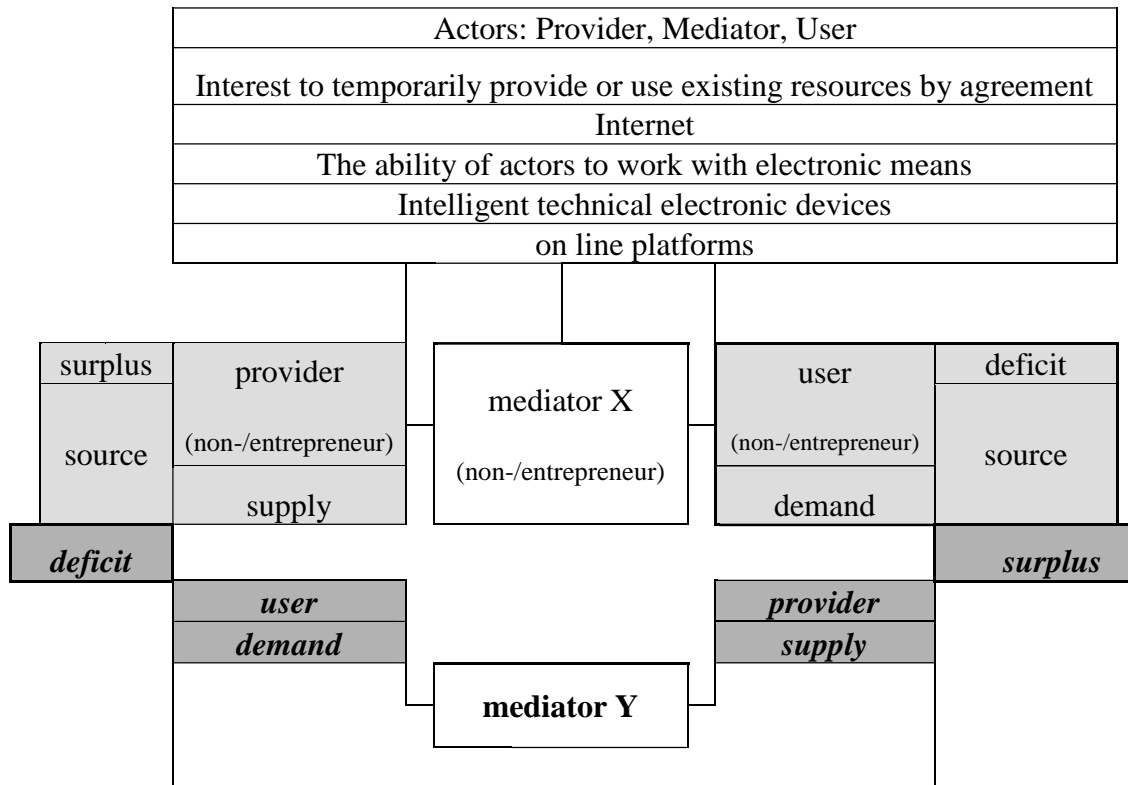


Figure 2 The concept of sharing model graphically illustrated in the diagram

Even with the use of research results, it can not be clearly determined, that sharing is business, and this issue will require further investigation.

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## Evaluation of production processes performance

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### Abstract

The purpose of this article is to present a concept for creating a model for solution of the project focused increasing the efficiency of production processes. The approach is based on performance evaluation with the emphasis laid on efficiency and effectiveness. The solution is based on a model, implementing the interconnection and assessment of other important dimensions, in particular those of the customer, producer, market, environment and business ethics. The conceptual solution, the created model, and experimentation with the model as well, supported the anticipated possibilities of obtaining the real values of performance in the production processes.

Keywords: performance evaluation; production processes; model; effectiveness; efficiency.

JEL Classification: M11, M15, M21, M54

Article Classification: Research article

### 1 Introduction

Increasing the performance of processes is undoubtedly one of the most important means of growth, or at least of sustainability of company's competitiveness. Lesáková (2004) defines business performance as the "ability of an enterprise to achieve the desired effects and outputs, if possible in measurable units". In measuring and assessing performance of an organization as well as performance of various operations, it is advisable to use the indicators of efficiency and effectiveness. Drucker (2012) defines "effectiveness" as doing the right things and "efficiency" as doing the things in the right way. In addition to effectiveness and efficiency, the indicator referred to as "economy" – minimization of costs – is also assessed within the area of performance, as well as the factor referred to as "responsibility" or "ethics" that

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expresses doing things within the framework of morals and ethics. Efficiency and effectiveness also emphasize (Budaj et al., 2011). Under the conditions of the company systems solved, efficiency can be conceived as the ratio of the output power (output products or services, including their parameters) of the given system or equipment to the supplied performance of the inputs (quantity and quality of input resources, raw materials, manpower, etc.). Effectiveness is conceived as the ability to produce the right things and thus to produce the desired benefit (effect, purpose, required product). In the presented solution the assessment of effectiveness will be taken as assessment of whether the organization produces redundant, undesired, unsuitable or unimportant products or services. This article presents the concept of creating the model of production process performance in an enterprise. It may be assumed that the model will be a part of a Performance Management System (PMS). There are many opinions and views of PMS – Performance Management Systems – and the methods of performance assessment as well. Authors Ferreira and Otley (2005, 2009 and 2010) put forward the Performance Management and Control (PMC) framework as a research tool for describing the structure and operation of management control systems (MCS). They point out that it has been "shown that variables relating to external environment, strategy, culture, organisational structure, size, technology and ownership structure have an impact on the control system" (Ferreira and Otley, 2005). Another paper (Broadbent and Laughlin, et al., 2009) develops a conceptual model of Performance Management Systems (PMS). They declared any PMS that was able to be described as either "transactional" or "relational". Taticchi and Balachandran (2008) characterized a performance measurement and management system (PMM) as a "wide system, which has the role of collecting, integrating and analysing performance measures for enhancing decision-making processes, verifying strategies and creating alignment". Žižka et al. (2016) on the example of a specific production organisation prove that the possibilities to improve the adequacy of a measurement system are significant. Malmi and Brown (2008) provided a new typology for MCS structured around five groups: planning, cybernetic, reward and compensation, administrative and cultural controls. Speklé and Verbeeten (2014) studied the use of performance measurement systems in the public sector. Also interesting are other information sources dealing with the solution of PMS issues from the point of view of the methods of measurement. Deville, Ferrier and Leleu (2014) propose a method of measuring performance that captures both the overall performance and the contributions of the separate levels within an organization's hierarchy. Other authors think that defining Performance Indicators (PIs) is also an important domain. Závadský and Hladlovský (2014) defined the minimum set of attributes of the performance indicators. Customers tend to assess the quality (of a product/service) based on a small number of important attributes (Madzík, 2016). A view of the model as a whole, consisting of cooperating elements, will also be important. This idea is supported by Chenhall (2003) who warned that studying specific MCS elements in isolation has "the potential for serious model under-specification" (Chenhall, 2003). Budaj et al. (2015, p. 19) pointed out that "all paths, in long-term perspective, bring success to a company only if they are managed primarily by an ethical dimension". Similarly Dirgová et al. (2017, p. 18) pointed out that "nowadays market subjects are aware of the fact that the core stones of market economy depend also on the facts which are of moral character". In terms of the impact of culture Copuš and Čarnogurský (2017) say that "one of the factors that determine the efficiency is cultural specifics visible by cultural forms which were interpreted for each selected culture". The concept of sharing model was created in Janíčková (2017). An interesting model is presented by Khayrullina et al. (2015, p. 77) who declared that by "using the model-calculated

integrated value and observations about its change over time, we can estimate continuous improvement trends of an enterprise”. In another work Taticchi (Taticchi, Tonelli and Cagnazzo, 2010) indicate a problem with the “effectiveness of PMM models” in the SME context. They declared that “future research will focus on the creation of early conditions for PMM models’ ” (Taticchi et al., 2010). These literature sources serve only as theoretical bases for solution of the given task.

## 2 Material and methods

The project’s aim is to evaluate the performance of production processes in a company and build an appropriate tool – a model to address the desired task. The evaluation model should be designed as a relatively versatile solution, one that can be adapted to any company wishing to evaluate their production processes. The initial idea is based on Drucker’s model of efficiency and effectiveness (Drucker, 2012) with the name "The matrix of efficiency versus effectiveness". The basic methodology should be complemented with new features that can be accepted and included by the proposed model into the activity when evaluating production process performance.

A manufacturing process is complex and consists of a number of participating systems and their ongoing main and sub processes and these processes take place in succession, but often also in parallel, in a maze of interconnected systems and subsystems. This requires monitoring and separating, but at the same time, combining various dimensions (cost, quality, ecology, public, customer, innovation, etc.) and understanding ties between dimensions and their internal systems, their dependent and independent parameters. The multi-dimensional model will need to monitor a cyclically repeated (information and material) supply chain: supplier - manufacturer - distributor - retailer - customer. The movement in the chain (the flow of information, materials and products) will also be a bi-directional one. It is appropriate to conceptually divide the real model into several parts: internal model, external model and a system for multidimensional linking of the external and internal model or other sub-models. The internal model can include internal processes when manufacturing a product that can be broken down. Thus, the performance of the interfaces of the cooperating internal producers - P and the internal customers - C can be monitored (Figure 1).

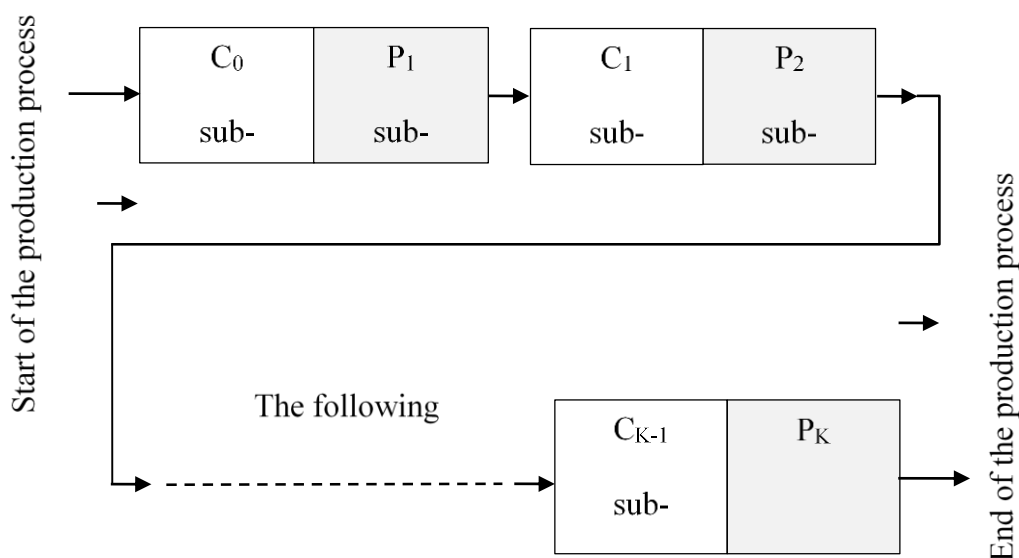


Figure 1 The continuity process of internal customers and producers source: own elaboration

This is mainly about the system of an internal producer and internal customer, as well as a system monitoring losses of production due to excessive waste or shoddy manufacturing of the sub-product. The internal model must reflect, in particular, the customer of sub-products (components, semi-products and also materials), the impact of management (including the owners) on the internal processes in production, a system of measurement and control, the objective and subjective effects of the workers, and the possible external influences on this element, as well as possible random effects.

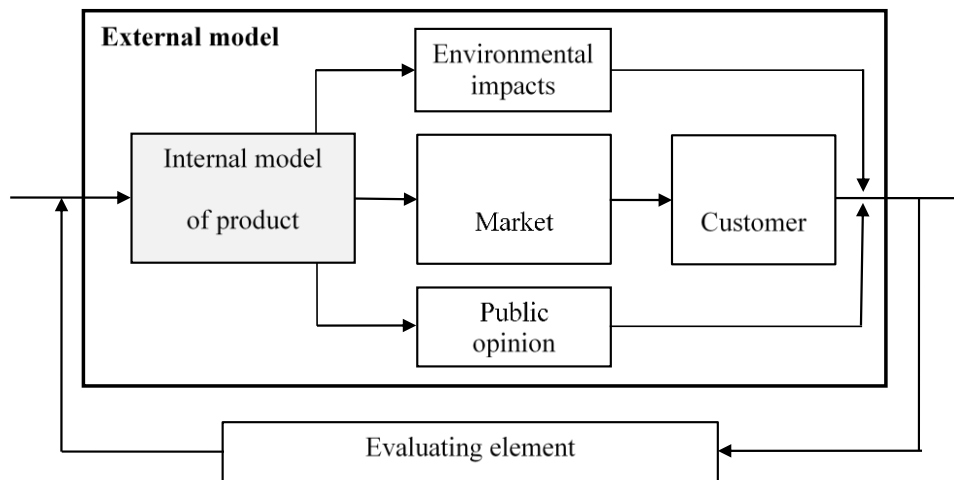


Figure 2 Concept of the external model; own elaboration

The external model (Figure 2) should reflect the relationship with the environment, especially with the market and customers. It must also generate major model outputs towards managers involved in the process of modelling and simulation of business production processes. From a conceptual point of view, the internal model as a whole will be the final producer. However, its performance will be evaluated in the entire context of the economic system and the place of the evaluated company in that system. The model's evaluation element will monitor all internal and external parameters. After that, it will perform operational calculations of parameters. The final task will be to determine the production performance with the necessary graphical and numerical representation.

### 2.1 Indicators of performance

Currently, in business practice, a number of parameters and indicators that express production performance are being used. The main performance indicators are often referred to as Key Performance Indicators (KPI). Key performance indicators are the most important practical indicators that quantify the overall performance of a company in relation to a relevant global objective, or a critical success factor. It can be assumed that a significant number of the parameters and indicators will also be provided by a future user of the model – the target company. The first priority attention is paid to the other critical areas of assessment, the effectiveness of the manufacturing process. When solving the task, it will be based on the parameters and indicators monitored by the internal model, e.g.  $P_{1\_in}$ ,  $P_{2\_in}$ ,  $P_{3\_in}$ , ...,  $P_{k\_in}$ . From these, an overall indicator of the effectiveness of the internal processes  $P_{Ess\_IN}$  will be calculated. Consequently, it will be used along with the indicators and parameters monitored by the external model, e.g.  $P_{1\_out}$ ,  $P_{2\_out}$ ,  $P_{3\_out}$ , ...,  $P_{k\_out}$ . The aforementioned parameter of total internal effectiveness  $P_{Ess\_IN}$ , will be used as one of the parameters of the external model, e.g.  $P_{5\_out}$  is  $P_{Ess\_IN}$ .

### 2.1.1 Effectiveness indicators for the external model

When calculating the resulting value of the effectiveness of the production processes, it will be based on the parameters and indicators monitored by the external model. Although the precise formulation of the main indicators may be subject to further development and design, in the project being solved the following external parameters appear to be suitable:

- Number of products sold (handed over) to the customer.
- Number of customers dissatisfied with the product.
- Number of products returned by the customer (due to malfunction).
- Coefficient of satisfaction – customer testimonials about the quality of the product.
- Overall internal indicator of effectiveness, e.g. PEss\_IN.

Other parameters are proposed as well. These are based on theoretical assumptions, which imply the involvement of the other dimensions into the overall assessment system. They are mainly:

- Coefficient of efficiency for the region – representatives within the region talking about the benefits of the product.
- Coefficient of efficiency for employees – employee representatives talking about the benefits of the product.

The global and independent position in the evaluation system of production process performance will have an overall indicator of effectiveness PEss\_out. At least three principle ways of calculating the total value of efficiency are offered. These are mainly the product, sum or average of the parameters presented. The second option, using the sum of the sub-parameters, was published in Jenčo (2013).

### 2.1.2 Effectiveness indicators for the internal model

The internal model may use the principle of the external indicators, but it will evaluate them from the perspective of the internal production process. The internal customer is always the next production line, workshop, operation or sub-process. Internal producers will be the previous production line, workshop, operation or sub-process. The internal evaluation of the effectiveness will use four preliminary indicators or internal parameters:

1. Number of products (sub-products, parts, components) handed over (delivered) to the following internal customer.
2. Number of sub-products claimed by the following internal customer.
3. Number of sub-products returned (due to malfunction) by the following internal customer.
4. Internal customer satisfaction coefficient – an expression of the internal customer with regards to satisfaction with the supplied internal products, ranging from 1 to 10 points, which will be converted into the interval  $\langle 0.1; 1 \rangle$ .

In principle, the total (summarising) internal indicator, based on the partial internal indicators, may be expressed in several ways. If the weights of the individual parameters are included in the evaluation, represented by the weight coefficient ( $w_j$ ) of the sub-parameter, then it can be expressed in the following formula:

$$P_{Ess\_IN} = \sum_{j=1}^k P_{j\_in} \times W_j \quad (1)$$

where

$P_{j\_in}$  is an element  $j$  from the set of internal indicators,

$w_j$  is the weight of the internal indicator  $j$ ,

$k$  is the number of internal indicators.

## 2.2 Efficiency indicators

The second dimension in the space will be defined by the  $P_{Ecy}$  parameter, which reflects the efficiency of the production process. The efficiency parameter will generally be expressed as the ratio of total output to total inputs. However, realistically, it may be expressed as a set of sub-indicators while the overall  $P_{Ecy}$  coefficient will be calculated according to whether it is preferable to multiply, add partial values, or calculate their average value.

If the production system is composed of several independently evaluated subsystems, or elements, the resulting efficiency can be expressed as follows:

$$P_{Ecy} = \frac{1}{N} \sum_{m=1}^N P_{Ecy\_m} \quad (2)$$

where

$P_{Ecy\_m}$  is the partial efficiency of the element  $m$  from the set of  $N$  elements.

It can be assumed that the process of determining the efficiency of the production processes can be much more complex. However, the model is flexible and is able to accept the methodology chosen by managers or a different number of sub-parameters as well as the intended relationship for calculation of the outcome of the  $P_{Ecy}$  parameter.

## 2.3 Performance mapping

The resulting coefficients  $P_{Ecy}$  and  $P_{Ess}$  then determine the point in the system space or at the intersection matrix of effectiveness and efficiency, which reflects the real state of the production process performance. By periodic evaluation of process performance, the movement of the resulting point in time intervals  $t_1$ ,  $t_2$ , ( $t_3$  – black point) and others can be monitored. Mapping the determined state can accurately and responsively express changes in performance.

## 3 Results

The construction of the models was done with available software. The model is ready, quick, easily customisable, user-friendly, flexible and open. The model's input is the space (or spaces, tables) of the entered or measured values and parameters. The input values into the model are entered by managers, authorised experts, or trained technical-economic workers of the company. The model has two inputs: the input of the internal model (or several models) as well as the input of a more robust external model.

Using two inputs allows experimentation, not only by changing parameters on one of them but also by parallel changes on both inputs.

### **3.1 Actual internal model**

For practical application a company producing knitted textile products was selected. Main production processes inside the company are performed on a multistep production line for production of socks. Daily output of this production line has recently been increased to 45 000 pairs of the above mentioned product. Weekly production is 225 000 pairs. The production line is divided into four workshops equipped with special machines. Their operation is monitored and ensured by service personnel (production operators). Each group is responsible for one of the following processes. The first process is knitting of a sub-product which makes a base of the whole product. The second process is sealing of socks toes. The third one is forming of final product shape and the fourth process is matching and packing of final pairs of socks. Parts of final products called sub-products in successive steps go through all the processes. After the final process the product is complete and ready for a customer. The most important data from production concerning a particular period are shown in the table 1. These data were used as input data for an internal model. The company prefers short periods to assess its performance/efficiency. The period for production process efficiency assessment is one week. Partial assessment is carried out on a daily basis. The reason is creation of conditions aimed at faster correction of mistakes. There are number of weekdays during which production process is monitored in the first line. The second line brings name of a process. In the third line there is the number of the previous process for which the assessed process presents an internal customer (IC) and the number of the next process for which the assessed process presents an internal producer (IP). For example, the process number 2 is an internal customer for the process number 1 and consequently an internal producer (supplier) for the process number 3. The values in the line number four in the table 1 marked as “Received” express quantity of received pairs of sub-products from the previous process. In the workshop which carries out the first process it is quantity of input material for production of targeted quantity of knitted sub-products. The values in the fifth line “Goods under claim (non-repairable)” show number of sub-products in which a mistake resulting from the previous process was found. They can be usually marked as non-repairable and are excluded from production. Some of them are partially repairable but transferred to the lower quality class. Number of such products always decreases the level of efficiency and production effectiveness. The values in the line number six marked as “Returned to be repaired (repairable mistake)” express quantity of received semi-products from the previous process which contain a repairable mistake. They are returned to the previous process to be repaired. The values in the seventh line marked as “Internal customer satisfaction” express point assessment of sub-products received from the previous process (subjective expression of internal customer satisfaction).

The values in the eighth line marked as “Passed to the next operation” show quantity of sub-products which are processed within the specific process and passed to the next one. In the next lines of the table 1, input parameters in all the consequent processes are expressed in a similar way.

Table 1 Input parameters of the internal model; own elaboration

Day in a week	1	2	3	4	5	For a week
<b>Workshop 1</b>						
Process 1 – KNITTING (product base)						
Internal customer / Internal producer			IC 0 / IP 2			
Received – input of material for quantity of pairs	45000	45000	45000	45000	45000	225000
Goods under claim (non-repairable)	1	1	2	1	1	6
Returned to be repaired (repairable)	2	0	3	0	1	6
Internal customer satisfaction	9,436	9,834	8,919	9,811	9,74	9,548
Passed to the next operation	44997	44999	44995	44999	44998	224988
<b>Workshop 2</b>						
Process 2 – SEALING (toe)						
Internal producer / Internal customer			IC 1 / IP 3			
Received – input of semi-products	44997	44999	44995	44999	44998	224988
Goods under claim (non-repairable)	2	1	3	1	1	8
Returned to be repaired (repairable)	2	1	4	2	1	10
Internal customer satisfaction	8,967	9,657	8,814	9,13	9,066	9,1268
Passed to the next operation	44993	44997	44988	44996	44996	224970
<b>Workshop 3</b>						
Process 3 – FORMING (shape)						
Internal producer / Internal customer			IC 2 / IP 4			
Received – input of semi-products	44993	44997	44988	44996	44996	224970
Goods under claim (non-repairable)	2	0	1	2	2	7
Returned to be repaired (repairable)	3	1	2	3	4	13
Internal customer satisfaction	8,983	9,945	9,477	8,938	8,811	9,2308
Passed to the next operation	44988	44996	44985	44991	44990	224950
<b>Workshop 4</b>						
Process 4 – MATCHING and packing						
Internal producer / Internal customer			IC 3 / IP 5			
Received – input of semi-products	44988	44996	44985	44991	44990	224950
Goods under claim (non-repairable)	1	2	2	1	1	7
Returned to be repaired (repairable)	2	4	3	2	1	12
Internal customer satisfaction	9,492	8,838	9,075	9,353	9,696	9,2908
Passed to be dispatched	44985	44990	44980	44988	44988	224931

If input data are entered to the model (Table 1), model calculates individual partial parameters and also total parameter as well.

In table 2 partial parameters  $P_{1,in}$  to  $P_{4,in}$  are calculated for each day in a week, on each line, i.e. for all four monitored production sub-processes. In each process also parameter  $P_{Ess,in}$  is calculated for a particular process. Based on above mentioned partial parameters an output parameter  $P_{Ess,IN}$  is calculated on the output of an internal model. These parameters were measured or calculated at the boundary-lines of individual internal suppliers and internal customers.

Table 2 Values of partial internal parameters; own elaboration

Day in a week	1	2	3	4	5	For a week
<b>Workshop 1</b>						
Process 1 – Knitting						
Internal customer / Internal producer						
IC 0 / IP 2						
P <sub>1_in</sub>	0,99993	0,99998	0,99989	0,99998	0,99996	0,99995
P <sub>2_in</sub>	0,99998	0,99998	0,99996	0,99998	0,99998	0,99997
P <sub>3_in</sub>	0,99996	1	0,99993	1	0,99998	0,99997
P <sub>4_in</sub>	0,9436	0,98342	0,89192	0,9811	0,97404	0,95482
P <sub>Ess_in</sub> process 1	0,98587	0,99584	0,97292	0,99526	0,99349	0,98868
<b>Workshop 2</b>						
Process 2 – Sealing (toe)						
Internal customer / Internal producer						
IC 1 / IP 3						
P <sub>1_in</sub>	0,99991	0,99996	0,99984	0,99993	0,99996	0,99992
P <sub>2_in</sub>	0,99996	0,99998	0,99993	0,99998	0,99998	0,99996
P <sub>3_in</sub>	0,99996	0,99998	0,99991	0,99996	0,99998	0,99996
P <sub>4_in</sub>	0,89671	0,96567	0,88141	0,91298	0,90658	0,91267
P <sub>Ess_in</sub> process 2	0,97413	0,9914	0,97028	0,97821	0,97662	0,97813
<b>Workshop 3</b>						
Process 3 – Forming (shape)						
Internal customer / Internal producer						
IC 2 / IP 4						
P <sub>1_in</sub>	0,99989	0,99998	0,99993	0,99989	0,99987	0,99991
P <sub>2_in</sub>	0,99996	1	0,99998	0,99996	0,99996	0,99997
P <sub>3_in</sub>	0,99993	0,99998	0,99996	0,99993	0,99991	0,99994
P <sub>4_in</sub>	0,89825	0,99452	0,94767	0,89382	0,88107	0,92307
P <sub>Ess_in</sub> process 3	0,97451	0,99862	0,98688	0,9734	0,9702	0,98072
<b>Workshop 4</b>						
Process 4 – Matching and packing						
Internal customer / Internal producer						
IC 3 / IP 5						
P <sub>1_in</sub>	0,99993	0,99987	0,99989	0,99993	0,99996	0,99992
P <sub>2_in</sub>	0,99998	0,99996	0,99996	0,99998	0,99998	0,99997
P <sub>3_in</sub>	0,99996	0,99991	0,99993	0,99996	0,99998	0,99995
P <sub>4_in</sub>	0,94918	0,88376	0,9075	0,93535	0,96959	0,92908
P <sub>Ess_in</sub> process 4	0,98726	0,97087	0,97682	0,9838	0,99238	0,98223

Table 3 shows output parameters of internal model for a specific time period. In the presented situation it is one week. It is proper to assess the above mentioned parameters for each day and also for the whole week. In the line marked as “Value” (Table 3) final values of parameters of effectiveness of individual monitored processes 1 to 4 are shown. Parameter P<sub>Ess\_IN</sub> expresses total effectiveness in the production process inside the company. In this case individual parameters included into calculation are understood as parameters having the same importance. Parameter P<sub>Ess\_IN</sub> will be adapted as one of the relevant parameters for external model. Parameter “Weight” shows relative importance of applied indicator. It enables managers to determine



importance of individual production processes and include it into the total assessment of production process performance.

Table 3 Output parameters of the internal model; own elaboration

	Operation 1	Operation 2	Operation 3	Operation 4	Operation x
Indicator	$P_{1\_in}$	$P_{2\_in}$	$P_{3\_in}$	$P_{4\_in}$	$P_{x\_in}$
Value (total)	0,98868	0,97813	0,98072	0,98223	...
$P_{Ess\_IN}$			0,98244		
Weight (w)	0,34900	0,23200	0,25100	0,16800	...
Weighted value	0,34505	0,22693	0,24616	0,16501	...
Result ( $P_{Ess\_IN}$ )			0,98315		

Parameter “Weighted value” expresses cumulative summary of weighted partial parameters. They express effectiveness of individual processes. Consequently, based on these weighted values, the final cumulative value of parameter  $P_{Ess\_IN}$  is calculated. Parameter Result ( $P_{Ess\_IN}$ ) presents final internal effectiveness in production process which considers importance of individual processes. The first major output of the internal model will be the effectiveness of the internal parameter. In the case which is being solved here – production of knitwear products with four main processes the value of parameter  $P_{Ess\_IN}$  is equal to 0,98315. The second output is the parameter of internal efficiency. In the company during the monitored period the value of the parameter of internal efficiency  $P_{Ecy}$  was also assessed by experts. These will be used as input parameters of the external model.

### 3.2 Real external model

On the same principle as used in the internal model, the values of the external model will be inserted. External model uses parameters obtained on the interface/line of division a company – company’s customer but also output parameters of an internal model. Parameters of the calculation of the total efficiency are presented in Table 4.

Table 4 Inputs for the main external model; own elaboration

Parameters	Parameter number	Value of parameter	Weigh	Weighted value
Products sold	P1	0,9510	0,171	0,16262
Dissatisfied customers	P2	0,9920	0,156	0,15475
Return of products	P3	0,9710	0,159	0,15439
Customers' evaluation	P4	0,9460	0,12	0,11352
$P_{Ess\_IN}$	P5	0,9831	0,154	0,15141
Managers' evaluation	P6	0,9160	0,137	0,12549
Regional evaluation	P7	0,8540	0,103	0,08796
SUM		6,61315	1	<b>0,95014</b>

Final effectiveness of production process expressed by parameter  $P_{Ess\_Out}$  is equal to 0,95014. In the company efficiency of production process was calculated for the assessed period. It was entered into external model as the next parameter  $P_{Ecy\_Out}$ . Its value is equal to 0,91412. The final assessment of the production process performance

can be expressed as a point shown in following figure 3. Output state space is a space to express graphically values of monitored production processes performance. It is divided to smaller parts in which position of a depicted point and also specific value of performance is marked (Figure 3). The grey marked cells indicate the limit spaces. Crossing them indicates to managers that there have been significant changes in the system. The dark cell indicates the real state of performance. Due to the huge amount of data it is not possible to express graphically exactly a realistically shown model output. The figure shows only a principle but managers can monitor the exact presentation in a computer display. The value in final depicted point equal to 1,86426 is obtained as cumulative value of parameters  $P_{Ess\_Out}$  and  $P_{Ecy\_Out}$ .

The measurements and computations will help managers to find quick and effective corrective measures.

#### 4 Discussion

Every business has its own specifications. The model must be able to accept the indicated specifications. But it also must be able to provide some data for comparison with other companies on the market. The performance evaluation model, with an established emphasis on efficiency and effectiveness, reflects dimensions such as quality, performance, innovation, service and their most important indicators. The solution is based on an actual model, implementing the interconnection and assessment of other important dimensions, in particular those of the customer, producer, market, environment and business ethics. The number of dimensions, their direction and priority can be set according to the specific conditions and requirements of the model user.

Presented model is able to respond flexibly to the changes of production processes in a company. It also provides data and graphical representation of production processes output. Actually, the measurements, computations and experiments will help managers to find quick and effective corrective measures. They will also enable the monitoring, verifying and analysing of various anticipated situational conditions. The process of developing the specified model was not a simple matter or time-efficient. But developing and experimenting with a model of efficiency in production processes is much less expensive than experimenting with an actual system. In the foreground is the requirement for simplicity and the possibility to adapt the model to the conditions of an actual company. It may be presupposed that the model will generate important information about a company that is often otherwise unavailable. The creation of one's own model, a so-called tailor-made model, is one of the directions of the development and implementation of an open system of specific models for decision-making support in a company.

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# Liquidity and cash flow management in engineering companies in the Slovak Republic

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## Abstract

In the interest of engineering companies in order to compete both in the domestic and foreign market in the conditions of increasing competition, increasing demands on quality and dynamic development of markets, the most up-to-date knowledge, methods and ways of corporate management must be used. The increasing complexity of business environment is exposing the engineering companies to the relentless pressure of the environment. At present, none of the engineering companies is able to exist without examining its financial situation and development. As the image and reputation of a company is built on liquidity, the company should be liquid at all times of its operation. The company which is unable to meet its obligations is exposed to the risk of losing its good name and competitiveness which can also lead to its bankruptcy. As a result of insolvency, its suppliers lose their confidence in the company, it does not have the ability to provide commercial loan losing potential buyers, it has difficulties obtaining new loans due to the banks' reluctance to bear the risk of their non-payment. Cash flow management should therefore be an integral part of engineering companies.

Keywords: liquidity; cashflow; insolvency; competition; financial controlling; engineering companies.

JEL Classification: M21, L25

Article Classification: Research article

## 1 Introduction

One of the key preconditions for the success of an engineering company on the market is to fully understand its financial health and causalities which can be significantly supported by cash flow management which affects liquidity in engineering companies. The basis of successful understanding and, probably, the necessary precondition is to formulate the principles of company liquidity management. All companies need to have a clear idea of their own financial situation, so-called financial

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stability. In the ever-changing economic environment, both executive and middle management is influenced by the time dimension compelling the business entities to reconcile their business goals with ongoing changes such as slowing economic growth, price shocks, financial risks, crises, etc. After the years of stagnation as a result of the global economic crisis, the year of 2014 was a turn for the better for engineering companies which have experienced a significant improvement in economic indicators. These positive results were not only due to the revitalizing of the global economy adding new orders and fulfilling the production program in engineering, but also due to the pressure from the engineering companies to increase efficiency of production process and operating activities, to draw costs and minimise dependence on purchased technical solutions. However, it is not only uncertainty that surrounds the companies. Continuously improving technologies, the Internet, virtual enterprises, network organisation structures, digital communication – all of this radically changes the management of companies.

The engineering companies have certain characteristic features and they differ from other companies for example by higher wage demands, need to invest in innovations, longer period of debt collection and payment of obligations etc. which is closely linked to liquidity management as a part of financial management.

## **2 Material and methods**

The market for engineering companies is high in competition not only in Slovakia, but also in the world. In particular, the current political situation in the world is contributing to a decline in profitability, financial difficulties, bankruptcy and corporate failure, and there is often a lack of will to apply prevention measures and to secure against such difficulties, and especially to apply financial instruments.

Before any investment and financial decisions are made, the financial strength, the financial health of the company must be known. It is not just about the current situation, but above all about the basic development trends over time, stability of results, comparison with standard values in the given field or industry.

The quality of financial decision making and its results have a significant impact on the prosperity and future performance of the company. The primary role of today's companies is to adapt to the selected market and to adapt business process management on the individual levels of business management. Top managers decide on a day-to-day allocation of funds or hold money on bank accounts.

One of the management tools that helps companies resolve different financial situations is financial controlling. It represents the concept of financial stability of the company, it seeks the optimal solution and fulfillment of the financial goals of the company.

### ***2.1 Liquidity – key indicator of company's financial situation***

The fact that liquidity is an indivisible part of company's financial management is nothing new. As a consequence of the current critical situation, however, it becomes the major priority in the financial management of most businesses and financial managers are trying to improve liquidity management. Liquidity management is no longer just about making plans more "precise" and predicting cash flow, but also about securing customer resources and ensuring that key suppliers continue to make deliveries without any difficulties. "We can describe our liquidity management policy as a set of

tools and solutions to improve liquidity, eliminate liquidity risk and reduce the need for net working capital” (Majková M., 2008).

When analysing liquidity and managing it in companies, the requirements of effective liquidity management are at the centre of attention. Developments in the financial market and the global economy have shifted the focus of corporate operations to cash management. Longer periods of favourable economic and market conditions can lead to a certain degree of relaxation in the efficient use of available financial resources while applying cash management techniques, whereas critical periods turn attention to the areas where it is possible to exploit as much as possible for effective development. The liquidity area clearly meets this characteristic.

Liquidity is therefore the most important prerequisite for ensuring the existence of a company. Neither the significant growth of turnover, nor the dynamic marketing concept, and even the most advanced manufacturing technology, cannot prevent the bankruptcy of a company, as soon as the company is unable to meet its payment obligations. Securing liquidity is the primary task of managing a company.

J. Sedláček is concerned with liquidity analysis, its analysis and management in the context of financial control (2011). He also deals with the analysis of cash flow as a part of the analysis and management of liquidity in the company (2010).

Liquidity analysis is a part of company financial analysis. Local authors who deal with the issue of liquidity analysis in more detail include Ľ. Lesáková, K. Zalai and J. Chajdiak.

Ľ. Lesáková (2007) understands under the liquidity analysis as the assessment of the degree of ability to balance the company’s payment obligations in the funds that flow from its business activity. Liquidity analysis is focused on the ability of a company to meet its short-term liabilities and hence to achieve short-term financial stability.

We agree with the statement of J. Chajdiak that the liquidity analysis must be the concern of every financial manager because the company should be able to meet its payment obligations/commitments at all times (2011).

The analysis of liquidity in relation to the making of financial decisions in the company is also dealt with by Ch. Guilding (2002), with particular attention paid to the analysis of net working capital, i.e. analysis and management of receivables, inventories and funds in the company, cash flow analysis and explanation of the difference between profit and cash flow.

In local literature, we have seen the liquidity analysis as a part of the financial analysis, broken down into an ex-post analysis and an ex-ante analysis (Zalai, 2016, Lesáková, 2007). Liquidity analysis is a part of an ex-post analysis that assesses the current financial situation based on the results achieved in the past and aims to identify the causes of the situation. This allows a better understanding of the current situation. The results achieved cannot be changed, but measures can be prepared for the future.

Several authors (Lesáková, Vlachynský, Zalai, Fetisovová) use the ex-post method for the analysis of ratio indicators or difference and flow indicators for the calculation of financial analysis indicators. In the ex-post financial analysis, there is a large set of these indicators, broken down into indicators of liquidity, activity, profitability, indebtedness and market value of a company. It is important to note that all indicators are mutually interrelated and affect the financial side of a company, but we will only deal with liquidity indicators that tell us how the company is able to cover its liabilities through its liquid assets that fall due within one year.

## ***2.2 Creating cash flow in a company***

At present, no company can do without examining its financial situation and without analysing the factors that threaten its success and financial stability.

The term cash flow refers to a quantity denoting increment or loss of cash in a company's economic activity over a certain period of time. The cash flow statement is part of the company's financial statements.

One of the management tools that helps companies orient themselves in different situations is financial controlling, which includes, in particular, cash flow management. It represents the concept of financial stability of the company and seeks the optimal solution to the financial goals of liquidity and profitability. Cash flow management, i.e. financial controlling is a subsystem of corporate controlling that aims to ensure liquidity and thus the overall financial stability of a company. But not only controlling but every employee in a company can influence the overall financial situation of the company, especially by access to work and processes. The fact that something has been produced does not mean that the process is finished. The process itself ends with the payment for the produced product. However, this is conditioned by various factors that affect the overall process, and in particular by:

- the maturity of purchase and sales invoices,
- the amount and structure of inventory,
- advance payments affecting financial budgeting.

Cash flow provides information on the financial position of a company and represents the difference between income and expense over a certain period of time. In some small and medium-sized companies, the greatest emphasis is placed on cash flow from operating activities, as they form the centre of action. From the point of view of cash, the ability of a company to pay, and hence its financial balance, we will be particularly interested in cash flow planning for which the direct or indirect method is used. The direct method is based on primary cash accounting records. The indirect method is based on net profit after tax, which is adjusted in all items causing the difference between revenue and income, costs and expenses (Cisko, 2013).

Financial planning is important for cash flow planning (preparation of financial plans), which is an indispensable tool for the managing of financial development of a company and a prerequisite for ensuring its favourable financial situation. "The role of financial planning is to ensure financially the achievement of the company's material goals and maintain its financial balance" (Sedlák, 2010).

Financial planning creates a financial plan that reflects all the activities of the company and the financial plan at the same time reaches back to these activities by providing them financially. For this reason, financial planning is a prerequisite for ensuring the financial stability of a company, since its structure affects all the financial indicators (liquidity, activity, profitability, indebtedness). The starting point of the financial plan is the business analysis that focuses not only on the financial situation, but also on the relationships and links of the business process.

## ***2.3 Financial controlling as a tool of liquidity management***

The basic assumption of liquidity provision is the balance of income and expenditure in the short and long term. Insufficient liquidity slows down corporate intentions and reduces the credit of the company with all the resulting negative consequences. Liquidity surpluses, on the contrary, mean losses from missed

opportunities. The objective of liquidity controlling is to minimize these negative impacts by optimizing the financial flows of the company. The efforts of companies to adapt to ever-changing conditions and economic upheaval stimulate their interest in new, modern management methods. One of the new management tools that helps not only detect past errors but also solve problems is financial controlling.

Financial controlling is one of the most important parts of controlling. It often affects the success or failure of the company to a considerable degree. Many companies do not attach big importance to this part of controlling as they should do, and they pay more attention to cost controlling. It is true, because without profit there is no success, but a more modern theory says that without adequate profit or economic gain or economic added value there is no success. The essence of the creation of economic added value and economic profit is precisely an area that is largely included in the financial controlling (Chodasová, 2012).

Financial controlling is a subsystem of corporate controlling that aims to ensure liquidity and hence the financial situation of a company (Sedláček, 2007). J. Holečková understands financial controlling as the management of cash flows mainly outside the company, i.e. ensuring its liquidity. According to Kalouda (2015), financial controlling is incorporated as a subsystem into the operational controlling system of the company and its objective is to ensure the financial balance of the company at all times, while taking into account the liquidity and profitability objectives.

Financial controlling alerts corporate management to problems, sends warning signals, and gives recommendations for decision makers. It is a support system for management. The role of financial controlling is to manage the funds needed to cover payments arising from the business process. It appears in three basic spheres: raising financial resources, allocating financial resources correctly and managing them.

The functionality of financial controlling depends on the quality of controlling instruments used (methods and techniques), the consistency of planning and control mechanisms (Kalouda, 2011).

In terms of content, financial controlling deals with controlling short-term assets, controlling ongoing liquidity, and controlling short-term surpluses and liquidity deficits.

### **3 Results**

The frequency of cash movement in individual engineering companies varies, but the need for its management is common to all companies. Business bills are billed daily to suppliers and other entities, and receivables from clients are collected in their favour. Daily earnings in companies are based on payments from customers, and their planning is the subject of debt management. On the other hand, cash management is the decision on the volume of money to be maintained to ensure the smooth running of payables. In our research, conducted in two stages, in September 2014 (pre-research) and in May 2016, we also dealt with the issues of liquidity and financial management of cash flows in engineering companies, namely in 398 engineering companies in the SR.

#### ***3.1 Examining liquidity in engineering companies in SR***

In our research, we asked whether the individual engineering companies (398) are analysing their current ratio. We received positive responses from 98.49% (392 companies).



On the basis of this it can be concluded that even in Slovak companies, financial managers deal with the monitoring of liquidity indicators as a measure of the ability of a company to repay its obligations, i.e. this figure demonstrates how financial managers of particular companies are interested in managing cash flows.

**Are you dealing with current ratio in your company?**



Figure 1 Distribution of companies according to their use of liquidity analysis

**3.2 Most frequently used financial management tool**

In our research, financial managers have identified two most important financial management tools – financial controlling (40.58%), cash flow planning and management (33.13%). These are considered to be the most commonly used liquidity management tools in engineering companies.

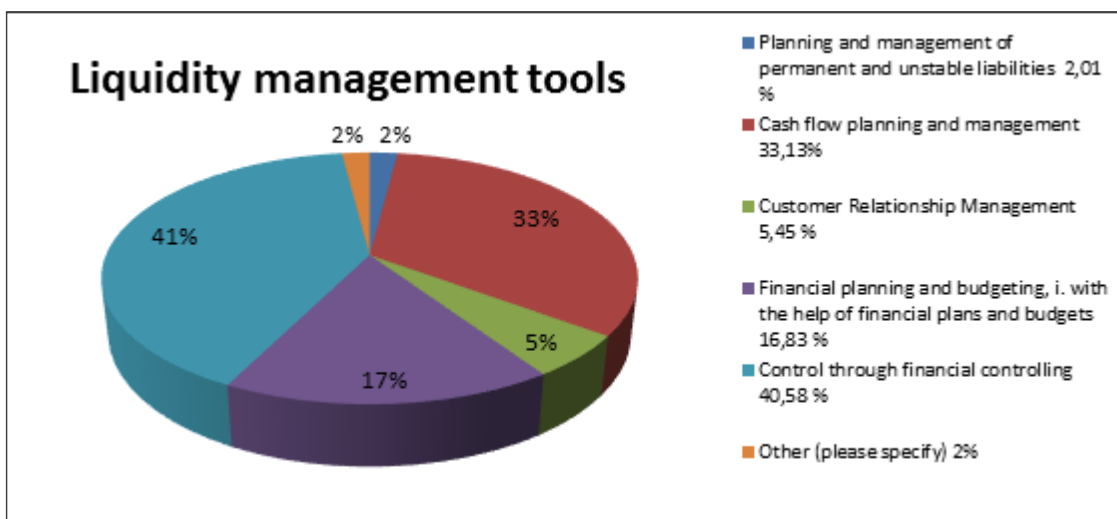


Figure 2 Recommended liquidity management tools in engineering industry.

Applying sound liquidity management tools helps the companies in the engineering industry to move towards financial stability. The planning and management of financial flows avoids various difficulties associated with the overall functioning and existence of a company. Financial management is an indispensable tool for the managing of financial development of a company and a prerequisite for ensuring its favourable financial stability. Long-term financial planning is essential in large companies, whereas in small companies, it is rather at the level of the business owner’s considerations. Planning is used in companies as a tool to promote corporate policy, its strategies, and goals.

## 4 Discussion

We understand the financial situation of a company as a complex phenomenon, influenced by a set of interrelated factors in the area of financial management, i.e. in the area of liquidity, activity, indebtedness, profitability and market value. We consider as financially stable company the one which, at a certain point in time and with a view to the future, is able to fulfil its sense of existence. The long-term economic objective of each business entity is to achieve the valuation of paid-up cash resources of venture capital in the form of profit. One of the most important liquidity assurance tools to reach financial balance of a company is financial controlling. Financial controlling is a supportive management method and its tools are used mainly in medium and large engineering companies. Especially in medium-sized companies, the responsibility for its implementation can be taken over by an economist; whereas in large companies, it is advisable to create a self-contained controlling department lead by the financial controller. Applying financial controlling reflects the company's interest in the management of its own liquidity, which is influenced in particular by the attitude of the company to its ability to pay, the intensity of financial flows between the company and its external partners, interest rates, penalties and, last but not least, the quality and timeliness of information on the state and movements of corporate funds.

So far, few businesses have understood the nature of this concept and the need for its strategic implementation into key areas and long-term business goals. It is not only about short-term decision making, but also about strategic decision-making, it is about investment projects aimed not only at achieving economic benefits, but also taking into account the social needs of the company and of the entities that create it. Effective corporate liquidity management is in the interest of the entire society because a favourable business environment is the basis of a functioning economy.

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## Quality Management and its Impact on Business Performance

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### Abstract

The subject of this article is selected quality factors in companies and their branches across the Czech Republic, and their influence on the performance of these enterprises. The aim of this article is to identify the differences in quality management (its selected characteristics) within efficient and less efficient enterprises. The research was conducted using a questionnaire for a total of 55 enterprises. A specific question from the questionnaire was used to divide the enterprises into efficient and less efficient. The characteristics for quality management were identified within the groups of efficient and less efficient enterprises, and subsequently the statistically significant differences were found between these two groups of enterprises. The statistical significance was set at a level of 90%. The differences between both groups of enterprises were determined using a pairwise comparison method, including the appropriate tests. The results show that there are differences in the degree of formalization and integration of the quality-management system between both groups of companies, with efficient enterprises also having a designated post more often which is responsible for quality management at the level of quality planning. Further differences are in the existence/absence of a quality-management system and in the use of methods and tools for determining customer satisfaction. Efficient enterprises also tend to concur that quality management leads to the support, maintenance and growth of the company's competitiveness in terms of increased productivity.

**Keywords:** quality planning; responsibility; quality management system; integration; formalization; quality measurement; productivity; competitiveness.

JEL classifications: L15, L25

Article Classification: Research article

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## 1 Introduction

The subject of this article is quality management in selected companies and their branches in the Czech Republic relating to the efficiency of these companies. The aim of the article is to identify the differences in quality management (selected characteristics) within efficient and less efficient companies.

Drucker describes efficiency as being the final test for any organization (Drucker, 1992). It is possible to add that this test has to have its economic dimension. Efficiency can then be defined more precisely as a company's ability to increase its invested capital (Hindls et al. 2003). Efficiency is normally measured objectively using secondary (accounting) data, as this data is relatively reliable (Tosi et al. 2000). However, in research it is also quite common to use a subjective measurement of efficiency, and research has shown that the results from subjective and objective measurements correspond (Wall et al. 2004), and some research has even suggested a strong correlation (cf. Dawes, 1999). Due to the easier accessibility of subjective findings (particularly from small and medium-sized companies), we elected to use this approach in our research.

The subjective measurement of efficiency is basically very similar to objective measurements in the sense that it uses the same variables (contained within the accounting data), for example, profit, ROA, and liquidity, and either separately (as a business) or in relation to the competition (cf. Deshpandé et al. 1993, Narver, Slater, 1990, Deng, Dart, 1994). Due to the fact that the simplest method is for the respondent to assess the efficiency of their own company, the company's efficiency was thus determined and the variable chosen was profit - the variable which the respondent had the clearest idea about.

Quality can be understood in different ways and it is possible to distinguish six different groups of quality (value, conformance to requirements, fitness for use, loss avoidance and meeting and/or exceeding customers' expectations), while conformance to requirements is suited for measuring quality (Reeves, Bednar, 1994). We also used this approach in our research and so we have understood and defined quality in this sense.

Parasuraman defines quality as zero errors in production (Parasuraman et al. 1985), whereas Crosby (Crosby, 1979 in Parasuraman et al., 1985) understands quality as meeting the demands of the customer. This is in accordance with Gilmore's definition: "quality is the degree to which a specific product satisfies the wants of a specific consumer" (Gilmore, 1974). This definition of quality focuses mainly on the quality of a product, but also partly on the quality of the production process. The concept of quality is thus expanded to include quality management (in accordance with the aim of this paper). "Quality management is defined as a governing philosophy that promotes continuous quality improvement within all activities of an organization" (Kaynak, 2003 in Ferron Vilchez, Darnall, 2016).

From the above definitions it is clear that "quality" is a set of elements which serves to satisfy the customer. In first place is product quality. However, for the product to be of sufficient quality it is necessary to properly establish production processes, followed by the other (auxiliary) process in the company, and then finally to bring together these processes into one complex system (van der Wiele et al. 2001). In this sense it is then possible to talk about quality management. Quality management can be more precisely defined as the "integrated approach to achieving and sustaining high quality output, focusing on the maintenance and continuous improvement of processes and defect prevention at all levels and in all functions of the organization, in order to meet or exceed customer expectations (Flynn et al. 1994). Therefore, quality

management establishes a complex system for the company as a whole, which has to effectively operate and produce (effectively) high-quality products according to the customer's demands.

There has been a large amount of research into the relationship between quality management and efficiency, in particular the influence of quality management and its tools on a company's efficiency. Researchers agree on the proven positive relationship of both variables, i.e., an improvement in quality management (an improvement in its operation) leads to an increase in company efficiency (cf. Nair, 2006). However, with regard to the definitions and means of measuring efficiency, quality and management quality, the specific results of the research differ, so there is still a wide range of possibilities to bring new findings to this area.

The existing research shows that the perceived importance of quality management has a large influence on a company's efficiency (Lascelles, Dale, 1990, Guttierrez et al. 2010), which leads to the incorporation (on a strategic and tactical level) of quality management into the companies' long-term plans (Samson, Terziovski, 1999), a greater level of quality management formalization is linked to setting clear responsibilities and competencies for certain posts (Germain, Spears, 1999, Kaynak, 2003, Prajogo, Brown, 2004), a greater level of the integration of quality management in terms of the flow of information connected to quality management across the company, the existence of a real system of quality management (Curkovic, Pagell, 1999) and a level for measuring customer satisfaction (Cengiz, 2010). Research has also indicated that efficiency also relates to the perception of quality as one of the ways leading to greater competitiveness in terms of increasing productivity and lowering costs (Powell, 1995, Samson, Terziovski, 1999).

## **2 Materials and methods**

A structured questionnaire was used in this research. The questionnaire contained 55 questions, 5 of which focused on the company's characteristics (company name, headquarters, the sector in which it operates, company size) and 50 questions focused on efficiency and the method of quality management within the company. Closed scale questions (with a seven-point scale) and closed questions with possible yes/no answers were used in the questionnaire. One scale question focused on company efficiency, while 19 scale questions and 30 yes/no questions examined the method of quality management.

Company representatives (always one from each company) from management were issued with the questionnaires and the questioning took place in spring 2017.

Firstly, the companies were divided into efficient and inefficient according to a subjective evaluation by the company respondents. The respondents had a scale of 1-7, where 1 meant high company losses and 7 meant high company profit (over the past 3 years). The division was originally intended for the group of efficient companies to include companies with an evaluation of between 5-7, and the group of inefficient companies would include companies with an evaluation of between 1-3, while companies with a value of 4 would be rejected. However, due to the results, the classification of the companies had to be altered (see the section on the results).

The second step was to ascertain the statistically significant differences between the two groups of companies as part of the characteristics focusing on quality and its management within the company. Standard statistical methods of univariate and bivariate analyses were used to discover these differences. The analyses are based on cross-comparison tables, i.e., the identification of the different occurrence of the

phenomena under observation within the groups of companies. The statistical significance of the differences was measured using traditional approaches - the Chi-squared and Mann-Whitney U tests, where the level of significance was set at a p-value of 0.1 (in some cases 0.05). This level has been set with respect to fewer enterprises in the research sample and it is not contrary to the standard level used in other researches (Schumm, et al. 2013).

### 2.1 Research sample

The research sample consisted of 55 companies from various sectors of the Czech Republic's economy. Table 1 shows the number of companies according to the individual sectors of the Czech economy, classified according to CZ NACE. It is evident from the results that manufacturing companies (the manufacturing industry) were represented the most, followed by service-sector, commercial and construction companies. On the other hand, there was minimal representation from forestry, recycling and education (these companies were the only ones representing the public sphere).

Table 1 Companies divided according to individual sectors; own elaboration

Sector	Absolute no. of companies	Relative no. of companies (as a %)
forestry	1	1.8
logistics	2	3.6
commercial	5	9.1
recycling	1	1.8
services	15	27.3
construction	5	9.1
education	1	1.8
manufacturing	25	45.4
Total	55	100,0

Table 2 shows the number of companies according to size, and this classification (valid in the Czech Republic) is based on EU regulations (EC Commission regulation no. 364/2004). The results show that the sample mainly contains small companies. There are nearly the same number of medium and large companies, though there are more than twice as many small companies.

Table 2 Companies divided according to size; own elaboration

Company size	Absolute no. of companies	Relative no. of companies (as a %)
small	29	52.7
medium	13	23.6
large	12	21.8
unknown	1	1.9
Total	55	100.0

The characteristics of the sample can be supplemented by the finding that 19 (34.5%) of the companies belong to multinational corporations, while 36 (65.5%) are independent.

### 3 Results

The companies were divided into efficient and inefficient based on the questions relating to efficiency. However, the results significantly deviated to the right, i.e., the majority of respondents ranked their companies among the most efficient. No company was given a value of 1 or 2 and only three companies were given a 3. Twenty-one companies were given a value of 4, nineteen were given a value of 5, seven companies were given a value of 6 and five companies were given a value of 7. The companies were subsequently divided into two groups: efficient companies (with a value of 5-6) and less efficient (with a value of 3-4). There were 31 companies in the group of efficient companies and 24 in the group of less efficient companies.

The statistically significant differences were then ascertained as part of the characteristics focusing on company quality and management methods in both the groups. The statistically significant results are shown in the following tables which are then discussed.

Table 3 Integration of the system of quality management into the companies' plans; own elaboration

Companies	Quality management is part of the company's strategic plans			Chi-squared	df	p- value
	no	yes	total	9.025	1	0.003
Less efficient	12	12	24			
	50.0%	50.0%	100.0%			
Efficient	4	27	31			
	12.9%	87.1%	100.0%			
Companies	Quality management is part of strategic planning at the level of the company's posts/departments			Chi-squared	df	p- value
	no	yes	total	7.669 <sup>a</sup>	1	0.006
Less efficient	10	14	24			
	41.7%	58.3%	100.0%			
Efficient	3	28	31			
	9.7%	90.3%	100.0%			
Companies	Quality management is part of tactical planning			Chi-squared	df	p- value
	no	yes	total	10.668 <sup>a</sup>	1	0.001
Less efficient	15	9	24			
	62.5%	37.5%	100.0%			
Efficient	6	25	31			
	19.4%	80.6%	100.0%			
Companies	Quality management is part of operational planning			Chi-squared	df	p- value
	no	yes	total	3.265 <sup>a</sup>	1	0.071
Less efficient	10	14	24			
	41.7%	58.3%	100.0%			
Efficient	6	25	31			
	19.4%	80.6%	100.0%			

Table 3 shows four questions dealing with the integration of the quality management system into the company's different planning levels. For the first two



questions it is difficult to generalize the conclusions because the Chi-squared test was not met (the minimum value is 5, for the first question there was one case of 4 and one case of 3 in the second). Nevertheless, it appears (at least within the sample) that efficient companies integrate the system of quality management into all management levels, from the highest (strategic), to tactical and then to an operational level, and not only as part of the company as a whole, but on a strategic level within the individual departments. It can be concluded that in the case of efficient companies, quality management is in general integrated more fully into the system of planning on all three basic levels.

Table 4 shows the results of the answers to the question of whether there is a post at work which deals with product quality management or quality care. The results clearly show that this post is to be found in efficient companies.

Table 4 Is there a post in the company which deals with product quality management or quality care in the company; own elaboration

Companies	Existence of a post within the company which deals with product quality management or quality care			Chi-squared	df	p- value
	no	yes	total			
Less efficient	18 75.0%	6 25.0%	24 100.0%	11.437 <sup>a</sup>	1	0.001
Efficient	9 29.0%	22 71.0%	31 100.0%			

Table 5 shows the results for whether a company ascertained customer satisfaction through feedback. Feedback was mainly a method for ascertaining customer satisfaction amongst less efficient companies. This method was used less frequently by efficient companies.

Table 5 The company ascertained customer satisfaction with its product (service) through feedback; own elaboration

Companies	The company ascertained customer satisfaction with its product (service) through feedback;			Chi-squared	df	p- value
	no	yes	total			
Less efficient	6 25.0%	18 75.0%	24 100.0%	3.135 <sup>a</sup>	1	0.077
Efficient	15 48.4%	16 51.6%	31 100.0%			

Table 6 shows the results for introducing a system of quality management into the company. The results show that efficient companies prioritize a formalized system of ISO norms instead of their own system. Conversely, less efficient companies create or introduce their own system of quality management and use a formalized system of ISO norms much less frequently.

Table 7 summarizes the results from the questions focusing on the number of methods used by the company to ascertain customer satisfaction, the relationship between quality management and productivity and reduced costs, the formalization of a system of quality management and its level of integration. The results show that more efficient companies use more methods to ascertain customer satisfaction than companies which are less efficient. Efficient companies are also convinced that quality

management leads to greater productivity and lower costs. It can, therefore, be concluded that quality management in this sense is viewed by companies (particularly efficient ones) as a method for eliminating conflicts either within production or management, which leads to lower costs and an increase in the effective running (productivity) of the company.

Table 6 System of quality management introduced into the company; own elaboration

Companies	ISO system of quality management introduced into the company			Chi-squared	df	p- value
	no	yes	total	3.060 <sup>a</sup>	1	0.080
Less efficient	14 60.9%	9 39.1%	23 100.0%			
Efficient	11 36.7%	19 63.3%	30 100.0%			
Companies	Introduction of own system of quality management into the company			Chi-squared	df	p- value
	no	yes	total	8.178 <sup>a</sup>	1	0.004
Less efficient	7 30.4%	16 69.6%	23 100.0%			
Efficient	21 70.0%	9 30.0%	30 100.0%			

Table 7 Ascertaining customer satisfaction, the relationship between quality management and selected characteristics of efficiency, the system of quality management; own elaboration

		N	Mean Rank	MWU	p-value
We use various methods and tools to ascertain customer satisfaction	less efficient	24	23.10	254.5	0.041
	efficient	31	31.79		
Quality management leads to the support, maintenance and growth in the company's competitiveness in terms of increased productivity	less efficient	24	22.73	245.0	0.028
	efficient	31	32.08		
Quality management leads to the support, maintenance and growth in the company's competitiveness in terms of reduced costs	less efficient	24	23.50	364.0	0.063
	efficient	31	31.48		
To what extent is quality control in your business controlled by internal directives or other formal management tools? What is the degree of formalization?	less efficient	24	23.00	252.0	0.057
	efficient	30	31.10		
How would you assess the degree of internal integration and coordination (in terms of interconnection through information and processes) in quality management in your company?	less efficient	24	23.02	252.0	0.057
	efficient	30	31.08		

For efficient companies the system of quality management is also more formalized and integrated (particularly in the sense of interconnected processes and sharing information). It also appears that this greater degree of formalization and integration leads to greater efficiency in quality management and higher productivity, which the companies are convinced of.

#### **4 Discussion**

At first glance the self-assessment results for company efficiency are surprising as the majority of respondents evaluated their companies from medium to very efficient, and only a few assessed them as less efficient (no-one as inefficient). Due to the subjective nature of the assessment, it can be assumed that respondents overestimate the efficiency of their companies. This hypothesis is indirectly supported by other research focusing on the differences in perceiving the quality of a product (service) by the company (its employees and managers), and the customers, as the customers were more critical (they had a lower evaluation of the product) than the company representatives (cf. Dedeoğlu, Demirer, 2015 or Tsang, Ou, 2000). In view of the fact that this distortion appears to have been reflected in the entire sample and caused it to move to the right, the solution to the problem by moving the dividing line between efficient and less-efficient companies to the right proved to be basically correct. Dividing the companies into these two groups allowed for the discovery of statistically significant differences within the characteristics of the company's management system. These findings are also logical and mutually consistent, even though they were discovered as part of separate questions.

Due to the low frequency of some of the results, it is difficult to generalize the conclusions drawn from the questions focusing on the integration of quality management into strategic planning on both a company and departmental level. However, regarding the results from the other two questions, it would seem that with a larger research sample, the findings would be confirmed.

Therefore, it is possible to state with a high degree of certainty that for efficient companies, quality management is integrated more into the system of planning on all three basic levels - for the strategic level this is not just for the company as a whole, but also for its individual sections (departments). These findings are consistent with the fact that a greater degree of formalization and internal integration of the quality-management system was found in more efficient companies. However, it is open to question whether this finding might correspond with the size of the company (where there is a greater level of formalization, integration and sophistication of management systems including quality-management systems in larger firms).

The fact that there exist posts within a company which deal with product quality management or quality care also fits in with the logic of a more elaborate quality-management system and its integration and formalization in more efficient companies. However, it is also possible to speculate that the existence of these posts is related to the size of the company.

It is interesting that less efficient companies stated more often that feedback was used to ascertain customer satisfaction. This might relate to the fact that more efficient companies use a wider range of tools to ascertain satisfaction, but mainly that these companies have quality-management systems (where customer satisfaction is also dealt with) which are more sophisticated and formalized. It can be deduced that as part of the implementation of some of the standard systems of quality management (for example, based on ISO norms), companies also implement a system to ascertain customer

satisfaction, and the primary impetus is not their feedback but the requirement of a formalized system.

It would also appear that a formalized system of ISO norms has a greater impact on efficiency (i.e., it increases efficiency) than a non-formalized independent system. The research also shows that it depends on the complexity and sophistication of the quality-management system, i.e., more complex and sophisticated systems have a greater impact on efficiency (cf. Zhang, 2000). Taking into account the above characteristics, it has also been demonstrated that an independent system, which would seem better suited to meet the quality-management requirements of a firm, need not be as efficient as a tested and formalized system (such as the ISO norms here).

Despite the possible link between a company's size and the level of sophistication of a quality-management system, it has been shown that a higher level of integration, formalization and specialization in a quality-management system, including dedicated specialists (or a whole department), leads to greater efficiency. The respondents were certainly convinced this was the case. It would also appear (albeit the research did not prove it directly) that for companies which introduce a formalized system which has tools for ascertaining customer satisfaction, not only do they carry this out more effectively but they also gain time as they do not have to wait for feedback from the customer. This may also increase a company's efficiency.

It would be interesting to compare these findings with objective data which would measure efficiency (for example, the ROA indicator or Tobin's q for international companies). In view of the fact that the respondents (company employees) should know the company well, we would expect the results to be fairly similar. We also believe that although the overestimation of companies' efficiency by respondents shifted the scale to the right (increasing the sample's overall efficiency), at the same time it did not eliminate the individual differences in the efficiency between individual companies.

One of the biggest limitations of the research was the subjective evaluation of the company's efficiency. Therefore, as part of any further research we would objectify this evaluation using accountancy data from which we would construct an ROA indicator. This would not only assure the correct division of companies between efficient and inefficient, but at the same time we could also discover the extent to which this objective classification corresponds with the respondents' subjective classification. The second significant limitation of the research was the number and representativeness of the sample of companies. In any further research we would increase the number of companies into the hundreds so that more advanced statistical methods could be employed to obtain more precise results which would be easier to generalize. We would also like to change the structure of the sample so that it would be more representative in terms of the structure of companies in the Czech Republic.

As the focus of the research is relatively wide, the questions and the individual areas under research are defined quite generally. However, we hope that in subsequent research we will be able to examine areas in more detail which have an influence on a company's efficiency. We would also like to verify the relationships outlined in the research within a complex model.

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## Financial Management of Slovak Universities – Possibilities of Increasing the Share of Extra-budgetary Resources

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### Abstract

The aim of the paper is to clarify the possibilities of financing the public universities in Slovakia. The first part deals with theoretical and legislative foundations. The research is aimed at the possibilities of financing the activities of the universities with the actual revenues and expenditures of a particular university being demonstrated by specific budget outputs in the period of 2010 to 2015. The period of 2015 is analysed in detail in terms of the revenues of a particular public university and the cost of its operation. In comparison, a table showing the 2015 economic results of other universities is also attached. Finally, the possibilities of increasing the share of financing from extra-budgetary resources are outlined.

Keywords: public university financing; analysis; sources; revenues; expenditures.

JEL Classification: G2, G32

Article Classification: Research article

### Introduction

University system has recently undergone many significant changes that have altered the original model. The most important change was the possibility of business activities and so-called multi-source model of financing. Nevertheless, there are public universities that still have problems with the financing of their activities. It is given by the fact that, over a long period, the schools have relied on financing from the State budget. Although formally, in some areas, there is certain convergence with the European area, for instance the 'Bologna Process', in the field of the building of the European higher education area, but it ended here and with not very good results. A

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guarantee of the quality standards across Europe should have been a part of it. The Bologna Agreements have been accepted in practice, however, it has not contributed to the increase of the quality of Slovak higher education. We can find the proof in frequently published rankings of various rating agencies, where among the first five hundred universities, there are rarely any Slovak ones. In our opinion, it is caused by the form of financing of universities, inadequate interconnectedness with the practice, unreasonable proportion of academics without any selection process and links to Slovak infrastructure. This way we lose the possibility of increasing the interest of private and public sectors in the education of their future employees in the form of sponsorship, donating, participation in research projects, etc.

A selected university will serve as an example of the individual components of financing with a dominant contribution from the State budget, even if the law allows multi-source financing.

### Overview of the Current State of the Problem Solving

Universities are the organizations with a high degree of autonomy. Therefore, the State cannot use the standard scale of direct management tools. The State can use primarily the legislative and economic tools and control competences and partially the quality control by means of the Accreditation Commission.

During twenty-five years of its activity, the Slovak higher education has undergone a number of changes that have had an impact on the current form of funding of universities in the territory of the Slovak Republic. For the purpose of increasing the quality of services and teaching, the education was supposed to undergo various reforms. However, none of them were finished also because there was nobody to do it. Since 1993, the year the origin of the independent Slovak Republic, there have been sixteen Heads of the Ministry of Education, Science, Research and Sport of the Slovak Republic (The Ministry of Education further on). It has not contributed to the strengthening of any conceptual basis of education. The Slovak Republic would like to approach and be equal to the best universities in Europe, in what it has not been successful yet as our best university – Comenius University (UK) in Bratislava – ranks at around four hundred among the world universities.

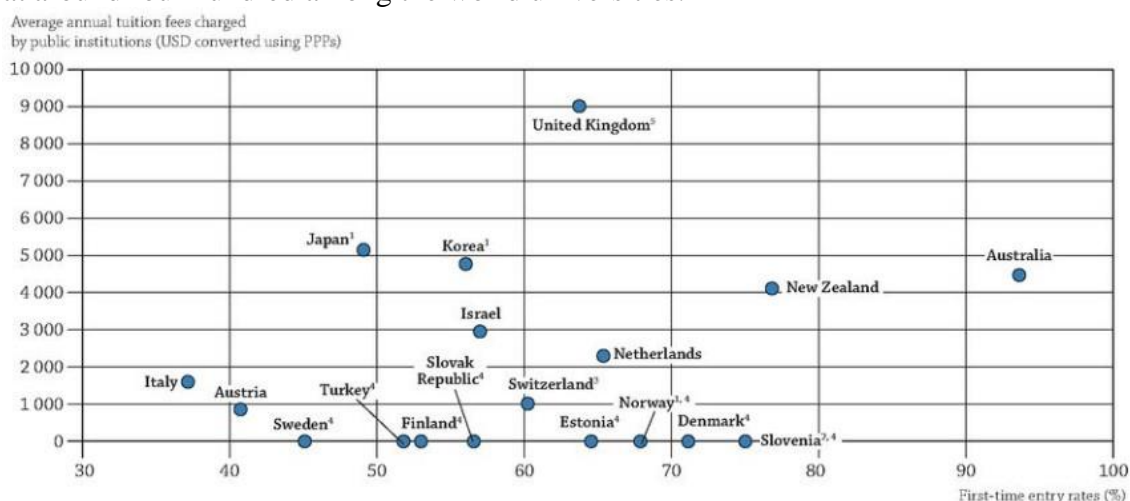


Figure 1 Tuition fees (USD); Source (OECD)

Generally, there are three basic models of financing in the world. While the Anglo-American system uses tuition fees to select the best students, the Swedish, solidarity system helps a student to get to the university – supports him or her



financially. Of course, also in Anglo-American system, there is a scholarship fully paid for by the institution but it is for the students who are the best in what they do (athletics, science, medicine, art, etc.). In Slovakia, it is also possible to get a scholarship but it is rather a way of motivation of an individual because of either good results or a bad family situation to help him or her with some form of social scholarship.

In Figure 1, it is shown what the amount of tuition fee in each country is. It is obvious that in the Slovak Republic as well as in Sweden or Slovenia, everything is covered by the State while in the United Kingdom, students pay extra \$9,000 for the study. On the other hand, countries using the Australian system are approximately at the same line as Japan, Korea, New Zealand and Australia where the amount of tuition fees is around \$4,000 to 5,000.

The Slovak Republic in comparison with other states gives lower percentage of GDP on education and the development of science. In the next table, we show the comparison with the selected countries of the EU.

Education spending Tertiary, % of GDP, 2013

Source: Education at a glance: Educational finance indicators



Figure 2 Percentage of GDP given on higher education; Source: (OECD, 2015)

Financing of universities is, among other things, based on normative principle when the universities are financed based on the number of students and personal and economic demands of pedagogical and educational process according to the Act 131/2002, Coll. in effect from January 1, 2016. It might be shown which normative of financing of a student is used based on the last information available – from the year 2013 – in comparison with other countries of OECD.

„Looking at sum of financial sources in the education sector, we might claim the increase of 1% GDP in 2006 from 0,7% GDP in 1995 – though the complete decrease versus OECD countries is seen in a complex view not caught by the OECD data survey“ (Kollar, Mesežnikov, 2010).

The OECD average is around \$10,000 per student, while in our country it is approximately twice as less at around \$5,000 to 6,000. In the last period, the amount has not changed and remained at approximately the same level.

## **Sources and Models of Financing of Universities in the Slovak Republic**

At the beginning, it should be noted that in 2002, first significant changes took place which gave the financing of universities as such its direction. Till then, all the schools were paid solely from public sources. By 2002 reform, the property was passed on to the universities which meant that the university could determine itself to whom and for what sum of money it would rent its property. The university can manage this amount of money as it wants and it is another contribution to the budget of the university. Multi-source financing was established when the university did not have to be dependent only on the State but could independently manage its property and had to charge money for the so-called above-standard services, which meant that a student paid for exceeding the standard length of study, which was five consecutive years. The university might get money from grants. At the same time, in 2002, in accordance with the Bologna Process, the compulsory credit system and division into three degrees of study, namely bachelor, master (engineering) and PhD were introduced.

In 2007, compulsory tuition fees for part-time studies were introduced. It diversified student loans as well as limitation of the number of accepted part-time students at universities. The Amendment to the Act No. 131, Coll. On Higher Education divided higher education institutions into universities, colleges and technical colleges. Finally, the register of students and academics was created what contributed to the transparency of the situation in the Slovak Republic. The possibility of commercial bank loans was an important part of the Amendment.

The 2007 Amendment to the Act No. 131, Coll. on Higher Education introduced so-called multi-source financing. The Act established the system of financing of public schools based on agreements and the principle of four grants. The aim was to create the system of multi-source financing of public universities with the majority of financing from the State budget. The Section 89, Article 1 of the Act No. 131, Coll. On Higher Education explicitly states that “A public higher education institution shall be financed primarily through subsidies from State budget according to a special regulation.” Nevertheless, it also notes that “To cover expenses necessary for its activities, a public higher education institution shall also use other resources” (MINEDU, 2012).

A subsidy from the State budget is the main source of financing of each of the public universities, which is provided in a form of grant by the Ministry of Education of the Slovak Republic. The criteria based on which these grants are reallocated are annually discussed and specified with the representatives of the universities (Kravčáková, 2005). The agreement also determines the purpose of the grant, its amount and time period. The subsidy agreement limits labour costs and contributions which can be maximum of 80% of current expenditure (Ďurčianska, 2013).

Generally speaking, the financing of universities from the State budget is realized according to three basic models, which can be mutually combined:

- a) Model of Purpose Financing
- b) Model of Financing Based on Performance
- c) Model of Financing Based on Quality

### **Public University Income**

1. State Budget Subsidy
2. Own Revenues
3. Business Activity
4. Other Revenues in the Form of Subsidies
5. Structural Funds

### **Public University Expenditures**

After transition to multi-source financing, the management of resources changed in the following ways:

1. a public university has to secure a part of its financial means on its own by its activities,
2. a public university keeps its revenue to cover the expenditures and does not transfer it to the State budget,
3. a public university can transfer the saved financial means from the State budget to the next calendar year as well as to the following years,
4. subsidies from the State budget are provided to a public university predominantly in a form of block grant and are not obligatorily internally structured.

Public university expenditures are divided into current and capital ones in relation to their purpose.

### **Analysis of the UCM budget**

The analysis of revenues and expenditures is based on the data in the Income Statement. It provides detailed information about revenues and expenditures in the selected areas such as public procurement or technical evaluation of fixed assets in a prescribed structure. The analysis of revenue or income is shown in a specific structure.

### **Analysis of the UCM Revenues**

We based our analysis of the financing of the University of Ss. Cyril and Methodius in Trnava on the Annual Financial and Economy Reports from the years of 2010, 2011, 2012, 2013, 2014 and 2015. In the given period, the University managed itself based on the budgets approved by the Academic Senate of the UCM for the respective year. In the second subchapter, we will look at 2015 in more details when we show the table of income or revenue with exact sums of individual items.

The main source of financing of public universities has continued to be subsidies from the State budget, which are provided in the form of so-called block grant which is internally unstructured except for purposefully bound resources and obligatory indicator of maximum sum of personnel costs (wages and deductions). The amount of financial resources from the subsidies used for wages and deductions into security funds cannot exceed 80% of the volume of financial means provided in the given year to a public university for running costs (Minedu, 2015).

### ***Analysis of the period from 2010 till 2015***

#### ***Subsidy from the Ministry of Education***

A significant change was introduced by the Amendment to the Act No. 131, Coll. in 2007 when we started to talk about so-called multi-source financing of higher education. The budget of the Ministry of Education for universities shows a rising tendency. In 2015, it was €482,032,666 for higher education within Program 077. Of course, the sum is divided among other programs. The Figure 3 shows invested means

of the Ministry of Education for the UCM during the analysed period. The analysis includes the year of 2015.

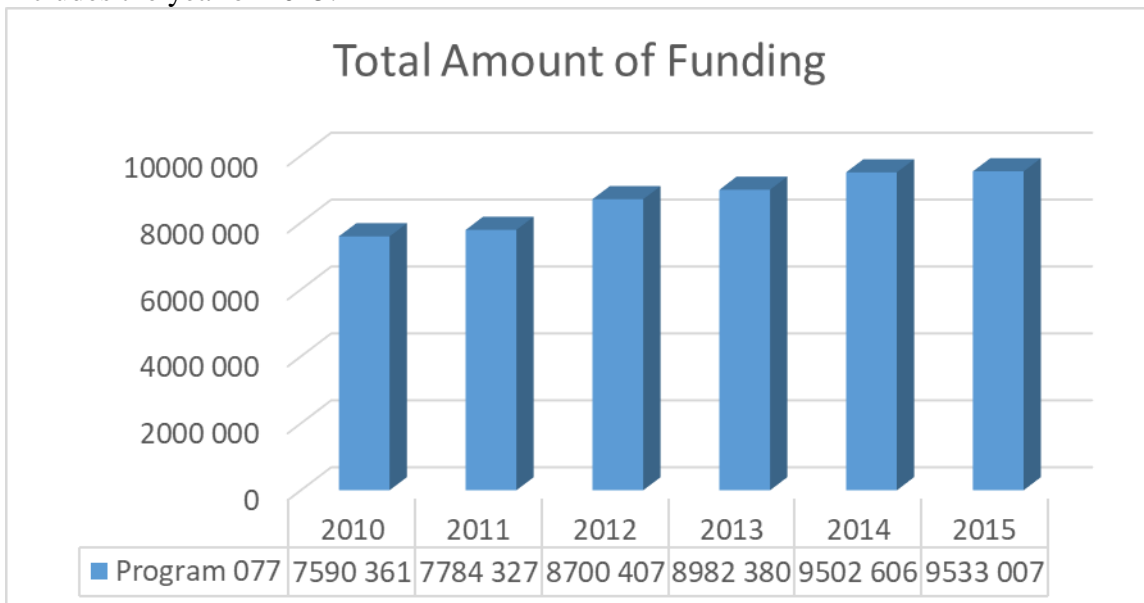


Figure 3 Program 077 (EUR); Source: own processing of data of Ministry of Education, 2015

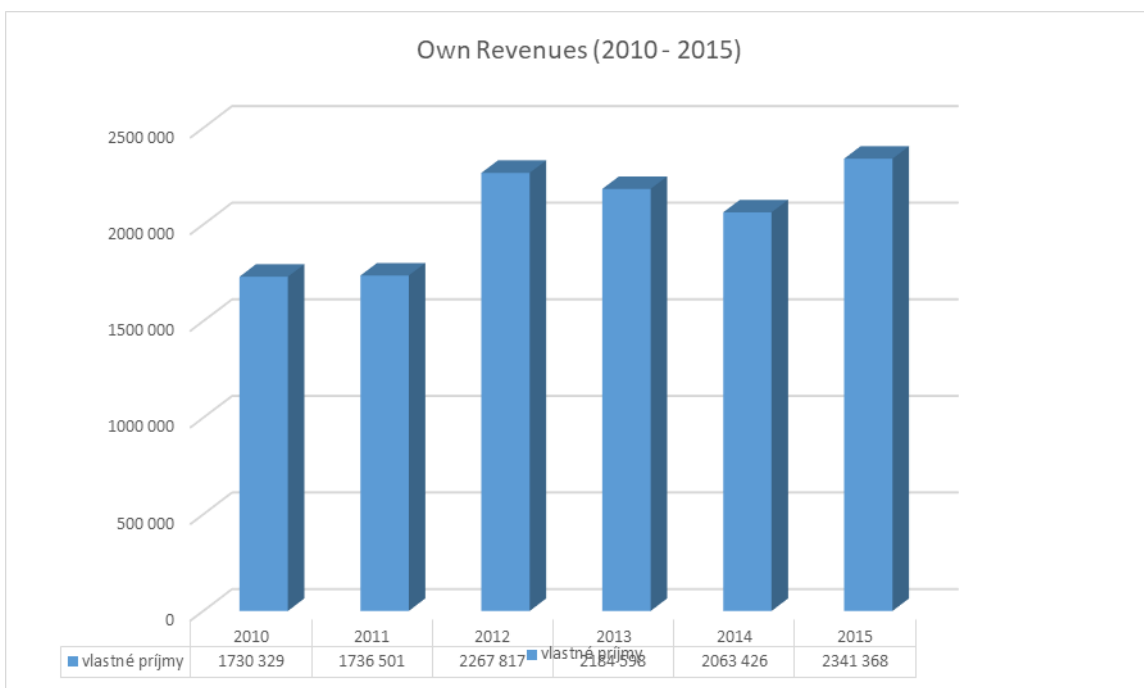


Figure 4 Own Revenues; Source: Own processing of the data from the UCM Annual Reports

### Business Activity

Since 2007, each public university can take part in business activities. In Figure 5, business activity of the UCM during the observed period since the Amendment has been in effect is shown.

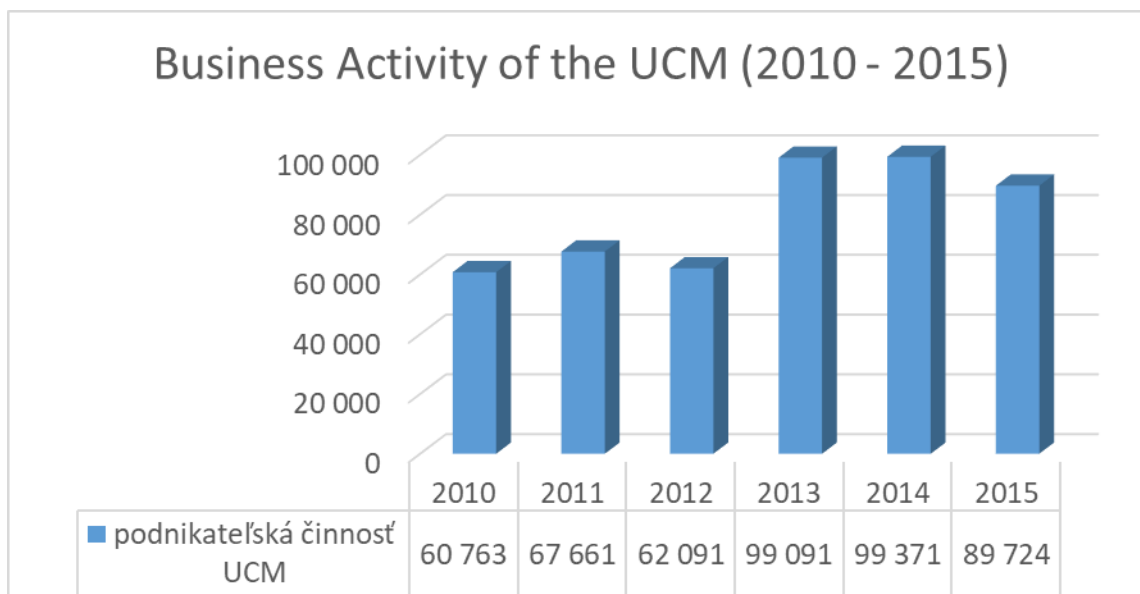


Figure 5 Business Activity; Source: own processing of the data from the UCM Annual Reports

### Structural Funds

The University of Ss. Cyril and Methodius in Trnava is actively taking opportunity of using the European Union financial means and takes initiative in getting involved in elaborating the projects with the aim of securing the implementation of innovations into educational process, developing the infrastructure for science, research and quality education (Figure 6).

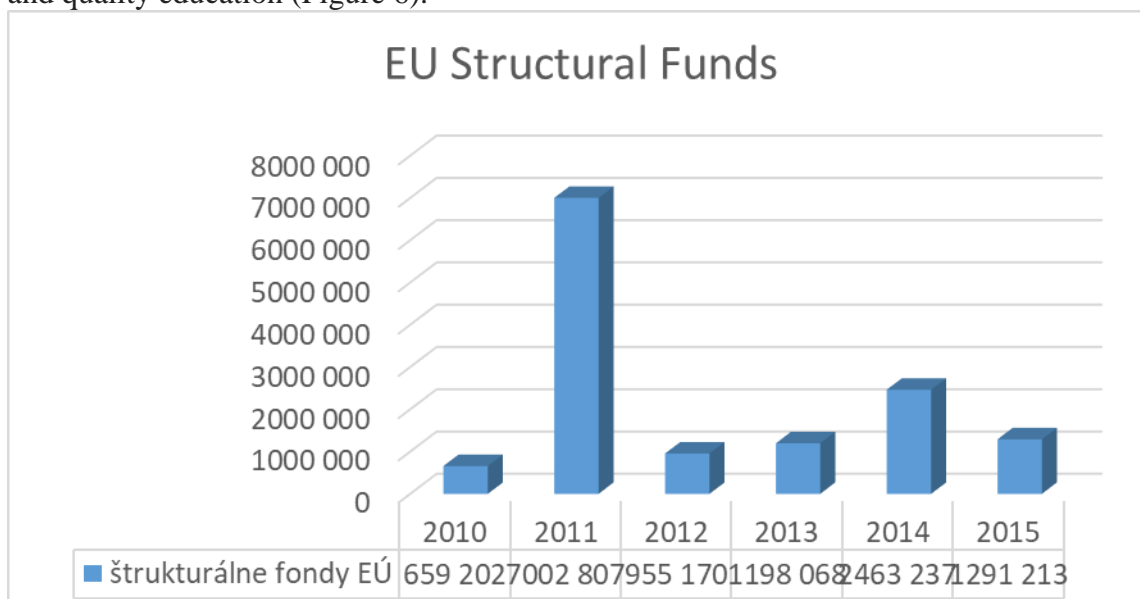


Figure 6 EU Structural Funds; Source: own processing of the data from the UCM Annual Reports

### Revenues of the UCM in 2015

In 2015, as well as in the previous years, the subsidy from the State budget from the Ministry of Education was the most significant and important source of financing. Other important revenues were acquired from other education, tuition fees, donations, etc. The UCM also obtained certain revenue from the business activity.

In 2015, the total revenue of the UCM was €14,758,991 €30. The main activity in 2015 yielded €14,669,266 €95 and the business activity yielded €89,724 €35, which was around 0.6% of total revenues.

#### *Expenditures of the UCM in 2015*

The expenditures of the UCM in 2015 connected with the main activity were at the amount of €14,747,786 €52. The largest items were:

- labour cost – €6,612,954
- statutory social insurance – €2,273,099
- cost of material– €458,140
- cost of energy – €276,312
- depreciation, sold property – €2,367,336

Based on the analysis it follows that a public university, in this case the University of Ss. Cyril and Methodius in Trnava, managed with a positive result at the amount of €11,205 which is statistically still in black ink numbers, but the ratio of 0.6% of business activity is not enough for economic survival. Just an increase of the share to 5% would raise the revenue to €850,000 instead of current €89,000. In the observed period, the university relied predominantly on the subsidies from the State budget which increased every analysed year. Not insignificant part of the financing was acquired from the structural funds, especially in 2011, when there was a large investment in the purchase of tangible and intangible property. Business activity is not so significant which is probably caused by lower creativity or implementation of individual project what are the most promising areas in this context.

#### **Conclusion**

In the Slovak Republic, we have twenty public universities at present, which are financed similarly as the UCM, i.e. they gain the most of their finances from the State, which is significant at present but in the future, the subsidies from the State will be lower so the universities should aim at getting the finances also from other sources if they want to survive in the future.

#### *Possibilities of multi-source financing*

A university is essentially dependent on the financing of its activity by subsidies from the State budget and by the revenues from the tuition fees. In the context of structural funds, the projects are long-term and the finances are paid gradually and cannot be used for anything else and in any other period than it is stated in a project. Concerning the EU funds, those will finish in 2020 and it will be necessary to find other sources.

More significant orientation on business activity can be one of these sources. Business activity can be one of the most important sources of financing and also one of the most profitable. Public universities have various possibilities how they can secure a stable income by business activity. Generally, we can say that technical and medical universities can obtain finances by business activity easier in cooperation with a private sector. Nevertheless, we believe that also universities and faculties of social sciences, arts and humanities can find other ways of financing.

First of all, the universities should try to change the approach. They should predominantly make use of the experience from the private sector, e.g. in the field of PR, marketing, development, etc. They can start at the level of rector's office of faculty where they can establish a body responsible for increasing the amount of sources from the business activity and which would not be linked to budgetary sources. It would have to be able to support itself in the first place and gradually, it would increase the amount of business sources, e.g. by accreditation of different types of training courses.

Example: Creation of tables in Microsoft Excel is an integral part of the computer age. On average, the basic packages of such trainings by private companies cost around €250. Based on the successful completion of the course, a candidate gets a certificate that he or she completed this course. If a university offered this product for 50-75% less, the cost would be €80-125 for a course that could last one or two semesters. After the completion of the course, a student would get a certificate of completion approved by the Ministry of Education which would indirectly sponsor this course by offering the premises and infrastructure of a university.

Universities have professionals of technical character that create specific projects with the use of modern technology and equipment. Professional staff from the field, e.g. mass-media communication, would provide necessary qualification skills for conducting such a course. A university would have to secure the education and space. An applicant would pay the necessary sum or a beneficiary of any scholarship would get the course for less money. Students themselves could also be applicants and would get, apart from general education, the possibility of extra training with the focus on specific skills necessary for the practice.

It is important to realize that without a necessary practice, a student is less likely to get employed right after finishing the studies. Another difficulty arises when trying to create business partnerships of public universities and private companies. It is difficult to set the business conditions for such business activities which would be satisfactory for both, a university and a private company.

It can be difficult to develop and offer a profitable business activity for the universities in the field of social sciences in such a way as technical universities. When a student of public administration prepares for the future job, it would be good if he is able to experience the functioning of public administration in practice. They could take part in various kinds of internship, assist to politicians at home or abroad and bring their experience back to school and pass those skills to other students before finishing their studies. In other words, it is not easy to create such a model which would be productive for all. Frequently, we can hear especially when amending the Act No. 131, Coll. on Higher Education that people compare the Slovak Republic with universities in the US or other countries but we have to realize that it is not possible to compare them. It is necessary that public universities focus on a primary aim of education and creation of young educated people who would be interested in the major they study. Education is still a primary function. Business activity should not be at the first place. However, that is not even possible with current share of 0.6% of business activity.

### ***Comparison of the Theory with Practice***

The aim of the paper was to find out whether the system of public universities financing is set to enable the universities to create necessary values which depend on financial stability. Each public university gets specific amount of finances from the category of budget of the Ministry of Education as well as from other categories of the

State budget which are allocated to certain projects. As we mentioned, finances are also acquired from the EU Structural Funds as well as from own business activity.

In conclusion, we present Table 1 for mutual comparison of Slovak public universities in terms of the balance of their budgets in 2015.

Table 1 Profit and Loss of Slovak Public Universities (EUR); own elaboration of Annual Reports of 2015 (missing entries mean unknown data, the universities are described in abbreviation names)

Public University	Current Subsidies	Revenues	Expenditures	Difference
UK	90,332,246	155,798,705	153,354,559	2,444,145
STU	56,970,638	98,040,173	97,674,318	345,855
TUKE	38,829,443	73,629,563	72,476,523	1,153,040
ŽU	30,935,455	64,622,023	61,024,568	3,597,745
UPJŠ	27,971,778	54,526,377	52,764,668	1,761,708
SPU	21,341,628	-----	-----	-----
PU	20,452,179	31,565,677	31,565,121	546
UKF NI	19,494,160	28,331,274	27,500,049	831,225
UMB	19,453,502	31,377,941	31,129,680	248,261
EU BA	19,299,757	27,590,297	27,578,466	11,831
KU	11,715,957	-----	-----	-----
UVLF KE	11,527,039	18,993,983	18,627,277	366,705
TUZVO	10,989,141	18,784,018	17,768,824	1,015,194
TVU	9,900,927	15,042,708	15,281,859	-239,151
UCM	9,260,692	14,758,991	14,747,786	11,205
TVAD	6,590,406	11,043,308	10,869,376	173,932
VŠMU	5,434,966	-----	-----	-----
VŠVU	4,326,912	4,349,958	-----	-----
AU	3,534,568	-----	-----	-----
UJS	3,228,115	-----	-----	-----

Each year, around €450 million are divided among public universities in the form of direct subsidies which slightly increase each year.

Education should be one of the most important topics in any country and we should pay great attention to securing the quality for next generations. It is closely connected with the financing of higher education. Simply said, how much you invest into education of the future generation that much you get back in intelligence and the quality of provided services. The more educated a nation is, the more added value it is able to create in the future.

We can often hear that even if the financing of higher education in the Slovak Republic with its 1.3% of GDP is approximately at the same level as the OECD average, which is around 1.5%, it is still not enough. In advanced economies such as the US and Japan, it is more than 4% of GDP. Of course, it is difficult to compare Anglo-Saxon and Swedish systems of financing. Even though the Swedish system of financing is also in the form of subsidies from the State as in the Slovak Republic, the difference is that Scandinavian countries give 2% of GDP on higher education.

The rules of financing the universities are important for the right setting of motivation of universities. The main aim of educational policy is to improve the quality of education and research outputs at universities which should be the basis of public funds allocation. The emphasis on outputs of educational process as opposed to



financing based on indicators of input motivates to more efficient behaviour of institutions (Beblavý, 2010).

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# **Multidimensional Approach to Increasing the Efficiency of Information and Communication Processes in a Knowledge-based Economy**

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## **Abstract**

Production of mass-media is a reflection of everyday present and historical context. Even under its influence a new society and a new world of companies are formed, a new world of constant turbulence, reversals and transformations that exclude traditional management methods. Changing a man, his needs, it becomes necessary to accept a flexible reagent and to find ways to keep the existence of the world, enterprises also within this time-scale of historical significance.

Keywords: knowledge; communication.

JEL Classification: L26, L22, L23

Article Classification: Conceptual article

## **1 Communication in the Process of Economizing the World**

Let's get not lost in the information-communication universe! New electronic information technologies and new means of communication are being enhanced by unprecedented acceleration. Computers can integrate image, sound, graphic artefacts, simulation, animation and more to create multimedia. By their application we achieve new forms of communication. The communication of the third millennium is marked by an information explosion. The way of communication has changed radically.

The complexity of international relationships, in the course of the negotiations, has gradually brought to the surface questions which, in the past, career diplomacy treated as if they were not existing. In politics – more than ever before – the economy has entered, and hence opened the issues of country production and the creation of

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foreign markets. This explains why the government, together with entrepreneurs, is also engaged in identifying new opportunities for business development. It supports new investment opportunities, increasing employment, creating new values. The communication penetrates into places that have not been seen in the past. It goes from the market through relevant components to the customer and returns the same way. It "pulses" between customer, product and enterprise.

## 2 Information and Communication Circuits

Communication requires creating contacts and exciting attention to the subject of interest. It consists of the individual's desires, his particular ideas of products that correspond to his interests and needs. Most often there it is a mental or material product. However, not only an individual, but a specific institution or an enterprise, need certain products to exist and operate. In such cases, they are products for common use. But also products serving the manufacturing process or other purposes serving production or other final activity. Interest is related, for example, to the need to modernize the enterprise or the product that is being produced.

The designation of the information-communication circuits (ICC) and their differentiation is only hypothetical because their movement in space is uncontrollable. It could be said that it is not ICC, but IC cloud IK cluster

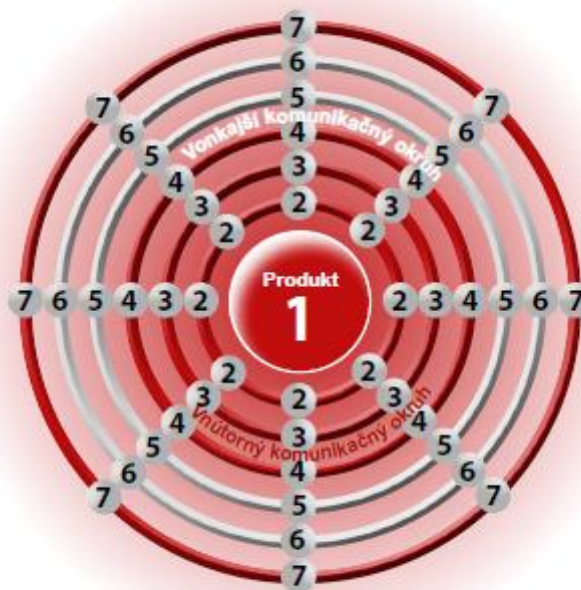


Figure 1 Product, own elaboration

From the unimaginable amount of information in the world, it is necessary to "shed" events and information from the immediate vicinity, which are the most important for the mission of the corporation. It also relates to information obtained from the world because they are of great importance for the quality of life and the development of events in our country, our conditions and the building of relationships. These statements are very vague and we cannot make any clear decisions based on them. A man spends a lot of time to communication – until he walks away with a nickname or belief that he can talk only to a computer. So as the technical level, expanding performance parameters and the breadth of their usability are rapidly

changing, there are also concerns about the health of users and the possible decline in human relationships and social contacts.

Mass media has a significant impact on increasing the performance of the processes. The world course of events also drags Europe and raises almost an emergency regime of the behavior of governments, institutions, enterprises. Building a system of managing organizational units in conditions of the country and specific regional conditions is dependent on current changes.

In comparison to a passive response to unexpected changes, the active involvement in carrying through the interests of the country, enterprises and institutions is a strategic entry into information and communication space at various levels traditionally referred to as global, national and corporate.

### 3 The Interdependence of Relationships

Today, there are not only inter-state relations, but also relations between enterprises and institutions that have been established by countries by mutual agreement. International treaties concluded between at least three countries have international legal personality, permanent character, have their own bodies and strive to achieve the objectives set out in the Memorandum Charter by the Member States.

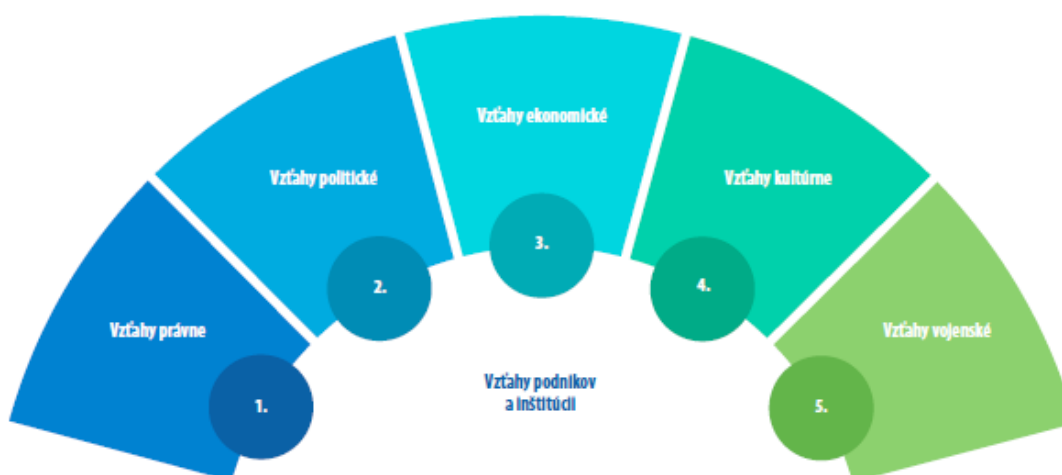


Figure 2 Communication in the process of economizing the world, own elaboration

### 4 Communication Consumption

This term is not too familiar, but on the occasion of the Church's World Day of Communication, the role of modern technologies and the media in today's world was also expressed by Pope Francis. Specifically, the pope devoted himself to oversaturation by information that is put against each other and people are urged to choose a party instead of seeing things as a whole.

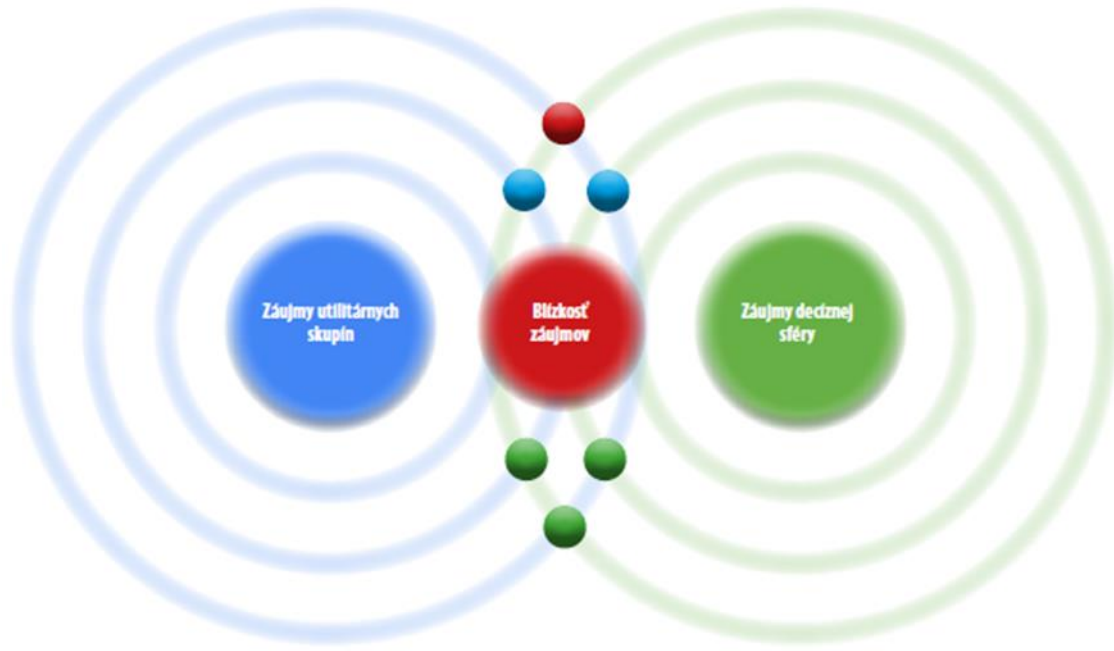


Figure 3 Spheres, own elaboration

## 5 Interests and Communication Consumption

Through media, some kind of pressure can be exerted on their consumers (for example in political campaigns). Continuous promotion of group interests, especially in the media, is referred to as lobbying. Through the media, various businesses or institutions also maintain relationships with their surroundings and the public using various techniques and tools that are referred to as PR (Public Relations).



Figure 4 Product, own elaboration

## 6 Practical Application of Information Products within the System of Information and Communication Annulus

A good example of the application of the shown method is the International Conference NEW EUROPE, which as a contribution of the Štefan Kassay Foundation for Science and Education was not only extremely challenging, but the information purpose of the conference website is divided into three phases:

1. Preparatory Phase (conference information, press releases, panellist, program, accompanying events)
2. Implementation Phase (current press conferences during the conference, material for the media)
3. Information Phase (after the conference the website remains active, participants' contributions, responses, reports are uploaded and live performances are in the audiovisual form).

The idea of the international conference New Europe 2016 at the Smolenice Castle – as his personal contribution to the Slovak Presidency of the Council of the European Union – came by Professor Štefan Kassay in the autumn of 2015. The idea of this entrepreneur, scientist and economic diplomat was to organize a serious international event with the participants at the highest level. The main organizer of the international conference New Europe 2016 was the Professor Štefan Kassay Foundation for Science and Education.

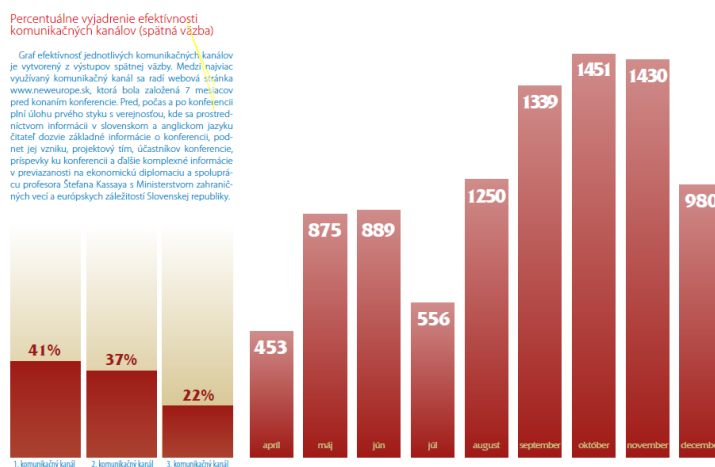


Figure 5 Percentual effectiveness of the communication channels (feedback), own elaboration

The international conference New Europe was divided into three communication channels from the point of view of Mass Media Promotion. 1. Communication Channel – [www.neweurope](http://www.neweurope) website. 2. Communication Channel – postal, telephone and electronic communication in the form of cover letters, interviews and invitations, 3. Communication Channel – audiovisual communication on the day of the conference through large-scale projection, screens, leaflets, conference program and information on Professor Štefan Kassay Foundation for Science and Education.



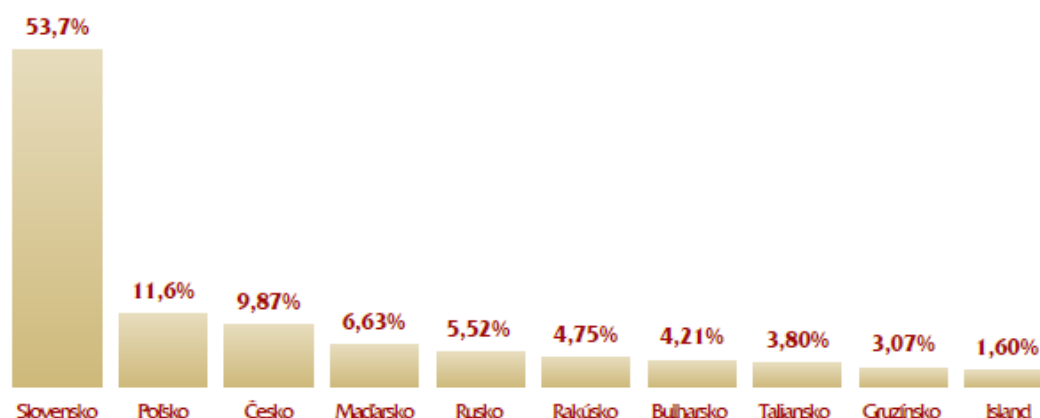


Figure 6 Percentage of unique access on www.neweurope.com for the period April 10 – December 10, 2016 by country of connection. Selection of the ten most frequently occurring countries., own elaboration

The graph shows unique IP addresses from the five most commonly used web browsers (Chrome, Firefox, Internet Explorer, Safari, Opera Mobile). The interest in the information grows with the approaching date of the conference and the subsequent translation of the conference due to the state funeral of President Michal Kováč. The site's reading in July is the lowest due to the holiday period and the less interest in a specific site engagement.

Traffic does not drop even after the conference, readers constantly monitor the press releases and posts shown at the conference. These will be continuously updated. The website will be also used in the future – a priority task in the information phase of the website is transformation into a portal where all important outputs from the conference will be stored, including audiovisual outputs and rich photographic documentation.

Percentage composition of unique approaches from countries reflects the activities of the Professor Štefan Kassay Foundation for Science and Education in 2016. Countries above 5 % are also linked to the subsidiary activities of the I.D.C. Holding, joint-stock, where the enterprise has its official representation. Austria and Italy are on the list thanks to the related activities of workshops called Next Europe, where New Europe plays an important role in the intellectual contribution of Professor Štefan Kassay Foundation for Science and Education to Europe's current challenges. Bulgaria is a surprise with its number of approaches but with a more thoroughgoing analysis we find that the activities of Professor Štefan Kassay as well as the earlier presentation at the University in Sofia and the pilot project MANAGEMENT (the publication MANAGEMENT in Bulgarian language) are actual topics. Last but not least – the Ambassador Extraordinary and Plenipotentiary of the Republic of Bulgaria H. E. Margarita Ganeva was also present and with active interest at the conference. Access from Georgia reflect engagement in economic diplomacy activities under development aid to the countries covered by the Slovak AID brand and the subsequent traineeship of young Georgian entrepreneurs in the world class enterprise – I.D.C. Holding, joint-stock. The tenth country with less than 2 % access – Iceland – again reflects the activities of Professor Štefan Kassay, who spent three weeks in May on the diplomatic mission and wrote an inspirational book “Iceland – the landscape of fire and ice”. Approaches from Italy are currently undergoing an analysis as it is quite likely that the



interest in the conference in this country stemmed from the natural linking of Next Europe workshops in the cities of Rome and Venice with the New Europe conference.

## **7 Conclusion**

The aim of this contribution was to point out the possibility of at least partially eliminating the impact of mass media on social consciousness. There is an evidence that it is possible to contribute to the positive formation of society. Turbulence, reversals and transformations rule out traditional management methods, but there are also positive changes. A person is changing, due to positive communication and good relationships, a flexible reagent develops, and man and his faith in the good helps to maintain the existence of the world and to develop an environment that is capable of controlling or positively adapting it.

## Smart City

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### Abstract

The beginning of this century is characterized by an intensive transition to a highly urbanized population in Europe. This trend brought societies and their governments in the world challenges related to key themes such as sustainable development, education, energy and the environment, security and public services. Management of towns and their parts or districts have to deal with complex social ecosystems and ensure sustainable development and quality of life for the population. Smart Cities are currently seen as a key strategy to improve the quality of life of billions of people living in cities around the world. With regard to the definition of Smart Cities and Digital Cities, it can be said that the shared and recognized definitions of both Smart Cities and Digital Cities are still missing. The aim of the paper is to present the basis of future research in the field of evaluation of selected places of the Slovak Republic by applying the smart cities principles.

Keywords: smart cities; digital cities; Slovak Republic.

JEL Classification: E26, J48, P43

Article Classification: Research article

## 1 Introduction

### 1.1 Digital cities

Definitions of a Digital City show higher uniformity since all of them focus on a key role of information and communication technologies used within the improvement of quality of services and information provided to citizens.

European Index of Digital Cities (EDCi) contains complicated indicators which describe how different European cities support digital business. These indicators analyse key factors such as availability of sufficient and adequate financial resources,

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skilfulness of workforce in a specific area and quality of supporting infrastructure and networks which influence the level of digital cities index. The aim of the evaluation is to support digital business by providing holistic and local views on the situation in the cities in the European Union countries. The index describes, evaluates the current state of selected ecosystem factors which mostly support newly established companies in digital business. The index includes all capital cities in the EU-28. The presence of cities from countries of EU-28 allows all the member states use the index to inform and evaluate their policy concerning digital business. Apart from that it includes 32 cities in the EU which are not capital cities of the member states of the EU but important centres of digital business. Selection of these cities was determined by analysis of two sets of factors: 1) concentration (strength) and excellence of ICT sector and 2) size (scope) and quality of digital business (<https://digitalcityindex.eu/methodology>).

The results of evaluation of selected 60 cities of the European Union which in 2016 were a part of the evaluation by the index of digital cities are published on webpages <https://digitalcityindex.eu>, and they provide the base for local governments (municipalities) to apply changes in favour of principles of digital cities establishment. In 2016 Bratislava - the capital city of the Slovak republic was included in the above mentioned evaluation and within 60 evaluated cities from the European Union Bratislava got the 41st position. From the neighbouring capital cities also Vienna which got the 10th position, Budapest on the 33rd position, Prague on the 37th place and Warsaw on the 38th position should be mentioned. London, Stockholm, Amsterdam, Helsinki and Paris are regarded as leaders in the area of digital cities of the European Union.



Figure 1 Areas of evaluation for calculation of digital cities index (EDCi, 2017)

## 1.2 Smart cities

The term Smart Cities is quite open since there is no universal definition of it. The Smart Cities Council, 2014 defines the intelligent city as the city which has already applied digital technologies in all city functions.

Business dictionary defines smart cities as a developed area of a city local government (municipality) which creates sustainable economic development and supports quality of life. Although there is no general agreement concerning the conception of “smart city”, the European Parliament (2014) defines the core of the idea of smart cities in creation and interconnection of human capital, social capital and information and communication technology (ICT), aimed at generation of higher sustainable economic development and better quality of life.

Smart Cities are directly connected to the priorities of the strategy Europe 2020. It is the 10 years' strategy of the European Union in the area of employment and growth. Its implementation started in 2010 and its aim was to establish conditions necessary for intelligent, sustainable and inclusive growth. The European Union as well as the government of the Slovak republic consider the sustainable development to be the basic principle of society development. Under the term sustainable development the targeted, long-term, complex and synergic process which influences conditions and all the aspects of life (cultural, social, economic, environment and institutional) at all the levels (local, regional, global) and made towards a functional model of a specific society (local and regional community, country, international community) which satisfies biological, material, mental needs and interests of people, while at the same time it eliminates or considerably restricts interventions which threaten, harm or destroy conditions and forms of life, do not burden a country over the bearable level, rationally utilizes its sources and protects its cultural heritage is understood. Member states of the European Union in their declarations emphasize and confirm the importance of sustainable development, as well as in strategic documents such as Lisbon agreement and also in the key document the Strategy Europe 2020. The Strategy due to its focus on intelligent, sustainable and inclusive growth fully respects economic, environment and social aspects of sustainable development. A permanent challenge for Slovakia is to transfer all the principles of sustainable development to everyday life, review all the planned and executed activities by criteria of sustainable development and evaluate the process of heading to sustainability by the set of measurable indicators. <http://www.tur.vlada.gov.sk/>

The European Union in the document Europe 2020 agreed on five main goals which are to be met by the end of 2020. These goals concern essential changes in the areas of employment, research and development, climate/energetics, education, social incorporation and decrease of poverty in the member states of the European Union. All the above mentioned goals and their fulfilment make a presumption for execution of principles of sustainable development of the European Union member states. (European Commission, 2014).

Smart City is a city with properly functioning characteristics: It is based on “smart” combination of financing of transferred and original competencies financed from state donations and activities which are financed by municipalities due to their own profit-making activities; it is independent and competent in the area of making decisions in the economic and managerial areas and dispose with conscious and educated citizens.

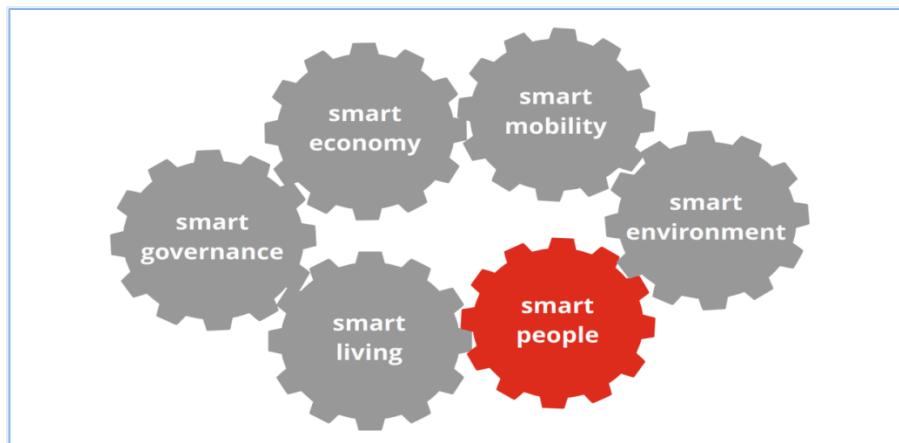


Figure 2 Characteristics of smart cities for index calculation (Legény, 2015)

## 2 Material and Methods

The aim of the paper is to present partial results of the research as the starting point for possible and required realization of the scientific research in the area of implementation of principles and rules of conception of management of smart cities in the Slovak republic. The aim of the paper is to present the results of the analysis of medium sized cities in Slovakia and develop a platform for a consequent new research which would be focused on selected cities in Slovakia. Based on the platform it would be possible to evaluate and determine the benchmarking of Slovak cities from the point of view of implementation of innovations within the principles of smart cities. Smart City is a city with properly functioning characteristics: It is based on “smart” combination of financing of transferred and original competencies in a form of processes financed by state donations and activities which are financed by municipalities own profit-making activities; It is independent and competent in the area of decisions making in the economic and managerial areas and dispose with conscious and educated citizens. Each smart city has the following six characteristics:

- Smart economy – innovations, enterprise, economic image and trade brands, productivity, labour market flexibility, international attractiveness.
- Smart mobility – local availability, national availability, availability of information technologies and infrastructure, sustainability of traffic system.
- Smart living – cultural facilities, health conditions, individual safety, quality living, school facilities, tourist attractiveness, economic prosperity.
- Smart governance, managerial systems – participation in public life, public and social services, transparent governance.
- Smart environment – environmental conditions, quality of air (no pollution), ecological thinking, sustainable sources utilization.
- Smart people – level of achieved qualification, long life education, ethnic plurality, liberal-mindedness (<http://www.smart-cities.eu>).

Within individual six characteristics particular or specific indicators were defined whose actual or real state in the specific evaluated city in the researched year was achieved. Solution of the project will result from the actual situation in the organization of SR local governance, from analysis of external and internal environment with monitoring and prognostic of behaviour of officials of local governance with the emphasis on processes performance and modelling of new procedures in the process of execution of innovations in performing public matters. Classification and causal

analysis will be followed by comparison of evaluation of the aspects of local governance in the process of application of principles and new measures in implementation of Smart Cities items as of a toll of building sustainable development and growth of Slovak cities in conditions of the European Union. Assumed benefits of the scientific project can be defined as follows:

1. The basic processes in the organizations of local governance (SR cities with the population higher than 50,000), which influence implementation of the principles of sustainable development and growth of the quality of citizens' lives, with the emphasis on quality of life in cities such as living, economy, culture, social and environmental conditions will be identified.
2. Based on the analysis the development and actual state of selected SR cities is to be evaluated, in relation to sustainable development and current conditions and disposable resources (human, economic, natural) and consequences of their utilization and reactions of the society to executed changes will be evaluated as well.
3. The comparative study related to selected cities based on already developed European Smart City model which provides integrating approach towards defining and comparing European middle sized cities and is considered to be a tool of effective learning in the area of processes concerning cities innovations in particular areas of cities development will be worked out.
4. Based on the above mentioned platform the benchmarking of Slovak cities will be evaluated and defined – from the point of view of implementation of innovations as the starting point for inclusion of the researched city among so called smart cities existing in conditions of the Slovak republic.
5. The document which will contain problems and risks in the area of changes in the organizations of local governance in the process of implementation of principles and procedures of smart governance formation will be worked out.
6. The possibilities of utilization of positive experience from European cities which implement sustainable growth by building smart cities in the following areas will be proposed.

### **3 Example of the research results: city Košice**

Košice is the second largest city in Slovakia and is located in its east part. Lucrative location made Košice an important trade point, today Košice is a key economic agglomeration and also a crossroad of transport lines, supported also by the rail junction and the international airport. In its administrative borders the area of the city is 244 square kilometres and the population of 239,369 citizens (the data is from 2014). The density of population is 964 per one square kilometre. SR Constitutional Court and Košice self-governing district are located here. As an individual legal subject it is divided to 22 town sections. The average age of the city citizens is 35.13 year. That is the reason why Košice is called the city of the young. It administers more than 40 elementary schools. The set of secondary schools includes secondary grammar schools, secondary vocational schools and training centres, trade academies, health and art schools. The highest level of education is provided by the Technical University Košice, the University of Pavel Jozef Šafárik in Košice, the University of Veterinary Medicine and Pharmacy in Košice and other departments of Slovak universities. In 2013 Košice was the main European of culture. In 2016 the city achieved the title European main city of sport (Košice, 2017).

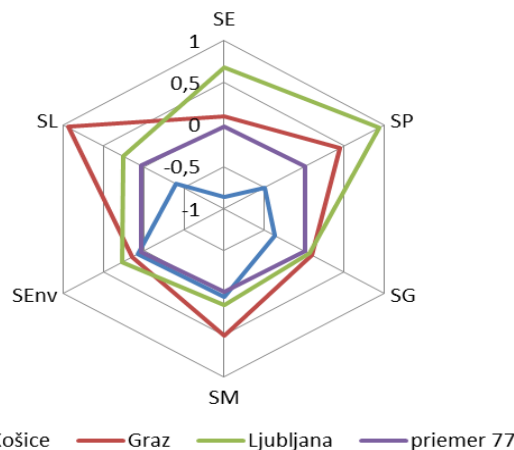


Figure 3 Results (Smart Cities, 2017); Explanations: SE –Smart Economy; SP – Smart People; SG – Smart Governance; SM – Smart Mobility; SEnv – Smart Environment; SL – Smart Living.

Based on the above mentioned graph which describes the situation in the researched cities in 2014 and may be compared to the average of 77 selected European cities, it is possible to state that Košice achieved the worst results within six key characteristics. Only two characteristics typical for a smart city, i.e. smart mobility and smart environment in Košice in 2014 achieved respectively exceeded slightly the average of 77 researched cities. The biggest problem within the characteristic is smart economy - SE which is presented by the area of business and market flexibility. It is possible to conclude that Košice in comparison to other analysed cities as well as with the average of 77 cities has not created sufficient assumptions for the growth and development of business activities yet. In the characteristic smart people – SP – Košice achieved the positive evaluation only within the indicator freedom of thought. The worst level was recorded in the area of ethnic plurality and the level of employees' qualification. Košice achieved negative evaluation also in the area of smart governance, in this area the negatives occurred in the area of transparency of public affairs performance and assurance of public and social services. Košice was positively evaluated in the area of smart mobility, especially in sustainability of transport systems, with the achieved value equal to 1.706. On the other side within this characteristic the factor local availability was evaluated negatively, its value was minus 1.214. The indicator which also brings problems is the characteristic of smart living – SL. Here the biggest problem is the indicator touristic attractiveness of Košice and actual cultural conditions in the city. Positive evaluation was given to the indicator individual security of citizens. It is necessary to mention that within the evaluation of 77 European cities, which were carried out by the employees of the Technical university in Vienna also two other Slovak cities – Banská Bystrica and Nitra were evaluated. In the comparison among Slovak cities some small differences can be seen. Banská Bystrica achieved the 54th position and Nitra the 59th one and Košice got the 60th position in the scale of evaluation of 77 European cities.

#### 4 Conclusion

Based on economic and technological changes caused by globalization and integration processes, European cities started facing challenges combining at the same time competitiveness and sustainable development of the cities. This problem will probably have a considerable impact on city life quality, such as living, economy, culture, social and environmental conditions.

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## **Session B**

### **Human potential development**

## Social Capital and Its Position in Social Quality

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### Abstract

Various studies are focusing on analysing life needs in intention of the specific societies that have become a vision for many EU countries. They are a vision of a learning society, a vision of a knowledge society, or a vision of a creative society. This effort has its substantiations; each of them requires a specific kind of capabilities that should be implemented in right time in content of the education systems. We realize that also the social quality has its own specificities, which differ from the present forms of coexistence of people. However, in what are these differences stay to be particularly vague. The existing situation evoked in us the effort to work and explain the professional competencies of worker in the social quality. Our goal will be to present not only its basic characteristics but, above all, to identify the individual social competencies that are essential for implementation of this new form of society.

Keywords: social quality; social capital; dimensions of social capital; quantification.

JEL Classification: A14, B49, O15

Article Classification: Conceptual article

### 1 Introduction

Social quality, like other types of societies (the learning society, the knowledge society or the creative society), has its own specificities that differ from the present forms of coexistence of people.

It is widely known, that authors defined it as "the extent to which people are able to participate in the social and economic life under conditions which enhance their well-being, capacity and individual potential" (Beck, van Maesen, Walker, 2001).

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Its conception represents a broad phenomenon continuum, consisting from three dimensions: conditional factors, constitutive factors and normative factors. Conditional factors represent the specific living conditions in which people live. They are divided into the following components: the socio-economic security, the social inclusion, the social cohesion and the social empowerment. The constitutional factors indicate people's reflection; they are the subjective perceptions of the personal security, the social recognition, the social responsiveness and the personal capacity. Assessing the level of implementation of the conditional and constitutional factors is possible only through the normative factors in which we consider the criterion of the social justice, the solidarity, the democratic citizenship and the human dignity.

From all dimensions of the social quality, we draw attention in our paper only to the social competencies that represent people and their abilities as the main actors of socio-economic development.

We anticipate, that workforce is a worker who will have exceptional competencies, based on the capability of the learning worker, as well as the knowledge worker and also the creative worker. It will be expected to be able to speak in various languages, to know the specific manuals, software, that will be creative and opened to the new ideas, and also capable of innovation. In addition to these abilities, he will be able to use the social competencies, oriented to the creation, deepening, and also using of the existing social networks and relationships, both characters: formal and non-formal.

The sketched range of competencies, relating to the workforce of the social quality, evokes in us effort to process the problematic with goal to specify the basic features of abilities of worker in the social quality with an emphasis on his social competencies.

## **2 Material and methods**

Target of our paper determines the approaches to its solution. We emphasize that the social capital in intention of the social quality has not been cared until now, so it goes, as an innovative work that requires the abstraction of the previous knowledge in the field of the social quality theory as well as the social capital and their logical interconnection.

The fulfilment of the goal presupposes application of the theoretical and methodological analysis, which is based on development of framework of examining the issue. In it, we proceeded from the following premises:

1. We perceive the social quality in intention of conception of the social quality created by W. Beck, L. J. van Maesen and A. Walter in their work *Social Quality: A Vision for Europe* (Beck, van Maesen, Walter, 2001). Its essence lies in relations of the conditional, constitutional and normative factors, which the authors describe in detail form and outline their mutual interconnections and determinations.
2. The category of the social capital is part of category the human capital, is characterized by the specific competencies of workforce, representing "over scope" of the professional competencies acquired through professional education.
3. Various forms of the social capital identified by the previous researches will need to be reviewed and their analysis focused on interconnection with the social quality, which requires taking into account the social capital's capacities

in the area of its operation and developing of the methodological framework in these given intentions.

4. The social competencies of the human capital, in a new form of society, will be manifested through various forms of the human activation. We lean to four models proposed by P. Herrmann, which are: the model of personal competence, the model of individual competence, the model of social competence and the model of societal competence (2005, 227-238).

### **3 Results of Theoretical Analysis**

#### ***3.1 Approaches to Human Capital***

In society characterized by the social quality, we expect, the human capital will have a different form than today. His abilities will be based not only on professionalism, but also on the capability to develop the interpersonal relationships, to implement the learning structures into working environment and to use them for achieving benefit of organization. There will be important competencies of sharing and dissemination, as well as non-traditional expression of creativity in solving of work problems, with using intuition.

Our findings are based on the well-known ideas of G. S Becker's "Human Capital," in which he perceived man as a being with universal abilities, skills more usable in every area of the human activity, but also with specific knowledge and skills that can only be used in a particular field or type of activity (Becker, 1993).

In period of thirty years, this theory has been developed, thanks to him, but also through the efforts of other authors (Crawford, 1991). Some of them have come up with the idea of uncovering the components within it. Thus, the social capital category (Coleman, 1988, 95-120) was created, and then the knowledge capital and other types.

Described the categorical development, according to our opinion, was related to the societal changes, and brought by the new types of societies, such as the learning society, the knowledge society, the creative society and the social quality. Each one, as we wrote, envisages the specific workforce capabilities - different from current needs.

The aforementioned facts have gradually given rise to a stronger pressure on the content of the "human capital" category, which has ceased to meet the needs of the solving scientific problems over time. An effort has been made for its wider perception, taking into account the wider professionalism of people. From our perspective, we prefer to apply the following dimensions of the human competencies:

- the professional dimension,
- the learning dimension,
- the knowledge dimension,
- the creative dimension and
- the social dimension

with the following characteristics.

1. The professional dimension of the human capital is a set of the professional competencies necessary for the exercise of a profession.
2. The learning capital expresses the ability of people to create an environment that fosters collaboration and learning. Its basis lies in implementation of the learning approach as well as in leading of organization itself.

3. The knowledge capital represents the capabilities through which we create new values and spread them in environment of organization and beyond. It is also called as the intellectual capital. It includes the knowledge, methods, ideas, processes and talents of people that can be used for organizational goals. This kind of capital has become a priority for knowledge-based organizations.
4. P. T Gow, creator of the creative capital, sees creativity as the ability and potential of individuals and groups to produce new ideas or to use the older by new way, to combine old and new approaches, or to develop activities that can be considered as creativity, design, gumption, or innovation (Bourdieu, 1986).
5. Through the social competencies, individuals are able to develop cooperation, participation and positive relationships, thus to produce the social networks and to use them for their benefit or for benefit of organization. This type of capital was created by P. Bourdieu, who defined it as a set of resources relating to the ownership of the long-term relation networks that are more or less institutionalized, with all their relationships, contacts and connections (Bourdieu, 1986).

The presented approach of the people's professionalism presupposes a change in the perception of category of the human capital itself. Its content is situated on a higher abstract level, since the professional capital, the learning capital, the knowledge capital, the creative capital and the social capital have become its components. All in connection with the social competencies create the prerequisite not only for the self-fulfilment of individuals but also for creation of a new form of society that is the social quality.

### ***3.2 Social Capital in Social Quality***

In theory of the social quality, the social capital is considered as a part of conditional factor called the social empowerment. It represents people, their qualifications, attitudes, wishes, but also the needs that drive them into activities and self-realization. P. Hermann regards it as a process related to the development of an individual or group and, at the same time, as development of environment in which individual and group are located (2003, 15). He understands it as "the extent to which people are able to activate through the societal relations" (2005, 6).

The social empowerment, by itself, does not represent only new characteristics, or features of the human capital, but above all, it's changed behaviour that should lead to the personal satisfaction but also to achieving goals of the immediate or wider community in which he lives (Herrmann, 2006, 227- 238).

How we wrote, in a society characterized by the social quality, according to our opinion, the human capital will have a qualitatively different form than it is today. His skills will be not based only on professionalism but also on ability to implement the learning structures in the working environment and on using them for benefit of organization. Also important will be the skills of creating and sharing knowledge, their dissemination, as well as the untraditional expression of creativity in solving work's problems, using intuition and imagination. The road towards the social quality is "paved" by innovations and is very closely interconnected with them.

From our point of view, we perceive the social empowerment (as a conditional factor of the social quality) as the targeted behaviour of people, manifested by their professional competencies, but also by learning, knowledge, creative and social abilities, that provide them saturation of needs on personal, individual and societal level. These levels are coming out from forms of participation of people perceived by P.

Herrmann, who created four models in which people can be able to activate. They are the model of the personal competency, the model of individual competency, the model of social competency and the model of societal competency (2005, 227-238). Individual models of the human activation also represent the specific capabilities of the social capital. The personal competency is based on self-analysis and self-regulation, the individual competency on expressing abilities in the environment in which the individual moves. The social competency is based on assumption of an individual's ability to move in an immediate community or work environment, and the societal competency represents possibility of applying the personal influence for the process forming of wider society.

#### **4 Forms of Social Capital**

In theory, we cannot find a unified definition of the social capital. Some authors emphasize that their identification requires an interdisciplinary approach; others say that everything depends only from research purpose. Complexity of the category content we can see in the following three streams, in which the social capital represents:

1. Ties between people based on feeling of the common identity, for instance close friends of the same culture or ethnicity.
2. Extended perception of identity, such as relationships between distant friends and colleagues.
3. Contacts between individuals and groups based on social stratification.

We see that issue of the social capital is very broad and represents (by character of contacts, relationships and bonds) a multidimensional phenomenon in which can be uncovered many forms. These include the individual and collective social capital, the bonding, bridging, connecting and corporate social capital, the structural and cognitive social capital, or the civil and governmental social capital. We shall describe all in very short form.

##### ***4.1 Individual and Collective Social Capital***

Separation of a given form of the social capital is based on the fact, whether it brings profit to an individual or a group (W. Stone, 2001, 7). The social capital is perceived as the ability to use the network of contacts to own material or intangible benefit (J. W. Deth, D. Castiglione and G. Wolleb, 2008). The individual type of the social capital can be divided into two components:

- mobilization,
- interaction.

The first component is creating activation of the network for profit; the second is based on intensity of the social interaction of individual with environment. Both areas are geared to different areas of research. The individual social capital is considered to be a private property that psychologists and sociologists more prefer. While the collective form of social capital – as a public property – is preferred by economists who see it as a factor of influencing the economic growth.

## ***4.2 Bonding, Bridging, Connecting and Corporate Social Capital***

The bonding social capital was developed by R. D. Putnam (2000), is also called as the defensive social capital. This form is characterized by strong relationships between individuals as members of group who are defending from some negative impact. It is based on strong domestic loyalty, homogeneity and high trust among people. These include family ties, closest friendly relationships and neighbourhood relations.

The bridging social capital is also called as the offensive social capital. It is considered as positive in terms of the social development and the civic society. It represents more distant contacts characterized by unstable ties. These represent relationships between friends who are not friends. This form of the social capital connects people between different social groups who have a common interest or strive for a common cause. These include various clubs, associations, sports clubs, and more.

The connecting social capital refers to relationships of the social groups with different economic and social status. Groups linked to the vertical social ties can benefit from their advantages. For example, getting funds, information through which they can contribute to the community development. The connecting social capital takes the form of lobbying.

Sense of the corporate social capital is in assessing the positive or negative impacts on character of the social capital. The voluntary organizations have positive forms of the social capital or the civic associations, they support by their activities growth of trust in society. On the contrary, the professional associations, trade unions, political parties that promote their specific interests contribute to the reduction of social cohesion (Pileček, 2010, 64-77).

## ***4.3 Structural and Cognitive Social Capital***

N. Uphoff (1996, 215-249) suggests dividing of the social capital into its two structural and cognitive components.

The structural social capital represents all types of organizations; it means institutions and organizations with their rules and procedures. The cognitive social capital is associated with mental (cognitive) processes, with standards, beliefs, attitudes, values that enable cooperation.

## ***4.4 Civic and Governmental Social Capital***

The civic and governmental social capital are depending on one another. Governance stability and government support the social stability; these indicators represent people's reflection. On the contrary, the government is reliant on the strong communities that support it (Hall, 2002, 49-54, R. Wuthnow 2002, 97-101, Offe, Fuchs, 2002, 234-236).

Information about forms of the social capital we presented for the purpose to obtain a picture of rich development of category itself, which requires an interdisciplinary approach to discovering the rules of its manifestation. We conclude that it is problematic to examine in its vast breadth, and therefore researchers will apply reducing forms of investigation, which also implies a specific method of its quantification.

## 5 Methodological Framework of Social Capital

For measuring of the social capital cannot be used the universal methodology. The problem is, that some author perceive it as a resource (Putnam, 1993), other than form (Coleman 1988) or as a consequence (Cote, Healy (2001)).

J. W. Deth, D. Castiglione and G. Wolleb (2008) have attempted to change the presented variability in *The Handbook of Social Capital* by distinguishing its individual and collective form, but their efforts ended unsuccessfully, just like W. Stonov, who, 5 years earlier, emphasized the importance of the formal and informal networks.

Contacts of various quality and measurement of confidence also represent the economic background in which economic transactions are realized. For this reason, the social capital is seen as part of the socio-cultural factors, which together with geographic and socio-economic conditions determine the region development. In work of R. Putnam (1995, 65-78) we can see diversity of success of regions, which lies above all in the attained level of the social capital.

CH. Grootaert and T. van Bastelaer recommend to use in quantification of the social capital using three dimensions: Macro, mezzo and micro, and two forms of the social capital that are cognitive and structural. Figure 1 represents connections between them.

The structural social capital, according to mentioned authors, is creating by elements of the social structure that create opportunities for the social realization. It provides the structure and stability of the social transactions. It is more than a norm, is based on the historical foundations of culture and institutions in society.

The cognitive social capital includes the common standards, values, attitudes and beliefs. The ideal approach to quantification we can see in four quadrants in the following figure 1.

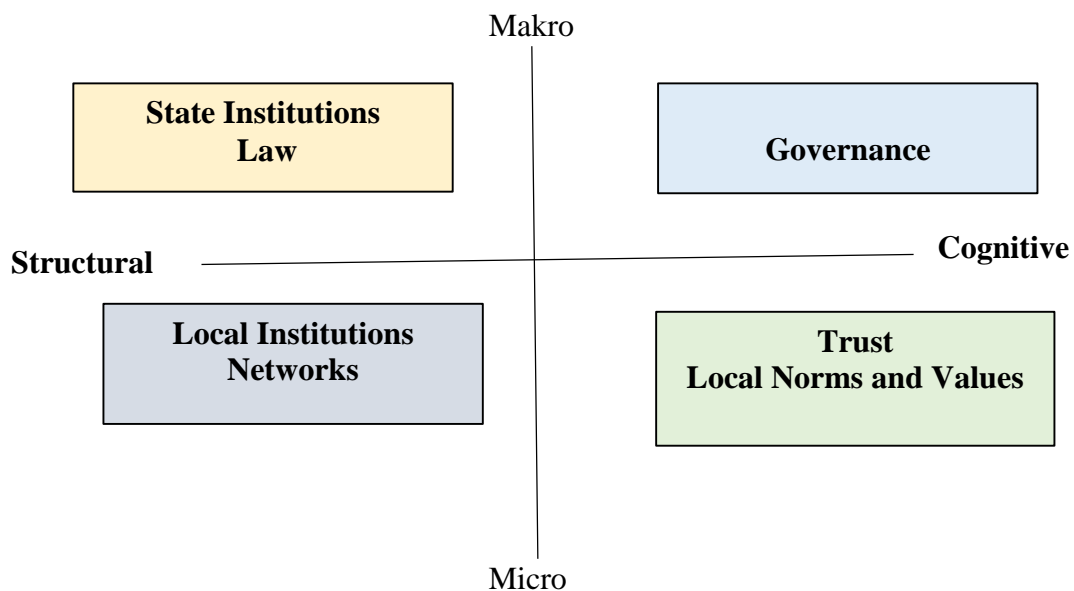


Figure 1 Dimensins of Social Capital according to CH. Grootaer a T. van Bastelaer

Source: (Grootaert, 2001)

The best-known approach to quantification of the social capital represents the R. R. Putnam Index, which consists from the following dimensions: community organizational life, engagement in public affairs, community volunteerism, informal



sociability and social trust. Each of these dimensions is characterized by a variety of indicators:

- Community Organizational Life: 5
- Engagement in Public Affairs: 2
- Community Volunteerism: 3
- Informal Sociability: 2
- Social Trust: 2

For this approach in quantification, he was often criticized for not being sufficiently valid to judge the level of the social capital in the frame of the USA.

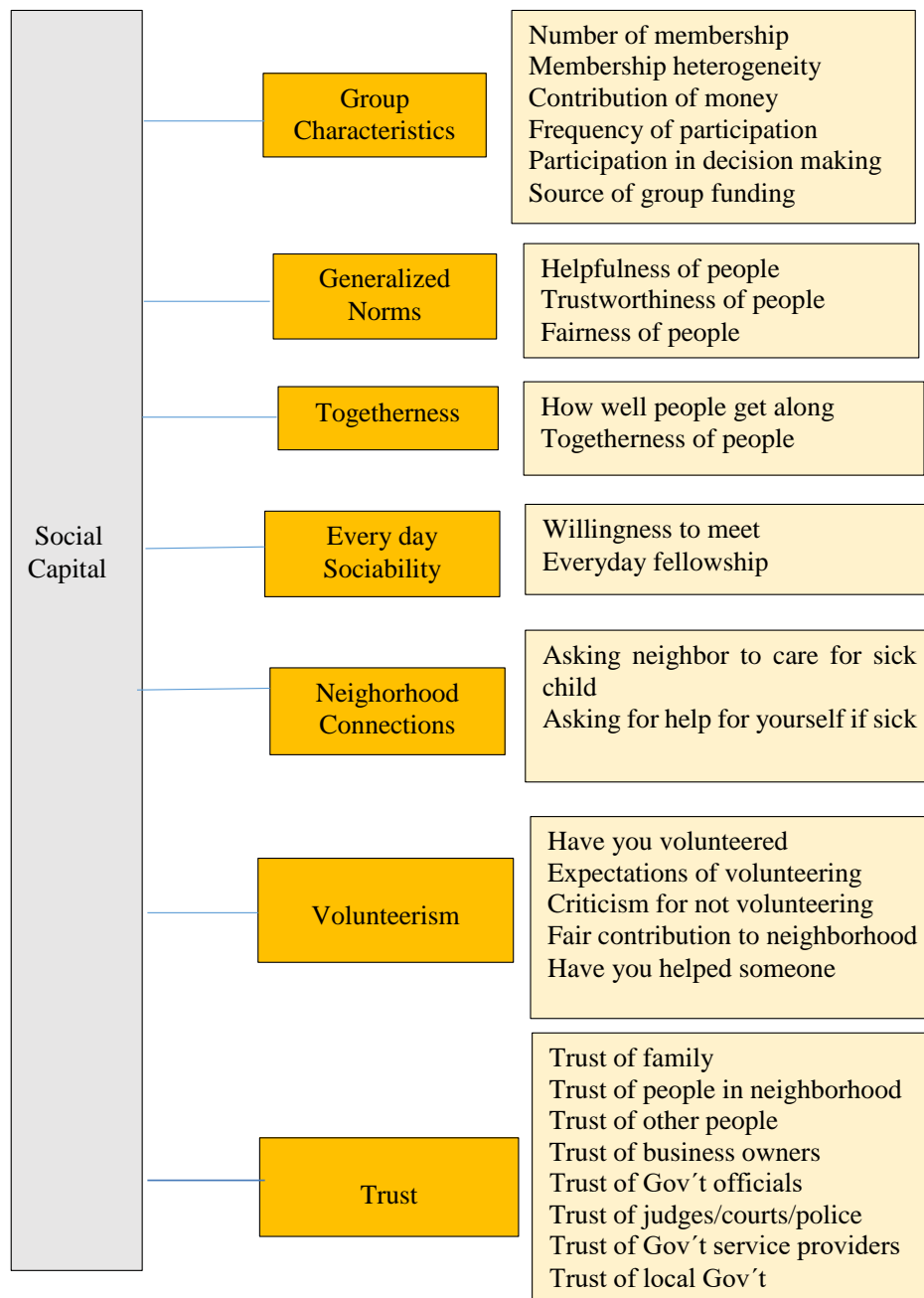


Figure 2 Dimensions of social capital according to D. Narayan a M. F. Cassidy

Source: (Narayan, 2001)

Six years later, S. Park (2006) has compiled a four-dimensional social capital index. Its components were: general trust, institutional trust, tolerance and ties. He also combined these components with purpose to create TSCI (Total Social Capital Index), validated by M. Webster (2013), who verified it in work *The Dimensions of Social Capital* and confirmed its reliability.

J. Onyx and P. Bullen (1997) also created their own the social capital index, by which they measured 5 localities in New South Wales with using 68 questions.

Another example of the variability of index formation is through which D. Narayan and M. F. Cassidy measured level of the social capital. They divided seven dimensions: group characteristics, generalized norms, togetherness, every day sociability, neighbourhood connections, volunteering and trust. The diagram also shows specific indicators in measuring of the every domain.

Based on these examples of quantification, we can judge that for decades, scientists have been making to measure of the social capital with greater or lesser success. Each of author used the specific approach to its dimensions and to indicators and variables. It is very problematic to take a stance, which one is more appropriate or has higher validity and reliability. It depends on the intention of researcher, what he needs to quantify, for what purpose and in which extent.

We consider as necessary to emphasize, that category of the social capital is the most used in economics, but its content is strongly determined by the perception of other scientific disciplines such as sociology, social psychology and psychology.

At present there exist covered area, in which measure the social capital increases the quality of life on individual level. We mean not only the objective conditions in which individual performs work and non-work activities, but also the subjective attitude and manifested satisfaction with his / her own life. It has been long confirmed that man is result of the social contacts, not only their users. In addition, it is not necessary to emphasize that the existing interpersonal relationships, which he co-authorizes, influence strongly at his / her personality and also at his / her character.

## **6 Findings and Discussion**

The results of our work consist not only in summarizing the individual dilemmas resulting from the theoretical as well as the methodological level of perceiving the social capital as well as social capital in the social quality, but also in pointing to problems that have not been solved by researchers up to now. For clarity, we divided them into three parts: the theoretical background, methodological assumptions, and empirical recommendations.

### **6.1 Theoretical Background**

1. In the frame of the social capital, we have taken into account the theoretical basis of its position in conception of the social quality. We perceive it as part of one of the conditional factors, which is the social empowerment.
2. We consider the human capital as a central category of the social empowerment, in which we accept various dimensions, such as: the professional dimension, the learning dimension, the knowledge dimension, the creative dimension and the social dimension.
3. The social capital is a subcategory of the human capital characterized not only by specific forms but also by unique ways of activating in the social space that should be taken into account in all forms of its exploration.

4. In the developing process of abilities of workforce towards the social quality, it will be necessary to remember the cumulative character of them arising from the different dimensions of the human capital as well as the forms of societies (the learning competencies, the knowledge competencies, the creative competencies, the social competencies).
5. The knowledge, skills and attitudes of the social capital is necessary to develop on knowledge, skills and attitudes of the learning capital, the knowledge capital and the creative capital.

### **6.2 Methodological Assumptions**

We recommend taking more care to quantifying of the individual dimensions of the human capital, identifying indicators in the professional capital, in the learning capital, in the knowledge capital, in the creative capital and in the social capital. Do not allow to overlap them, in their indicators and variables. As an example, we mention the perception of the knowledge capital as the creation of networks in organization, which are also a part of the social capital. Similarly, the learning capital, which has become one of indicators of the knowledge capital by D. G. Mavridis and K. Vatalis. Overlapping of the knowledge and creative capital, we can see in works of authors J. L. A. Navarre, V. R. Ruiz and D. N. Peña.

### **6.3 Empirical Recommendation**

In analysing the social capital and its links to the social quality, we recommend using the new-created indicators or verifying own model of their interconnections. It depends only from purpose of researcher to what deepness will be investigate forms of activation of the social capital in four models of P. Herrmann, who called them as: the personal competency, the individual competency, the social competency and the societal competency.

## **7 Conclusion**

The social capital, in theory of the social quality, emerges as part of the human capital, which is the essence of the social empowerment - a conditional factor of the social quality. The social competencies of workforce are on the top of progress towards the social quality. They represent application and using of the synergetic effects in solving work or personal problems. The learning to synergy requires a cumulative approach, representing the acquisition of first time the learning abilities, then the knowledge and creative abilities.

We recommend applying this process also in redefinition of the educational and working standards in intention of the mentioned societies, which, at the same time, we consider as individual stage of the implementation process of the social quality.

### **Acknowledgement:**

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## **Business competencies of non-economists students in conditions of Slovakian universities**

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### **Abstract**

Number of people wants to start up business in Slovakia, but there is lack of economic education, especially of students that study technical study programs and they are not sufficiently prepared for starting of successful business. Present universities as education and qualification institutions must be orientated to the new needs in area of education and expert preparation that result from knowledge economy and society. Due to the mentioned we made research with aim to find out business knowledge of non-economists and level of their preparation to start up business. Research had been done through questionnaire method, through which we found out that in practice students and starting businessmen did not have idea about possibilities of financial providing, many times they want only to make money very easily. According results we searched, to which measure students have and dispose given business abilities and competences according self-evaluation and what competences they want to develop and improve for their future employment. From the research we can state there is necessity to learn students and starting businessmen to follow up possibilities of financing and providing of prosperity and stability at the market. We perceived results as a source of knowledge, a pilot survey, which will be used in the conception of continuing education of non-economists students, regarding the development of entrepreneurial skills.

**Keywords:** economic education; business competences; financing; life cycle of business; market economy.

**JEL Classification:** A22, A29

**Article Classification:** Research article

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## **1 Introduction**

Financial crisis, global recession and debt crisis, running in global economy, obstructed conditions at the job market. They are reflecting in the increasing unemployment and growing demands on qualification and skills. Present universities as education and qualification institutions, must be orientated to the new needs in area of education and expert preparation that result from knowledge economy and society.

The relevance of entrepreneurship to economic development has been highlighted by many researchers (e.g. Davidsson et. al, 2006) and it is now well-recognized that education and training opportunities play a key role in cultivating future entrepreneurs and in developing the abilities of existing entrepreneurs to grow their business to greater levels of success (Henry et. al, 2003). According to the European Commission (2008), the aim of entrepreneurship education and training should be to 'develop entrepreneurial capacities and mindsets' that benefit economies by fostering creativity, innovation and self-employment. According Ponomarev, et.al (2013) about 93% of the authors pursuing the issue of entrepreneurship education have the opinion that entrepreneurial skills can be developed through education and training. Future graduate needs an education system that provides education in both terms of acquisition of knowledge and acquisition of skills (Grimes, et.al, 2010).

Despite the importance of business in market economies, it is seldom given extensive coverage in undergraduate economics courses (Stull, 2014). It has been suggested by experts in economic education that universities should place greater emphasis on economics as a general education (Pol, 2013). Accumulating evidence suggests that business recognizes its success depends on managing increasingly complex environments. Management educators need to respond (Bolton and Galloway, 2014). Therefore providing economic education is an important task for schools, since it is essential knowledge for all participants in today's market relations without regard to their age, sex, or place of residence (Prutchenkov, et.al, 2010). Economic education should have two dimensions. Students should learn to understand how private and social benefits are related, and teaching should focus on the scope given to markets, governments, and social networks in defining and meeting economic needs (Davies, 2006). Understanding of the economic knowledge is important for access to financial services of business (Grimes, et.al, 2010).

Economic understanding is especially important for young people in order for them to effectively participate in the global economy (Schug, 2008). But business abilities of students are not being investigated, while deepening market relations are being intensified. Along with learning the basics of market economy, experts are to form the economic way of thinking, learn the elements of economic culture of business making (Ponomarev, et.al, 2013).

There are several difficulties of economics courses, for example: inattention to the key role of private business, neglect of the competitive process, lack of coverage of business, etc. (Gwartney and Shaw, 2013). There is therefore need to apply economic knowledge in the development of business and to revise economic academic programs that has a solid history, but recently seen a decline in enrollment (Levina, 2013 and Coder, 2013). For example in this case online education is quickly gaining in importance in education (Bowen, et.al, 2014).

Business has its own life cycle – it is created by several phases, where managerial, production, technological, legal, ethical, ecological and economical aspects of business have reflection, as well as quality of all business activities (Gmelin and Seuring, 2014). Following of life cycle of company is therefore necessary tool for

prediction of future possible development of company with aim to find out decline of business and its possible revitalization with aim to avoid bankruptcy. There is necessity to link sustainability and new product development by providing a conceptual framework emphasizing the interconnections of sustainability and new product development with a life-cycle and product-focused perspective. Such a link of sustainable new product development with a life-cycle and product life-cycle point of view has not been presented so far (Gmelin and Seuring, 2014).

## 2 Material and methods

The research was targeted to obtain a broad spectrum of data for students of the Technical University of Kosice (TUKE) in their further career focus with priority given to the success at labour market.

Objective of research sub-task:

Method: questionnaire of self-prominence, the answers are ranged on a scale of 1-5, where 1 = strongly agree, 2 = more likely agree, 3 = neither agree, nor disagree, 4 = more likely disagree, 5 = strongly disagree.

Hypothesis: We assume that students of Bc./Ing. study do not have sufficient characteristics, knowledge, skills that are important for development of business competencies and self-employment.

Characteristic of a statistic set: The survey was conducted across six faculties of the Technical University in Kosice. Survey was performed on the faculties where Department of management taught economic science subjects at the bachelor and in the engineering degree of study. There was a representative sample of 147 students of Bachelor study degree and 136 students of Master or Engineer study degree. Data collection was performed in December 2015.

Data processing: using the Statistical Package MS Excel and MS WinStat.

The aim of our investigation was to obtain empirical data on broad spectral data from TUKE students in area of their future career focus with priority focus on their business activities. The ambition of the research results is to find a suitable "key" to strengthen the active attitude of students towards their own future, to increase the attractiveness of entrepreneurship as an opportunity to develop entrepreneurial mindset to promote entrepreneurial attitudes, how and to what extent it is necessary to develop business competence.

During research searching business competence had been followed up from the view of:

- Theory
- Own experiences of the students
- Real employers

According results we searched to which measure students have and dispose given business abilities and competencies according self-evaluation and what competencies they want to develop and improve for their future employment.

Results had been obtained by t-test (see Table 1), where students had been compared and average had been calculated – t-test for two independent selections. In t-test there is calculated first of all statistical criteria t for two independent selections – averages of two groups, from which there was deduced statistical importance p. In case p is lower 0, 05, there is probability less than 5% that difference is caused by influence of random factors. Therefore only those differences can be considered as statistically important.



Table 1 Form of results presentation; own elaboration

Level of study	Number of students	Average	Standard deviation	t	p
Bachelor Engineering					

In following questions, where averages had not been calculated, chí-square test of independence had been used. Results are illustrated by table, in which there is illustration of students' responses. Statistically important difference p is again described according table with percentage and multiplicity.

Test had been done with regarding students do not have sufficient knowledge, skills and abilities, important for development of business competencies and employment in area of business.

Table 2 Questionnaire about business competences; own elaboration

1. do I have knowledge about business financing	1 2 3 4 5
2. can I provide capital for business starting (mention concrete capital)	1 2 3 4 5
.....	
3. I know how to follow up financial need and sources of business	1 2 3 4 5
4. I know what are assets of the company	1 2 3 4 5
5. I am able to find out market value of the company and its market position	1 2 3 4 5
6. I know how to provide growth of the company	1 2 3 4 5
7. I know modern way of the business financing (mention and explain some of them, for example factoring, etc.)	1 2 3 4 5
.....	

Table 3 Structure of respondents according level of education; own elaboration

Faculty	Level of study	Number of questionnaires
Engineering faculty	Engineering	30
	Bachelor	44
Electro technique faculty	Engineering	51
	Bachelor	42
Mining faculty	Engineering	29
	Bachelor	32
Faculty of Art	Engineering	4
	Bachelor	5
Architecture faculty	Engineering	15
	Bachelor	14
Metallurgical faculty	Engineering	7
	Bachelor	10

Finding of business competences of non-economists and level of their preparing to start business had been done through questionnaire method, which had been realized by the way of personal asking on sample of students, studying non-economic programs. In the sense of achievement of defined goal there was necessary to realize research that

could answer questions, connecting present state of economic knowledge of non-economists through requesting of the questions in Table 2.

Through choice respondents from Technical University had been chosen from different faculties in bachelor, as well as in engineering level of study. Total number of bachelor respondents was 147 and total number of students from engineering level of study was 136. Selected number of 283 respondents is illustrated in Table 3.

### 3 Results

For students with economic orientation there is greater assumption to apply in the business, comparing with non-economists, since structure of their education offer only very little orientation to the business and psychological skills. Preparation of the student to be able to orientate at the job market according actual situation in the practice is proper choice of applying in economic and social conditions.

Education of business competences in non-economic study branches of education is also actual social demand, enabling students to obtain basic psychological, economic and legal knowledge, necessary for business activity that could be contribution for solving of unemployment and at the same time also economic growth.

Due to the mentioned there is made analysis of business education for non-economists at the universities with technical orientation (Table 4).

According research we can state that there is space for students of Technical Universities to make space for implanting of subject, determined for motivation of business and preparation of business realization. Presently existing subjects (courses), are offered only in some study programs and they are available only for certain groups of students (in this context there is necessity to prepare education, available for all students without regard to the study program).

Table 4 Review of economic subjects in chosen technical universities of Slovakia; own elaboration

University	Faculty	Economic subjects in the frame of bachelor study	Economic subjects in the frame of engineering study
Technical University Zvolen	Forest Faculty	7	2
	Wood Faculty	9	4
	Faculty of ecology and environmentalist	2	1
	Faculty of environmentalist and production techniques	2	-
Slovak Technical University Bratislava	Civil engineering Faculty	12	4
	Engineering Faculty	6	6
	Chemical Faculty	5	3
	Faculty of Architecture	1	1
	Faculty of informatics and IT	2	3
STU BA Trnava	Material and technical Faculty	11	11
University in Žilina		6	-

According to table 4 there is obvious; the most number of economic subjects is educated at the Technical University Zvolen at Wood and Forest Faculty. Faculty of ecology and environmentalist and production technique has very few economic subjects, orientated only to the basic of management and economy of the business. At STU Bratislava there is strongest education of economic subjects at Material and Technical Faculty with seat in Trnava, followed by Civil Engineering Faculty.

Table 5 Economic subjects at technical universities of Slovakia; own elaboration

University	Economic subjects
STU Bratislava	Economy and management of the civil engineering Manager in the civil engineering Project management Macro economy Personal management Effectiveness of investments and living environment economy Financial mathematics Cost and prices in civil engineering Taxes and accounting Marketing Financial management Economic statistics Management of small company Methods of risk analysis Business economy General economic theory Innovation management Controlling
TU Zvolen	Macro and micro economy Marketing and market research SMEs management Economy in the forest industry Basic of accounting and evidence of economic result Financial management of the company Managerial accounting Economy of natural sources Business economy Personal management Business finances and investments International marketing and business Firm's planning Calculation and budgets Banking and insurance Financial and economic analysis of the company Marketing communication Economy of living environment
University in Žilina	Career of businessman Business economy Small and middle business Finances of the company Economics of the enterprise

On the other hand the least number of economic subjects are at Faculty of Architecture, where there is educated only areal management and management of small company. At University Žilina economic subjects are educated only in the frame of bachelor study, mainly Career of Businessman 1,2 and Firm's economy, Small and middle enterprises, Corporate finances.

As for the research about business competencies, we state just key discoveries concerning the knowledge regarding wide database of obtained results that we use in order to prepare future graduates for labor market, as illustrated by Table 5.

According research results, illustrated in Figure 1, we found out to what measure students have basic economic knowledge of business and if they give attention to the importance of business competences development.

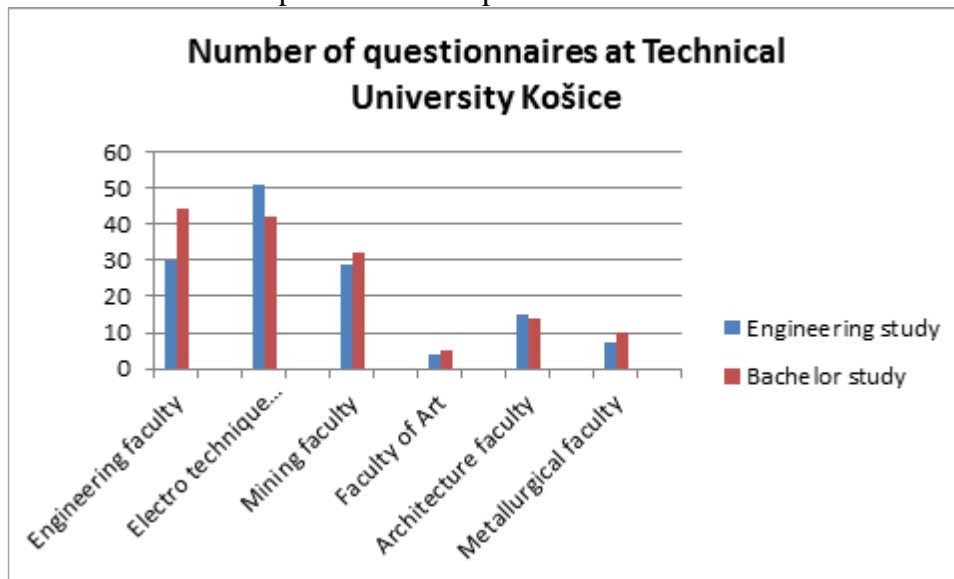


Figure 1 Number of questionnaires at Technical University Košice

Table 6 Group statistics of students' respondents; own elaboration

	Level of study	Group Statistics			t	p
		Number	Average	Standard deviation		
23.1	bachelor	142	2,26	1,26	-0,085	0,932
	engineering	117	2,27	1,17		
23.2	bachelor	126	2,41	1,36	0,446	0,656
	engineering	107	2,34	1,22		
23.3	bachelor	135	3,14	1,15	0,851	0,396
	engineering	113	3,02	1,12		
23.4	bachelor	138	2,95	1,29	1,609	0,109
	engineering	118	2,70	1,13		
23.5	bachelor	135	2,91	1,32	1,906	0,058
	engineering	116	2,60	1,21		
23.6	bachelor	140	3,07	1,31	2,568	0,011
	engineering	113	2,65	1,24		
23.7	bachelor	146	2,80	1,61	0,413	0,680
	engineering	122	2,72	1,54		

According results in Table 6 we compared mentioned evaluation according statistical criteria  $t$  for both groups of averages, from which there was derived value of statistical significance. During analysis of bachelor and engineering study statistical significance is only in case of question No 6 „I know how to provide growth of the company“, which achieves less than 0,05 that means, at question No 6 answers of both groups are rather different. In other cases statistical significance is over 0,05, difference of both groups answers is statistically not so important.

### **3.1 Evaluation of results**

Number of people in Slovakia wants to start up business. Majority of experts for business see the priority is to have unique financial providing – presently there are existing services of financial institutions, for example possibility how to obtain credit for beginning business. Except of mentioned Ministry of Economy in Slovakia presents important institution for support of the business. Beginning businessman need to determine volume of finances, necessary for business in accord with level of business, mechanization and automatization, organization of sales, etc. Business should have exactly necessary capital in correspondent structure. In case of overflowing capital, business would be not economical. On the other hand shortage of capital causes damages of business operation.

Business is influenced by living cycle of the company, consisting of several periods from business rinsing till its termination or revitalization. All managerial, production, technological, legal, ethical, ecological and economic aspects are reflecting in quality of all business activities. Operation of the business is influenced by internal and external conditions of business, for example business activity of competition, fiscal policy of the state, innovation policy of organization, qualification of employees, cost of logistics and transformation process, etc. Following of living cycle is therefore important tool for prediction of future possible development of business with aim to determine possible decline of the business and its possible recovery and revitalization, by which business could avoid bankruptcy.

As for the business competences from the view of education experiences: During discussions with students we came to result that in practice start-up businessmen do not have clear idea about possibilities of financial providing, many time they want only to earn money. Majority of students does not want to make business, since they think they need quantum of finances for start-up, but it is not true. Number of businessmen started from zero, they have only two hands, willingness to work hardly and enough reason to put aside some earned money for future business.

Understanding of living cycle is for students very easy, since it copy living cycle of product, known from area of marketing. Students almost every time know, nothing is going to exist eternally, as it is also in the business, when period of growth is limited in the time.

As for the business competences from the view employers: Majority of real employers presently states that they do not have enough graduates from schools, which would be qualitatively prepared for the practice. Employers, mostly big organizations, need for its management function of financial manager, which task is except others management of business finances. Given fact had been studied by Jančiová (2013).

Each company will sooner or later get into a crisis situation. The company's survival is dependent on the degree of readiness, quality of personnel of so-called crisis management. The crisis may in fact be minimized by timely, firm and effective action.

And just tracking the business life cycle presents for many employers possibility to deal with the emergency crisis in order to overcome the adverse consequences and restoring the functions of the business.

#### **4 Discussion**

Similar research had been done by various other authors. For example Ardagna and Lusardi (2008) used a micro dataset that collects information across individuals, countries, and time to investigate the determinants of entrepreneurial activity in thirty-seven developed and developing nations, showing that individual characteristics, such as gender, age, and status in the workforce are important determinants of entrepreneurship, and we also highlight the relevance of social networks, self-assessed skills, and attitudes toward risk.

According Aidis et.al (2012) and individual's decision to become an entrepreneur is influenced by country-specific characteristics, mainly size of the government, freedom from corruption and "market freedom" They tested relationships among them by combining country-level institutional indicators for 47 countries with working-age population survey data taken from the Global Entrepreneurship Monitor, where results indicate that entrepreneurial entry is inversely related to the size of the government, and more weakly to the extent of corruption.

New businesses have been formed at a striking rate in the transition countries, improving welfare by creating jobs, supplying consumer goods, constraining the market power of the state-owned firms, and building political momentum for reform. (McMillan and Woodruff, 2002). As for the young business, Stel et.al (2007) examined the relationship, across 39 countries, between regulation and entrepreneurship, finding the minimum capital requirement required to start a business lowers entrepreneurship rates across countries, as do labor market regulations.

Starting the new business is restricted also by new firm registration (Klapper and Love, 2010). Number of new firm registrations in 92 countries had been studied how the ease of registering a business and the magnitude of registration reforms affect new firm registrations.

In the frame of strategy Europa 2020 there is appeal to the stimulation of business spirit. Countries, where during 2004-2012 preferences of self-employment were growing, are Czech Republic (from 30% to 34%), Latvia (from 42% to 49%), Lithuania (from 52% to 58%) and Slovakia (from 30% to 33%) (European Commission, 2012). Optimism from higher mentioned data can be filled by several other positive facts. Government structured its ideas to the following four areas: improvement of business environment, broadening of qualitative infrastructure for development of SMEs, direct support of SMEs, tools of direct support of businessmen and development of business infrastructure and its financing (Slovak Business Agency, 2000-2016). Gratifying report is that opinion of young people and inhabitants as a whole, about social contribution of business is changing, and there number of private business opponents is decreasing. Newest study about business in 44 countries of the world proved that young people in Slovakia have considerable higher interest of business than older generation. In Slovakia we could find young and ambitious people that can imagine starting their own business. This rate increased against 2014 from 28% to 33%. But in reality only 6% of Slovak people are making business; therefore business "gap" is 27%. In spite of mentioned 37% people, younger than 35 years are thinking there is affable business environment in Slovakia. Yet 51% of requested in age 15-24 years consider business as proper. During growing unemployment, mainly among school

graduates and young people to 25 years, starting their own business is one of the possibilities how to earn money and at the same time to realize own business ideas. On the other hand they are sceptic during own business. Yet 76% of Slovak people consider possibility of self-employment during following 5 years as not proper possibility. Lack of starting capital, few experiences and knowledge, as well as expert contacts, present main reasons why young people are afraid to begin business. There is not ideal environment and “a free hand of a market” could manage all in the theory. Skills signalize permanent shortcomings. On the other hand there is no sufficient proper business aim or it is not innovative, which could raise successful business at the open market, or there are not sufficient knowledge and skills of potential businessman that could face all complications and risks in the future (Štainer, 2008, p. 9). Business area points to the reserves in preparation at competition job market, mainly industry and services. Universities are not preparing sufficiently students for the practice needs; education is only theoretical and backsliding against real life (Kremský, 2014). Business is not a simple one, it is connected with number of activities that demand except of knowledge from area of business also certain skills and personal outfit. Sum of such marks and characteristics is defined by holistic competence of businessman (Penchev a Salopaju, 2011, p. 6).

Start-up businesses do not have in this strict competition market environment easy condition. In comparing with well going big “sharks” with international participation, fixed business background, long tradition and perfect know-how, starting businessmen have very few skills and abilities with personal or financial management or business. They dispose with low hard and soft skills, lack of knowledge about business and financial capital and therefore they are vulnerable. Every startup needs access to capital, whether for funding product development, for initial rollout efforts, acquiring inventory, or paying that first employee. Most entrepreneurs think first of bank loans as the primary source of money, only to find out that banks are really the least likely benefactors for startups. Thus “creative” really means maximizing non-bank financing (Sinclair-Robinson, 2013). Except of mentioned Ministry of Economy in Slovakia presents important institutional actor for support of small and middle business. Starting businessman need to determine level of financial means, necessary for business in accord with volume of business, level of mechanization, organization of sales, etc. In this area there is lack of economic education, especially of students that study technical study programs and they are not sufficiently prepared for starting of successful business.

## 5 Conclusion

According research we found out to what measure students have basic economic knowledge of business and if they give attention to the importance of business competences development. Despite the fact that the results did not produce statistically significant differences between students of Bachelor and Master / Engineer of study, we consider the fact that this was a subjective opinion of students who may not correspond to the status of an objective assessment, and last but not least, may not even lead to a real readiness to business. We perceived answers as a source of knowledge, a pilot survey, which will be used in the conception of continuing education of non- economist students, regarding the development of entrepreneurial skills.

Teaching Economics to students who are not necessarily majoring in Economics (at either the undergraduate or the postgraduate level) can be associated with a number of challenges. Students may be very different in terms of their academic and skills backgrounds. A cohort may include students who are interested in and knowledgeable

about, Economics along with others who are less interested and are taking the module because it is compulsory. The curriculum can have a different emphasis. If students do not need a foundation of core theory on which to build second-level economics, then they may gain much more by focusing on *economic literacy*: fewer theories, or theory at a lower level, but applied to contemporary issues in the real world.

Students will not necessarily keep up-to-date with Economics and Business current affairs. News sources, including the suggestions below, can be recommended to students for them to consult regularly. The simplest way in which news items can be integrated into lectures is to illustrate theories and policies. It can be done by lectures, seminars, problem based learning, teaching case studies, etc. Those are such some of the recommendations how to remove gap in the education of non-economists students and how to help them to start their own business.

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## Educating for Global Leadership

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### Abstract

International businesses have operations, partners, alliances and senior managers representing virtually every global region. Addressing the global-leadership gap must be an urgent priority for companies expanding their geographic reach. Effective leadership is key to business success, especially for organizations with international reach and status. This paper presents different views of the authors on the basis of theoretical studies and research. The authors came to the following conclusions. Firms will need a mix of regional and global leaders. If leaders want to succeed in today's volatile global economy, they must be prepared to do business all around the world. The global leaders should not seek to sever or hide their own roots to become global citizens. Global leaders need to understand the factors that shape international interactions in their businesses, by undertaking a structured examination of cross-country differences and their effects. That is what a survey of academic thought leaders recently concluded should be the focus of the globalization of curricula in the universities. Formal training programs can teach high-potential leaders the competencies they need to think globally and manage cross-culturally.

Keywords: education; leadership; competence.

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### 1 Introduction

Rapidly increasing globalization, the expanding use of technology, and intercultural competency development have been discussed in the leadership and

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crossdisciplinary leadership literature for more than 30 years, although under somewhat different nomenclature (Hofstede, 1980, 2001; Irving, 2010; Jokinen, 2005; Morrison, 2000; Prewitt, Weil, & McClure, 2011). Increasingly, the literature has become a clarion call for leadership educators to better prepare undergraduate, graduate, and postgraduate students with the competencies needed for global leadership positions in the 21st century. Several leadership scholars in the universities have scoured the existing literature and conducted research in an effort to create recommendations and taxonomies for the development of specific global leadership competencies (Andenoro, 2005; Tubbs, Schulz, 2006). The rapidly expanding globalized economy and international business initiatives require that leaders possess both a general set of leadership skills as well as a specialized set of skills to demonstrate efficacy in the global marketplace. For example, Leininger and Javidan (2010) maintained that global leaders must possess a unique set of traits that allow them to lead people and organizations across cultures, across borders, and to exert influence in a globally integrated environment - essentially global leaders need what has been termed a global mindset. It helps leaders to decode what's going on around them in cross-cultural environments and choosing the right behavior under the relevant cultural conditions. A global mindset is a requirement to developing global competence. Intercultural competencies can be learned (Irving, 2010). Intercultural training is training that gives people the necessary information, skills and attitudes to enable them to adjust and to function productively in a country other than their own.

## **2 What is global competence?**

Global competence development was defined as skills related to the maintenance of the self (eg mental health, confidence); skills related to the fostering of relationships with host nationals; and cognitive skills that promote “a correct” perception of the host environment. Global competence in the 21st century is not a luxury, but a necessity. Authors (Lynch, Baker, 2005; Olson, Crose, 2011, Krajewski, 2011) believe intercultural education is the only avenue through which today's Students - tomorrow's workers and managers - can attain global competence.

Global competence refers to the acquisition of in-depth knowledge and understanding of international issues, an appreciation of and ability to learn and work with people from diverse linguistic and cultural backgrounds, proficiency in a foreign language, and skills to function productively in an interdependent world community. This definition contains four basic elements:

- **International awareness.** This constitutes the knowledge and understanding of world history, socioeconomic and political systems, and other global events. This awareness includes the understanding that local and national events can have international implications. An individual who is aware of the broader world environment also recognizes that an individual's actions can affect others beyond one's own borders.
- **Appreciation of cultural diversity.** This entails the ability to know, understand, and appreciate people from other cultures along with the capacity to acknowledge other points of view about pressing world issues. Awareness and appreciation of cross-cultural differences, and the willingness to accept those differences, opens doors for opportunities to engage in productive and respectful cross-cultural relations.
- **Proficiency in foreign languages.** The ability to understand, read, write, and speak in more than one language enhances cross-cultural communication skills.

The knowledge of additional languages opens doors to the understanding of other cultures and people who speak those languages.

- Competitive skills. The ability to compete globally entails the acquisition of extensive knowledge of international issues. To be able to compete, students need high-level thinking skills that enhance creativity and innovation. Students who gain a thorough understanding of the economic, social, and technological changes taking place across the globe enhance their ability to compete in the worldwide marketplace.

Graf (2004) divides the concept of global/ cultural competence into individual, episodic and relational systems. The individual system is further divided into the cognitive domain (knowledge), affective domain (intercultural sensitivity) and the behavioural domain (skills). The episodic system refers to situations in which the individual's normatively competent behaviour may not necessarily be seen as such by the other person in the exchange. The relational system refers to the competencies required across the entire span of relationships an individual may encounter. Reviewing a wide range of studies from many countries, he identifies five skills and attributes comprising cultural competence:

- Intercultural communication skills.
- Intercultural sensitivity.
- Interpersonal competence.
- Social problem-solving capacity.
- Self-monitoring.

Aurhors (Stenberg, Grigorenko, 2006; Ang et al., 2007) claim that people with high cultural intelligence are able to generate new and appropriate responses in unfamiliar cultural contexts.

Global leadership differs significantly from leadership in a domestic context, mainly that the global context includes both cultural intelligence as well as a global mind-set. Cultural Intelligence, or the knowing, sensitivity and empathy of other cultures is an essential prerequisite of effective global leadership (Triandis, 2006), and Pless et al. (2011) couple this intellect with the complexity of having a cosmopolitan mind-set. Such leadership is characterized by a diverse setting; frequent boundary expansion within and across organizations and nations; need for broad knowledge; an increase in stakeholder decision makers; expanded challenges on and off the job; heightened ambiguity surrounding outcomes; and increases ethical dilemmas pertaining to globalization. The role of education systems in contributing to global cohesion has been recognised nationally and internationally in recent years), as has the importance of intercultural, global social capital to human capital (Bean, 2008). The term 'global cultural competence' refers to the awareness, knowledge, skills, practices and processes needed by individuals, professions, organisations and systems to function effectively and appropriately in situations characterised by cultural diversity in general and, in particular, in interactions with people from different cultures. The term 'cross-cultural training' refers to all modes of training and education aimed at developing global cultural competence (Bhawuk, Brislin, 2000):

- The organisational and individual contexts of cross-cultural interaction
- The nature of culture
- Elements of cross-cultural communication including verbal and non-verbal communication, communication style, attitudes and values

- Cross-cultural comparisons including variables or dimensions such as individualism/collectivism, hierarchical/egalitarian, power distance
- The nature of cross-cultural adaptation, including “culture shock”
- Working with interpreters and translators
- Introduction to the languages of the host cultures
- Working with and managing culturally diverse teams
- Providing services to culturally diverse clients/customers
- Negotiation and conflict resolution

It includes workshops, seminars, training courses, coaching, mentoring and formal qualifications (Brown, 2004).

### **3 Competence for global marketplace**

One of the strengths of today's increasingly diverse global workforce is the fact that diversity brings innovation, fresh perspective, and creative problem solving to the workplace. In order to utilize the variety of skills and perspectives employees bring to the table, managers need to examine their own frame of reference, or paradigm through which they view the world and actively seek to broaden it in order to build more effective work groups and create an inclusive work environment. The fact remains that most industries are experiencing a sizeable growth in workplace diversity. If firms like to meet the unique challenges of the 21 st century workplace and remain competitive, managers need to have the skills necessary to leverage diversity as a strength. Savvy executives know that the global marketplace is ever changing. Skilled managers with proper training exude confidence and finesse that is palpable in the workplace and help to set the tone for excellent employee relations and workplace profitability (Lindr, 2015). Executives with global management skills are in increasing demand among employers wishing to secure the competitive edge in a constantly changing global marketplace. A successful 21 st century manager sees the positive possibilities in a diverse team and actively implements strategies that underscore the importance of self-awareness and synergy among all employees. Managers who have completed advanced training in global/intercultural communication skills will be able to foresee many cultural sensitivity issues and preemptively put procedures and training in place to avoid unnecessary stress and workplace tension without singling out any one person or group. Professional development in the area of intercultural communication competence can provide the first step towards recognizing and working with values, beliefs and practices for shaping inclusive education in universities.

This type of training (bullets below) could support educational leadership preparation programs by providing school leaders with the space, time and structure for becoming aware of and interrogating their assumptions about their beliefs and how these play out in terms of their practices. Intercultural sensitivity, “the ability to discriminate and experience relevant cultural differences”, and intercultural competence, the “ability to think and act in intercultural appropriate ways”, are central to understanding and improving relations across cultures in a globalised world and in an educational context (Hammer et al., 2003, 1998), Bennett’s (2007) orientations relating to verbal communication, nonverbal communication, orientation modes, social values and intellectual modes facilitate new cultural learning.

- Models for understanding culture and cultural dynamics
- Case studies
- Exercises and activities

- Simulations and role plays
- Training games
- Profiles (country and culture)
- Checklists and tip sheets
- Assessments of intercultural competence/readiness
- Intensive group sessions
- Other resources and tools include field trips, language training, contact with members of the host culture, storytelling, dance, art, music, journals and the literature of the culture.

Recognizing that capability in one's own culture is a necessary starting point for developing cross-cultural capability, intercultural awareness begins with an awareness of oneself and one's own culture. This implies an awareness of the role of the self in interaction and the ability to learn from interaction. Skills learned in intercultural competency programs include the following: observing, identifying and recognizing, comparing and contrasting, negotiating meaning, dealing with or accepting ambiguity, effectively interpreting messages, limiting the possibility of misinterpretation, defending one's own point of view while acknowledging the legitimacy of others and accepting difference (Gooden, Dantley, 2012).

In keeping with Bennett's (2007, 2004) model, intercultural communication competence workshops in educational leadership in the universities can provide the following parameters to:

1. Understand the concepts of culture and intercultural awareness;
2. Recognize the origins of participants' own cultural values, assumptions and attitudes
3. and the way in which their values affect their perception of other;
4. Identify types and causes of intercultural misunderstandings;
5. Explore participants' perception of how their own character, attitudes and behaviour
6. might influence their cultural learning;
7. Recognize personal skills affecting one's ability to adapt to cultural diversity;
8. Develop attitudes and strategies which support intercultural awareness;
9. Observe, monitor and report on participants' own cultural learning;
10. Transfer participants' intercultural competence into the workplace.

To support these conceptualizations, the four *Savoirs* from model of Intercultural Competence can be integrated into Bennett's (2007) professional development model:

- *Savoirs*: Cultural knowledge, including sociolinguistic competence; awareness of nonexplicit reference points such as values, beliefs, meanings.
- *Savoir apprendre*: Understanding otherness; using and creating opportunities for observation, analysis and interpretation.
- *Savoir être*: Understanding how an identity and a culture are socially constructed; setting aside ethnocentric attitudes and perceptions; openness and interest towards others; Intercultural mediation.
- *Savoir faire*: Integration of the three previous *savoirs* into practical applications

Led by a qualified cultural mediator, assessment of these workshops include a formative evaluation based on portfolio activities (brief report on personal development,

cultural identity, stereotypes and assumptions). As previously indicated, Ryan (2002) supports a continued and sustained inquiry into the practices of inclusive leadership. Furman (2012) arguing for the development of a critical framework steeped to intercultural understanding, proposes that transformation and action can occur at two levels: intrapersonal (reflection) and extrapersonal (action). In particular, the conceptualization of intercultural communication competence workshops based on Bennett's (2007), Byram and Zarate's (1997) models can contribute to intercultural understanding leadership necessary for cultivating learning communities in which all members may thrive. A practical end result for the students or workplace would be:

- Recognise any differences arising out of cultural background;
- Understand their possible impact on the interaction;
- Negotiate the differences so as to achieve a positive outcome;
- Less stress;
- More satisfaction with living/working in a foreign culture;
- Greater job accomplishment in culturally diverse environments;
- Lower levels of prejudice and discrimination;
- Less resistance to diversity initiatives (Hammer et al., 2003).

#### **4 Conclusion**

As discussed above, there is also increasing demand for cross-cultural training and recognition of the roles that education systems play in developing both social capital and human capital (Giovanna, Onorata, 2014). These studies (Andenoro et. al, 2008) found that, for many employers and educators, the position of cross-cultural training in training and development frameworks and strategies was generally not clear and that global and cultural competence was not yet considered a generic skill in most industries. The literature has discussed the attributes of effective global training in some detail (Landis et al., 2004). There is general agreement that cross-cultural training has a deeper educative role because of the pervasiveness of culture in all human interaction and that 'intercultural trainers are concerned with human relations ... and making learners aware of the impact of culture on their lives' (Farrell, Fenwick, 2007). We agree with the authors (Prewitt at al., 2011; Gopal, 2011). We came to the following conclusions. Effective cross-cultural training will therefore be that which increase participants' knowledge, encourages them to see the personal and organisational benefits of cultural diversity and cultural competence and increases their skills and capacities. Firms will need a mix of regional and global leaders. If leaders want to succeed in today's volatile global economy, they must be prepared to do business all around the world. The global leaders should not seek to sever or hide their own roots to become global citizens (Bednár, 2013). Global leaders need to understand the factors that shape international interactions in their businesses, by undertaking a structured examination of cross-country differences and their effects. That is what a survey of academic thought leaders recently concluded should be the focus of the globalization of curricula in the universities. Formal training programs can teach high-potential leaders the competencies they need to think globally and manage cross-culturally. Businesses have operations, partners, alliances and senior managers representing virtually every global region. Addressing the global-leadership gap must be an urgent priority for companies expanding their geographic reach. Effective leadership is key to business success, especially for organizations with international reach and status. Leaders and organizations who take the time to recognize the new global perspective and prepare

themselves for global leadership and management will not only be the successful leaders of tomorrow, but will be able to literally shape and change their world for the better.

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## Education as a determinant of applicability in the labour market

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### Abstract

Submitted paper deals with the topic of (un)employment in a selected region with emphasis on educational structure of applicants for a job. The authors base on the results of questionnaire research which was done from October 2015 to March 2017. Its findings confirmed mutual conditionality between achieved level of education and opportunities to find employment on a labour market.

Keywords: education; (un)employment; labour market; sustainable regional development.

JEL classifications: L15, L25

Article Classification: Research article

### 1 Introduction

Improving job quality and productivity at work is an important means of achieving the strategic goal of transforming the entire European Union into the most competitive and dynamic economic area capable to achieve sustainable economic growth with more and better jobs and social solidarity. Slovakia wants to contribute to the achievement of this strategic goal through the consistent implementation of the open labour market policy. Promoting business change and adaptability affects growth of their competitiveness. Important forms of work organization seem to be important, which promote quality of work, its productivity and the balance of working life (Alexy, 2009). Although the current legislative change has created proper preconditions for the introduction of progressive forms of working time adaptation, the practice in Slovak companies lags behind the situation in European countries. These include, for example, changes of collective agreements that could create a wider scope for application of progressive and flexible forms of working time organization. Significant changes in

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business sector can be caused by better utilization of information and communication technologies that create a favourable environment for innovation. In order to improve the quality and productivity of work, it is extremely urgent to remove the barriers that prevent them from being used more intensely. Since the quality of work is mostly dependent on the human factor, the most important pillars supporting quality of work are qualifications, professional development and lifelong learning. An important tool aimed at work quality improvement is elimination of discrimination in access to employment, remuneration for work done and career advancement. In order to extend the flexible forms of working time organization, legal prerequisites that allow more time-adjustment of working time, greater flexibility of labour relations, temporary assignment of employees to work with another legal entity or natural person, re-employment of people included the retired recipients of retirement, etc. were developed.

Although a higher degree of involvement of unused workforce in the economy is a priority for our country, it is also necessary to take steps to improve gradually the quality of employees' profile, i.e. to increase employees' productive capacity. Getting a job or other meaningful activity should become the first step on the way to a better life for unemployed individuals and families.

In addition, to improve business environment and building infrastructure, however, in a modern society, emphasis is placed on investing in human resources. It is not only about the education of children and young people within the school system, but also about lifelong learning and creation of a second chance. Together with activation measures concerning long-term unemployed people, consulting services are helpful for all who want to succeed in the labor market.

## **2 Theoretical background and methodology**

### **2.1 (Un) Employed in the social system**

Education policy is a separate area. However, the strategy to promote employment growth outlines the main ways to link the education system to the labour market and the social system (Geffert, 2009). Only unemployed people who are actively looking for work and without the help of employment services are not able to find a job, should be recorded in the evidence of the unemployed.

Nowadays, it is relatively advantageous for individuals who are really economically inactive and unwilling to work to be formally registered as unemployed. Such a situation not only increases the rate of unemployment, but also affects public finances and employment services. Nobody who is registered in the labour office should be provided any advantages by the social system in opposite to the status of the economically inactive person, the so-called voluntary unemployed, thus motivating to register only those who are really actively looking for a job. Although social policy often opposes the poor and the rich, actual social system in Slovakia brings most disadvantages to individuals and families whose income is slightly below average or slightly above average. Proposed measures agreed by the state should therefore try to eliminate the discrimination of so-called middle class and support the people who take care of themselves and their families. Emphasis should be placed on supporting a family and reconciling family and working life. Society should strengthen the motivation of parents to educate their children properly and thus help to realize the natural desire to have children without creating a "survival strategy" for parents who are facing unfavorable conditions on the labour market. Measures based on motivation and

perspective are the most effective ones. The fact that an individual is trying to get out of a social network is more important than the reason why he has fallen into it. This, of course, does not mean, that systemic incentive changes themselves prevent the misuse of public finances (Stanek, 2011). At the same time, repressive steps aimed at more effective elimination of social system misuse should be taken. One of the basic mechanisms of employment growth is motivation of an individual to find and maintain employment, respectively gainful activities. Higher motivation of an individual is presented by filling vacancies and creation of new working functions, which due to previous low motivation and employability of potential employees were not created. In addition, a part of so-called black work moves into a formal economy, which brings positives not only for public finances but also fair competition in the labor market and protection of employees.

Motivation to work or not to work depends on both absolute and relative factors. The absolute factor is to what extent, without income from work or business individuals and families are able to maintain their standard of living that they consider acceptable only thanks to social income. The relative factor is comparison of income from employment or business to social-income.

The aim of government measures is to create a situation in which life without work or other meaningful activity will ensure only short time basic living conditions guaranteed by the Constitution as the basic state law. The aim of these measure is to strengthen activity of the unemployed and to motivate them to meaningful activities (Štefánik, 2014). The target group of these measures should be low-income population groups, families with dependent children and the long-term unemployed.

## ***2.2 Proposals to improve the pillars of the social system***

The philosophical basis of each social system should be emphasis placed on positive motivation, limitation of benefits and incomes linked to unemployment, strengthening the benefits of formal employment, simplification and understandability of the social system.

- increasing motivation of the long-term unemployed to find employment by keeping part of the benefit in material need even after finding a job,
- emphasis on supporting working families,
- measures to motivate economically inactive groups to become work force.

Another tool for increasing employment should be a growth of motivation of the long term economically inactive people to return to work or to enter the labor market. It concerns especially a large proportion of disabled retired and disabled people. Measures in this area are related to the pension reform and the overall reform of the legal framework in compensating for disability and are based on the following principles:

- with an adequate level of support, every individual is able to perform meaningful work,
- rules concerning parallel income from employment and income from public sources in the form of disability pensions or compensation for disability have to motivate people to seek and retain employment, for example part-time job.

Employers' motivation to employ disabled people and people at pre-retirement age should also be strengthened and institutions reducing transaction costs in this area, such as agencies of supported employment, should be encouraged. In many areas of Slovakia, however, it is not possible for every individual who wants to

work to find adequately paid work. This is due not only to the lack of jobs but also to the impoverishment of many people, especially the long-term unemployed with a low level of education. Even in the areas with high employment there may be individuals whose employability is very low without any further steps. A key direct means to increase the employability of an individual are therefore investment in increasing skills and labour mobility. The state should therefore promote economic and social activity, in particular in the following areas:

- support for self-employed selected groups of the unemployed,
- promoting social activity in selected groups of individuals receiving a benefit in material need,
- implementing reforms of the education system to increase the skills of the workforce,
- motivation for labour mobility,
- promoting harmony in family and working life.

One of the traditional effective instruments aimed at improvement of high and geographically diverse unemployment is labour mobility for work. This instrument is especially important for Slovakia, where the way of industrialization and spontaneous restructuring have caused regional disparities in the possibilities that the domestic market can offer.

Another tool is consulting services. On an individual level for job seekers they are primarily focused on developing a history of so-called individual action plans and on monitoring activities during subsequent client cooperation with a professional consultant. It concerns repeated appointments of job seekers with a professional consultant to discuss executed activities and to determine further steps towards the employment of a particular unemployed person on the labor market. After Slovakia joined the EU the EURES Advisory Network focused on consultancy services when traveling abroad started its activities. There is an EURES consultant at each employment agency and he provides services to public within. Each client is provided a package of information concerning living and working conditions in the country in which he is interested to work, he is given assistance in preparing a European CV in the required language and other required information and contacts. An important event organized on the basis of the EURES Activity Plan is the International Labour Exchange. During this event, jobseekers have the opportunity to meet foreign employers personally, present themselves in a foreign language and offer their skills, knowledge and abilities. The work experience gained by employees from foreign labour markets present a great asset when they return to the domestic market.

### ***2.3 Employment versus education***

Young unemployed people form a group of citizens which is characterized by a new way of living with a reduced standard of living, increasing social isolation and reduced civil participation and which contributes to the transformation of post-communist countries into a new social system. They mostly adopt its shortcomings and distance themselves from its principles - and this is a big negative feature.

Even in the countries of the European Union it is admitted that the experience of young people from their first job as an anticipatory socializing environment is essential and irreplaceable. This work experience, whether good or bad, have their undisputed social-formative meaning (Bucht, 2013). Therefore unemployment of the youth is

particularly damaging especially if it starts immediately after finishing their school education.

As a result of the processes of economic globalization, technological innovation and computerization, the traditional problem of the relationship between the education and work system and the relationship between education and qualifications resulting from practical experience will integrate into a new context of growth in labour market competition. Young people find themselves in a situation where the job opportunities of the least educated and qualified people are significantly reduced (Dirgová, 2009). It means the danger of long-term unemployment and exclusion from the labour market for the whole segment of the current generation of the youth in the European Union.

A more detailed look at these sociological information shows a vicious circle between the expectations of the unemployed, their education and the labour market. Most of them believe that their education is in line with what they want to do, but at the same time they know that they do not get a job with the acquired education. Some of them agreed to accept work requiring other education or qualification than they possess. The vicious circle between work and education is reinforced by the fact that the offer of job opportunities is low in some regions and the work done is badly paid. Individual time and financial investments in retraining or further education are considered as inefficient by young unemployed people. Labour offices experts suggest that to overcome this vicious circle it is necessary to do individual and group consultancy services and activities with the unemployed to advise them to set new and, in particular, real career goals. Certain social groups of young people, however, do not see and understand education and retraining as a possibility of personality development (Buchtová, 2013).

Protection of and assistance to disadvantaged and marginalized groups dominates in European Union programs concerning education and acquisition of practical skills. Young people are motivated to find their "second life chances", given opportunities to find jobs – even the ones who have not completed compulsory education and who have difficulty adapting to the demanding job requirements to find their job in the labor market. Perhaps the most important task today is to overcome the wrong stereotypes of the long-term unemployed youth.

The Slovak Republic supports the objectives of the European Union, which include building a competitive and dynamic knowledge-based economy with greater social cohesion and higher employment. A number of measures have been taken to reach these objectives and many structural reforms have been set.

The prognosis of macroeconomic development for the next years implies a renewed growth of global economy, increasing competitiveness and performance of Slovak economy, continuing consolidation of public finances and gradual improvement of the labor market situation, but the course of economic development in the individual euro area countries will not be uniform (Štefáňik, 2014). Slovak economy will always respond sensitively to the development of other economies in Central Europe. Openness of economies and ongoing reforms in many countries should create an attractive environment for investors and accelerate the process to reach advanced European countries. FDI inflows together with structural reforms and use of EU budget funds should increase structural employment. Educational institutions, not just universities, but also secondary schools should also prepare for the future. A vision of ability to prove competent in the labour market in the future should be present at all levels of education. Education needs to match current real-world labour market needs. The role of universities is not only to educate but also to form young people who will be able to think independently. The school should educate creative people, because in practice

they wait for well-prepared people with the necessary knowledge and skills. Moral values, responsibility for the results of work and benefits for future generations and for society as a whole should not be neglected, too.

### 3 Results

When solving a problem of unemployment, education seems to be one of the most decisive factors. In our research, we focused on 6 categories of education. Research sample shows the following categories:

Table 1 Structure of respondents due to education; own elaboration

Level	Education degree	number	%
A1	Basic	4	1,48
A2	Secondary vocational education (vocational certificate)	42	15,50
A3	Secondary education (school leaving exam)	50	18,45
A4	University education Degree 1 (Bc.)	69	25,46
A5	University education Degree 2 (Mgr.; Ing.)	99	36,53
A6	University education Degree 3 (PhD.)	7	2,58
Σ		271	100

If we carefully study the data presented in the previous table and chart, we can ask if "unemployment is dependent on or conditioned by the structure of education" or if "there is dependence between these two factors." In order to verify predicted answers, a two-dimensional table was developed in the age-education scale.

Table 2 Structure of respondents by age and education; own elaboration

Age/educ.	A1	A2	A3	A4	A5	A6
< 19	0	2	1	0	0	0
19 - 25	0	11	41	42	1	0
26 - 30	0	12	6	11	11	0
31 - 40	1	8	1	6	32	1
41 - 50	1	8	1	10	53	3
> 50	2	1	0	0	2	3
Σ	4	42	50	69	99	7

We have formulated this precondition as a hypothesis:

H0: Monitored phenomena are not dependent. In the monitored structure of the unemployed, education is not a decisive factor.

H1: Monitored phenomena are dependent. In the monitored structure of the unemployed, education is a decisive factor.

To verify hypotheses, we used a chi-square test at a significance level equal to 0.05. A condition for using Pearson Chi-square test is that the frequencies in each category reach at least 5. Next we modified the categories by combining them with a



logically nearest category. After processing, the number of monitored categories is 3 for age and 3 for education. The probability value  $p = 6,03587E-20$  is significantly lower than the normally used levels of significance, markedly lower than selected value equal to 0.05. The value of test criterion is  $\chi^2_{test} = 150,7875$ , the critical value  $\chi^2_{(0,05, 3, 3)} = 16,91898$ . Even in this case, the test value significantly exceeds the critical one. Based on these results, it is recommended to accept alternative H1 hypothesis, as the observed signs are statistically significant.

#### 4 Discussion and conclusion

The objective of the research was to verify specified assumptions and facts. The most important but not the only possible recommendation is the finding that the social policy of the state needs to be formulated responsibly and the draft laws and legislative measures should contain necessities and requirements of real practice, i.e. to pay attention to the specifics of the labour market with regard to all-society changes, respond to its challenges and bring positive changes in the social system of the country.

The reform of education is a primary task. It is desirable to develop the education system that can flexibly respond to the needs of the labour market. It is also necessary to pay attention to requalification, which should meet the expectations of employers and prepare jobseekers, potential employees for new, required professions with the necessary knowledge and skills.

Education is a preventive solution of unemployment. If a person does not have any skills, his opportunities to find a job are limited. Education is an investment in himself. Even a person who has reached a certain level of education should not forget about continuing education, renewing knowledge, adapting to the working environment with modern technologies. People should be receptive to the challenges and current needs of practice.

Therefore, education needs to respond flexibly and anticipate labour market requirements in advance. There are so-called key skills, which are a prerequisite for successful employment on the labour market in almost every occupation. They are: flexibility, creativity, learning and acquiring information, practical application of knowledge, language and communication skills, information technology control, ability to work in a team, ability to solve problems, ability to act independently and responsibly, planning and management skills, and others.

Growth of employment depends on education and access to information. This is related to the reform of education aimed at increasing its quality. A skilled and qualified workforce is needed, workforce which is adapted to new labor market demands and new skills and promptly adapting to the ever-changing requirements of employers. Education is not a panacea for eliminating all the risks we face, but high quality education is a positive contribution to the future of the information society.

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# Macroergonomics in shaping work system and life quality in healthcare entities

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## Abstract

Work system management in the healthcare entities is multidisciplinary and the components of this system are strongly integrated. The implementation of the macroergonomics paradigms in the area of work system designing and management is an important and current issue. Macroergonomic designing refers to the whole system and its surroundings which causes that so called human factor criterion is a focal point. The purpose of this article is to present the prospect of the quality harmonisation and work environment ergonomics in respect to the needs and expectations of not only external customers – beneficiaries but also internal customers – medical staff in healthcare entities concerning the macroergonomic aspect.

Keywords: macroergonomics; work system; human factors; quality life; healthcare entities.

JEL Classification: M2, M5, I1, I3

Article Classification: Research article

## 1 Introduction

The healthcare sector in developed countries affects the macroergonomic results significantly constituting an important branch of the economy (8-15%), often more important than education, agriculture, tourism, tele-communication (Walshe, Smith 2011). About 10 % of all EU workers are employed in the healthcare sector, three quarters of whom constitute women. Additionally, the population of the elderly requiring the highly specialised care in hospitals and clinics is growing all the time. The World Health Organisation encourages the patient-oriented quality pattern in healthcare which is based on the clinical, economic and staff efficiency with the consideration of

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employees' security and current needs of the surroundings. As the process of treatment and care is "inseparably connected with the patient's safety. Work in difficult conditions and inappropriate number of medical staff increases the risk of making mistakes" (Stone 2004).

Moreover, the continuous economisation process of this sector leading to among others bringing most areas of medical services to the market, together with price liberalisation and mechanisms of competition undoubtedly affects a lot of changes in the work system functioning in healthcare entities. Acting in the turbulent economic, social, demographic, technological and political environment, they face financial constraints, organisational and staff problems.

Thus, the work system analysis, being multidisciplinary, is one of significant models of effective management. In a comprehensive approach, it is possible to analyse the factors which determine the functioning and competitive level of healthcare entities. Complementarity and coordination of these factors is the basis of proper shaping of the widely understood work environment. Thanks to it, both the life quality of medical staff and beneficiaries increases which facilitates the work of a healthcare entity and work processes. It contributes to the improvement of the whole organisation effectiveness so is beneficial for all participants – interested parties.

## **2 Life quality and work environment and its dimensions in healthcare entities**

The issue of quality including the professional life quality and widely understood innovations in the work system are necessary to the survival of each organisation. As the research of American Society for Quality (ASQ) shows the key forces which will determine the perception of quality in an organisation most in the nearest future so will influence the work system functioning comprise among others: comprehensive responsibility of the company, growing customers' awareness, also internal customers', change of the globalisation approach which is the synonym of a big number of competitors and the source of cheap workforce, growing pace of changes, growing significance of knowledge reflected in the permanent learning of the employees, significant changes referring to the way and where the work will be performed, ageing society which will be connected with healthcare but also a new segment of customers. According to the above analyses, it is assumed that the issue of quality will expand its meaning and the innovations will be defined as the assumed needs of external and internal customers' aware and unaware needs (Krzykowski 2011).

The development of technologies and medical techniques introduced new quantitative and quality features to the medical staff's work environment changing significantly its conditions. An employee performing occupational activities is affected by complex work conditions which are shaped as a result of associated existence of various factors which are not always beneficial for health. The conditions shaping the work environment in healthcare entities comprise (Pytel-Kopczyńska 2013a):

- *Organisational environment*: work division and cooperation, distribution of work time, number, kind of tasks and activities, work pace, work methods, workload, monotony, work enrichment, rotation;
- *Material environment*: noise level, lighting, microclimate, radiation, harmful chemical substances, contagious diseases, dust emission, workplace aesthetics, spatial parameters of work place, position at work, etc.,

- *Technical environment*: technical parameters of workplaces, quality level of medical technical measures, parameters of machines, devices, tools, medical equipment, construction and structure;
- *Management environment*: management system, workers' participation, decision taking structure, ownership structure, communication systems, innovativeness;
- *Social environment*: staff policy, interpersonal relationships, structure of workers' groups, motivation to work, professional trainings, organisational culture, ergonomic culture, work culture;
- *Natural environment*: natural environment protection, protection from urban noise, rubbish disposal, legislation concerning environment protection;
- *Economic environment*: productivity and efficiency of provided work, cost-effectiveness, productivity, responsibility,
- *Safety in the work environment*: physiopathological work consequences (fatigue, diseases, accidents), potential health and life dangers, nuisance arising from work process, personal protection equipment, possibility to eliminate or minimise threats, awareness of the objective of work safety, order and tidiness in the work place;
- *Human being in the work environment*: quality of the provided work, work satisfaction, adaptation to the material and social work norms, work intensity, intellectual fitness, mental and physical fitness, professional experience, interpersonal abilities, potential and work willingness, position in a team;
- *Information environment*: system supporting decision making and communication, information processing and steering systems, software ergonomics (control over the task, system response time, information coding, errors, dialogue form).

Work which constitutes the source of material and social benefits may also affect the worker's well-being and health adversely and even harmfully (Pytel-Kopczyńska 2014). The health threats existing in the work place may affect the employee directly by the physical and chemical factors or indirectly by exposing the employee on mental and social factors. The medical staff constitutes one of professional groups endangered on the existence of numerous threats in the work process (Pytel-Kopczyńska 2013b).

The analyses conducted by the Labour Protection Council referring to the shaping of work environment conditions of the employees in Polish Healthcare entities show numerous irregularities concerning medical staff's work organisation. The problem of significant excess of work time both daily and weekly (by doctors - the indicator of doctors per capita puts Poland on one of the last places among the EU countries, nurses, X-ray technicians) were shown in about 25% of healthcare entities checked by the National Labour Inspectorate (the employees of PIP checked 1,061 healthcare entities). The irregularities in the work time organisation meant that the medical employees provided work without breaks, performed medical duties, were ready to work for 40, 48, 72, 96 and even 103 hours. Moreover, another problem shown referred to the failure to observe the rules of work safety, inappropriately assessed professional risk on medical positions, the staff was not equipped with appropriate footwear and working clothes and the technical condition of rooms was inappropriate (walls, floors, windows, doors) (*Nieprawidłowości w placówkach...*2012).

The consequence of this dangerous phenomenon comprises fatigue generating the risk not only for a medical worker but also for the patient. The study conducted among the nursing staff (Spence-Laschinger, Leiter 2006) confirms that the condition of

mental fatigue is connected with the work conditions. The factors of work environment contributing to the professional burnout are: the management style, employee's autonomy level, interpersonal communication system, support from management, existence of threats in the work place, organisational culture together with safety culture, balance on the line work – life. The white staff (doctors and nurses) belongs to the professional group which experiences the negative effects of professional burnout the most often, every fifth professionally active medical employee suffers from professional burnout (Grunt-Mejer 2012). The research carried out among women – healthcare employees by the Australian organisation Beyond Blue dealing with the problems of depression proves that they are endangered of suicide twice as often as women working in other professions (Mauer 2012). As it is shown in literature, there is a significant connection between the high values of fatigue and morbidity among nursing staff (Vasconcelos et al. 2012; Araujo et al. 2003).

As a result, the experienced health problems, mental or physiological, may lead to cardiovascular diseases, digestive system diseases, immunological system diseases, nervousness, irritability, fear, back muscle stiffness, frequent headaches (Pytel 2011).

In the subject literature it is possible to find arguments confirming the necessity of health promotion in the work place so as to avoid so called ineffective presence at work (presenteeism). This phenomenon is a reason for great losses in the business. The study carried out on trainees in hospital who worked for 24 hours without break confirmed that the probability of being hurt with a needle or a scalpel increased by 61% and the risk of potentially accidental situation by 460% (*Z innej perspektywy...* 2007).

The presented problems prove that the work and health are equal values and the factors connected with work play a significant role in the existence of health diseases and problems. It justifies the need to implement the rules of macroergonomics in shaping work systems and the professional life quality in healthcare entities.

### **3 Macroergonomic prerequisites in shaping human work and life quality**

The permanent facilitation of the work system requires the solution of the new and more and more complex issues as well as consideration of the bigger and bigger number of parameters connected with the work process, with mental and physical reactions of employees and work environment conditions as well as external surrounding. The achievement of high quality and ergonomics (The term of work environment ergonomics means the set of features connected with the work process determining the adaptation of all work environment elements and interactions between them to mental and physical, anatomic features of a human being working in this environment. The modern ergonomics characterises with the evolution from “positional” approach through “useful friendship” to the “process” approach) of the work environment is one of the basic aims of macroergonomic actions (Jasiak 2015). The macroergonomic analysis of the work system requires to consider the peculiarities of the work organisation, structure of positions, management methods and such work features as: task teams, flat organisational structures, process approach, observance of values, specific norms and rules of a given company. It concentrates on the optimising of social and technological systems both in the stage of their designing and functioning including their organisational structures, management processes, action methods. The system analysis at the macroergonomic level requires to consider the problems of human resources management, work and work time organisation designing, quality management, participation, team work, local society ergonomics, organisation culture

and new work forms including the peculiarity of virtual organisations (Hendrick, Kleiner 2001; Karwowski 2003; Sherehiy 2001; Pacholski, Jasiak 2011).

Thus, the work system as sociotechnical system (Leavitt 1965; Rummeler Brache 2000; Hendrick, Kleiner 2001) considering technological, organisational, economic and social aspects of the company functioning can be called a sociotechnological system (Zink 1982; Karwowski 2003) with the synergic features (Jagas 2011), which components and interactions are considered in mutual interactions.

So, the domain of macroergonomics is to optimise the sociotechnical systems both in the shaping stage as well as their functioning (including organisational structures, action methods, management processes). In respect to modern theories of organisation, management of changes and work designing, it focuses on such issues as:

- New forms of work organisation and organisation of manufacturing processes,
- Changes management by the analysis and assessment of factors determining these changes and implementation of adequate methods and procedures;
- Evaluations of the efficiency in change management by the identification of problematic area, appropriate motivation methods in the scope of change implementation and responsibility and control directed on skills of human;
- Indicating alternative solutions and assessment of the relation cost – profit towards the rate and type of potential changes.

It is necessary to emphasise that the participation ergonomics defines as “*human engagement in planning and control of a vast part of their work with their appropriate knowledge and power in order to affect the processes and results to achieve assumed aims*” (Hendrick, Kleiner 2001) is a significant method used in macroergonomics. The rules of macroergonomics and work designing may be presented in the following way (Nagamachi 1999):

- Good work stimulates the brain activity and good organisation stimulates the employee’s self-development,
- Complicated work enriches employees’ abilities, their motivation and satisfaction and stimulates the activity of their brains,
- Flexibility and awareness in work methods cause the efficiency and productivity,
- The possibility to make decisions gives the employee the feeling of responsibility which leads to work motivation and satisfaction.

The possibility to implement the participation ergonomics exists both at the stage of decisive process and problem solving, during the product designing, system shaping or training designing. The participation of the ergonomist in the analysis process and work system designing is significant. Whereas, the participation of employees in the work redesigning process, engaging them to analyse and design at an individual and group level contributes to the improvement of work quality and efficiency. From the macroergonomic point of view, the structural analysis covers not only fundamental work system dimensions but also refers to the model of work features significant for shaping work motivation, satisfaction, stress reduction due to the concentration on such factors as variability of tasks, identification, significance, autonomy, feedback. (Jasiak 2016). Moreover, the application of macroergonomic rules is directly connected with the work efficiency of particular employees and the whole company. The more ergonomic the work environment is, the greater the improvement in the area of employees’ wellbeing and health with simultaneous decrease in the costs of absence, increase in the work efficiency as well as creative way of thinking in the work

process. Furthermore, ergonomics in the work place means higher work motivation and involvement. Additionally, the ergonomics of the building interior means the better image of the company.

#### 4 Conclusion

The human factor belongs to the basic components of the work system. It is also a factor which is limited when it comes to quantity and quality just like resources of other material manufacture factors. Thus, the organisation efficiency may be increased not only thanks to changes in the objective elements of organisational processes but also in the quality of resources by increasing the employees' competences, growth in motivation, undertaking and efficiency of action. The condition of high efficiency of work resources (effective use of possessed employment) is creation of the environment which facilitates the full use of human skills, predispositions, qualifications, development of manual and intellectual abilities with simultaneous optimal use of possessed biological potential. Whereas, the simultaneous improvement of objective elements and manufacture processes is necessary to adapt them to mental and physical needs and possibilities of the employed. It is connected with the fact of the increase in the society awareness which takes the level of technique and technology humanisation for the measure of civilisation development (Lewandowski 2003). The current rate at which the technique and technology changes, the new generations of products appear should include the specific human mental and physical abilities (mental and physical capacity) which cannot be changed as fast as technology.

As the analysis referring to the issues of the improvement in work efficiency shows (Rummler, Brache 2000), usually not more than 15 – 20% possibilities of result improvement is connected with the area of employees' knowledge and abilities, less than 1% depends on the individual predispositions, and 80% in the work place surroundings defined by the researchers as ergonomic work conditions including supporting procedures and current instruction and understandable feedback, clearly specified expectations towards performed work (Deming stated that 15% of problems with work effects connected with employees and 85% are problems connected with management (Deming 1982)). The economic practice shows the growth and development of an organisation thanks to such values as: human personality, intellectual and moral values (fitness), professional experience, but also the condition of health and spirit. Thus the work efficiency depends in big extent not only on the employees' competences, manufacturers' positions and abilities, skills supported with a proper motivation (Organ, Bateman, 1991) but is also conditioned with the work environment ergonomics and employee's health condition which specifies his work ability. Thus, it can be assumed that the performance (P) is a function of factors presented below:

$$P = f(M, E1, A, T1, R, T2, E2, L, H) \quad (1)$$

, where: P- performance, M- motivation, E1- effort, A- abilities, T1 –task, R- role perception, E2- environment, T2- talent, L- learning, H- health.

The research problems specified in the article have become the area of analyses in the scope of modern management concepts focused on the ways of increasing efficiency in organisations such as: health promotion, safety and friendly work environment in the network of relations between employees and groups of employees increasing the company own chances and benefits. It all leads to existence of the synergy effect on a large scale which may generate the company competitive advantage



in the market which constitutes the reason for following deeper scientific analyses which will be presented in following publications.

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# **The shift to holistic paradigm of human and its influence on the management of human resources**

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## **Abstract**

The gradual retreat of the industrial age and the relatively inconvenient and time-consuming formation of information and knowledge age require, among other things, the shift of the management paradigm to the so-called "principled leadership". One of the essential features of this desirable managerial paradigm shift is the shift people's perception within their leadership in organizations from the people's perception as "living things" to their leadership as "whole people". The aim of the paper is to clarify the essence and content of management's shift to "principled leadership" and to move towards a managerial paradigm of "leadership of whole people", and to recommend what could contribute to the desired shift in managerial thinking and conduct in the context of "leadership of whole people".

Keywords: management; paradigm; human resources.

JEL classifications: L15, L25

Article Classification: Research article

## **1 Introduction**

On the basis of the author's published outputs and his practical experiences it is hypothetical to assume that quite a few knowledge workers, including managers, in the context of their professional and personal mission, are feeling a "mental disenchantment". This disillusionment is reflected, for example, by their ideas: My boss is interested only my performance and strict adherence to the working procedures that he sets; I feel that nobody at work, but also in my family does not understand to me; I'm still in one round, I cannot get out of it; My life has no meaning; I'm afraid I will not stand up and lose my job; I am lonely, I do not have time for anything, everything is in a

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hurry; I am disgusted with the pretentious praise, everywhere with a pretence, sneering and defamation.

They are not able to overcome a contrast of their work and private life, they are under increasing external pressure to increase their performance, their life is accompanied by increasing stress, and some of them even get into a state of burnout or suffer from a depressive disorder.

It is paradoxical that the aforementioned consequences of their hectic life exist while there is unprecedented technical and technological progress that brings still new and improved information and communication technologies that should not only make life easier for them!

Why is this being explored by experts of various social sciences?! The author sees one of the causes in the rooted paradigm of industrial age thinking and, consequently, in the paradigm of industrial management, which naturally moves in the long-term and with difficulty in the desirable direction, similarly as an entrenched rigid culture in an organization that prevents the promotion of a forward-looking organizational strategy. In the general sense, the author is convinced that even more the serious cause is a proud idea a lot of people of the so-called "advanced West" that they have their own professional and private lives completely self-directed and their life complications cause them other people and other negative external factors. Such people do not need God in their lives, because their values of life are the accumulation of money, wealth, the gaining of the highest social prestige and the enjoyment of their lives. As to God's existence, they respond as follows: Why would we need God, after all we are doing well, thanks to our intelligence and purposeful activities. If we are suffering something really bad in our lives, it is proof of God's non-existence - because if God exists, then our suffering would not have been allowed! The fact that we are at the beginning of the formation of informational and knowledge age signals especially scientific outputs of technical and natural sciences and their practical applications in the form of computerization and automation megatrends. However, social sciences are basically stagnating, and most people are not ready for such major change yet. Unfortunately, the author's previous statement also includes the stagnant management science and, consequently, the managerial practice, which often perceives and approaches to people, except for honest exceptions, as to "living things"!

For the realistic retreat of the industrial age and its transition to the information and knowledge age, and subsequently maybe to the age of wisdom, a part of the relevant professional public (including the author) regards as a primordial understanding and acceptance of the necessity to implement a shift into the management paradigm so-called "principal leadership", whose central point is the perception of people as "whole people"!

The aim of this contribution is to clarify the necessity and the essence of the shift of the management paradigm to so-called "principled leadership" and to pay attention to the compatibility of the perception of people in organizations as "whole human beings"!

## **2 Shifting the management paradigm to "principal leadership"**

The initial managerial paradigm for a shifting to the managerial paradigm "principal leadership" is the "human resources and human relationships" paradigm, which is based on proper "treatment" of people - it means effective, efficient, economical and responsible use of their available potentials to achieve the objectives of whatever organization!

The paradigm of "principal leadership" therefore encompasses the paradigm of "human resources and human relationships," but goes much further, as it also seeks to help people find the meaning and fulfilment of their terrestrial existence, by understanding the fact that it will ultimately in all circumstances, the decisive influence of the natural and, at the same time, timeless laws of the supreme intelligence and the derived timeless mental principles.

In organizations, the paradigm of "principal leadership" can be broadly characterized as follows:

- The professional and personal development of co-workers has reached a desirable level of professional competence and social maturity, so they can be equipped with wider competencies, while their further professional and personal development is based on a shared organizational value system formed within the top pillar of the organizational management system – named “modern leadership”. (More about the organizational management system and its top pillar "modern leadership", please see: Vágner, I. (2015), pp. 35 – 37, 74 – 81.)
- Forming and maintaining a "high trust" organizational culture enables both inside and outside of the organization to build trusted internal relationships among organizational owners, top managers, co-workers, and external customer relationships with customers, suppliers, representatives of state and public administration. Organizational culture of "high trust" cannot be built without respect and observance of timeless mental principles. (More about timeless mental principles, please see: Vágner, I. (2015), pp. 42 – 44.) It is true that trust is a “product” of timeless mental principles. These are completely self-evident principles, regardless of whether or not they are respected by people in organizations. If they are honoured, they give the performance and development of the organizational mission a completely infallible direction, because they are the result of some universal common sense. On the contrary, if they are overlooked, for ignorance or for the proud attitude of the top management members, fatal consequences can be expected for the organization's mission.

"Enlightened" top managers with higher managerial skills and above average social maturity are beginning to think about these mental principles and try to integrate them into their management system. They realize that the organizational culture of "high trust", respectively cooperation with trustworthy people is a stabilizing core of the organizational mission success in an uncertain future which can be overwhelmed with difficult predictable or unpredictable phenomena. At the same time, it cannot be contradicted that the creation of a "high trust" culture will be a prerequisite for the survival organizations in the developed global economy. Only in the existence of a "high trust" organizational culture can power be freely delegated to co-workers, while creating the conditions for their creative motivation, professional and personal development as well as enabling top managers to have enough time for strategic activities.

The managerial paradigm of "principled leadership" helps people to find meaning their lives as well. Only under this assumption they will be able to believe in their hidden potential Most people are able to achieve far better results than they are informally accustomed, respectively it is formally given to them by their limited competence in relation to their jobs or life roles!

The need to urgently implement the desirable managerial paradigm shift to "principled leadership" accentuates, among other things, the warnings addressed by one managerial guru to advanced economies of the "advanced" West! Deceased Kōnosuke

Matsushita, president of a gigantic Japanese company producing consumer electronics expressed the following opinion: "We win and the industrial West loses; you can practically do nothing about it, because the reasons for your failure lie in yourself ... In your opinion, the essence of the procedure lies in the fact that the ideas which are born in the heads of the bosses are handed over to the employees"! (Kōnosuke Matsushita was a Japanese industrialist who founded Panasonic, Japan's largest consumer electronics company. By a lot of Japanese management theorists and practitioners have so far been symbolically considered to be the "god of management"!)

Ensuring the shift of management's paradigm to "principal leadership" in organizations requires a fundamental change in the thinking and negotiation of their top managers. They must understand that the successful and forward-looking performance and development of their organization's missions depend not only on the level of their credibility in the "eyes" and "hearts" of both internal and external "stakeholders", but also on the well-formed and maintained organizational culture of "high trust" that respects the "whole man" paradigm! Hypothetically, reality is remote from the desirable state, which is partly evidenced by the results of the author's research of the strategic management level in about 440 small and medium-sized enterprises (SME's) of the South Moravian region of the Czech Republic realized in 2016. The outputs of this research project can be summarized as follows: While SME's top managers are striving to introduce new technologies, empowering knowledge workers, fostering teamwork, developing partnerships, the old authoritarian paradigm remains: He is still the boss, who is always right and who does not dare to oppose; There is a bottom-up initiative, but de facto this initiative is not taken with enthusiasm by top executives; There is talk of the need to share information and knowledge, but in fact many knowledge workers strengthen their position by guarding "proprietary information and knowledge" with the egoistic intention of proving their uniqueness. ( Research project IGA\_AS\_02\_06\_B "Status and development of strategic management practice in a statistically acceptable sample of SME's in the South Moravian region")

According to the author's opinion, the necessary shift of the management paradigm to "principal leadership" is a process that is based on respect for the mental principle "from the inside out"! It is understandable that this will be a difficult process that can only be realized if the behaviour and conduct of chief executive members will be exemplary. The exemplary behaviour and negotiation of top managers should be reflected by incorporating timeless mental principles into all structures and systems, collecting and sharing information and knowledge, rewarding and raising co-workers according to their real benefits, and responding positively to their bottom-up initiative. The exemplary top management "broadcasts" clear and comprehensible signals of its consistency to observe and promote a "high trust" organizational culture, among other things, by insisting that co-worker, teams, regularly, at least once a year, compile accounts of observance of timeless mental principles to all stakeholders with they come into contact.

It has to be emphasized that the realization of the management paradigm shift to "principal leadership" cannot be achieved without modern leaders. However, their absence is a current reality. The rooted old paradigm of management has "generated" and, unfortunately still rather "produces" managers and leaders without a trust in people as whole human beings. The author is convinced that the shift to the age of information and knowledge will radically change the character of managerial work, which will be reflected especially in the following:

- managerial positions can only be held by people who manage their own personal and individual management,
- relevant professional public will accept a significant qualitative difference between leadership and modern leadership,
- traditional leadership will be replaced by modern leadership,
- modern leaders will appreciate timeless mental principles more than their organizations - such their attitude and approach will best serve their organizations. (They will be men and women characterized by both ethical character and desirable professional qualities. People who are deeply and continuously caring about their personal and professional growth. People expanding their abilities, acquiring new knowledge, who read, listen to empathy to other people, and who are constantly learning. What is important, however, is that they will always behave and act in accordance with the timeless natural laws of the Supreme Intelligence, and therefore honour the timeless mental principles in the performance and development of both their professional and private missions!)

### 3 Shifting the paradigm from leading “incomplete people” to leading “whole people”

As mentioned above, the author asserts hypothetically that the predominant style of leadership in Czech organizations is characterized by the perception of people as if they were "living things". Managers who perceive their subordinates as "living things" act in accordance with the paradigm that the author calls "leadership of incomplete people." In reality, however, most people are not "living things" because they carry the four dimensions: the body, the mind, the heart and the soul, and therefore the desirable paradigm of leadership can be called "leadership of whole people"!

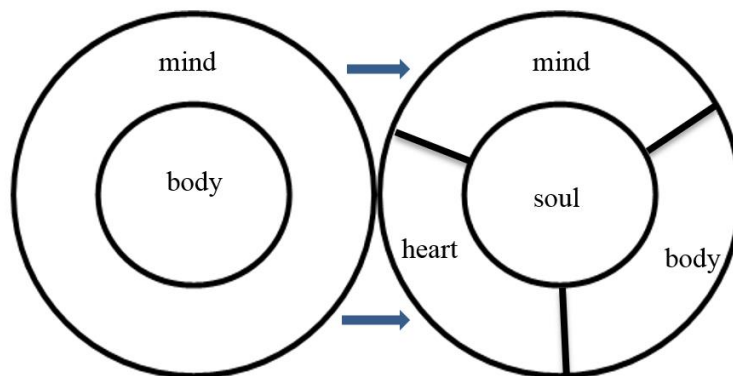


Figure 1 From incomplete to whole perception of man; source: (Covey, 2006)

“Philosophy and faith, both western and eastern, essentially deal with the same four dimensions of human existence: physical/economic, mental/intellectual, social/emotional and spiritual. Although they often use different words to describe them, they actually reflect the same four universal dimensions of life. The concepts they use also represent *the four basic needs of all people and the source of their motivation*: to live (preserve their own existence), to love (relationships), to learn (growth and development), to leave a reference (meaningful activity and contribution to the events around them)“ (Covey, 2006).

The author believes in the creation of man as a being who has a defined mission in earthly life, but at the same time it is given to him the free will of choice. An analogy can be found with the overhead of managing people in organizations, because managers

are trying to achieve the goals, but co-workers have the choice of their attitude and approach to fulfilling their duties. What will be the attitude and attitude of the staff significantly influencing the manager's paradigm!

If a manager will be leading his subordinates in accordance with the paradigm "leadership of incomplete people", it can be expected that his subordinates:

- they will tend to release the minimum of their available potential,
- if they are not under direct control, they will cease to work,
- they will complain to their direct supervisor about this or that,
- they begin to complicate their direct superior performance of his managerial work,
- especially the more brave ones, will seriously consider changing jobs.

If, on the contrary, a manager will be leading his subordinates in accordance with the paradigm "leadership of whole people", it can be expected that his subordinates will:

- make maximum use of their available potential in fulfilling their job responsibilities,
- have a tendency to self-control in the performance of their work tasks,
- strive to improve the performance not only of our own but of the entire working team,
- express joy and being satisfied with the work done.

So far it has been latently assumed that each manager is really a "whole man". However, this may not be a matter of course in managerial practice. The author even hypothetically doubts that most of the Czech managers are "whole people"! In situations where the manager is not a "whole man", it is impossible to realize effective leadership!

What needs to be done or changed to support a shift towards the "leadership whole people" paradigm?!

The author offers as a basis for evaluating of the personal integrity level using the so-called "profile analysis". The author applied the methods of profile analysis in the performance of his top management positions at Masaryk University. As a professor of management, he acquaints students with the effective use of these methods when choosing a study orientation and choosing to refine the acquired education in the labour market.

Profile analysis examine these personal characteristics (dominance, informal influence on other people, need for stability and willingness to adapt). They are based on the premise that the most important for the performance of any job is the relative consistency between the personal characteristics of the potential or executive knowledge workers and the necessary personal characteristics for desirable performance of particular job! Personal and professional profiles can be graphically displayed, allowing to visually assess of their compatibility.

Of course, a higher level of consistency between the personal and professional profiles indicates the appropriateness of accepting a potential candidate for the job. The same is true for judging whether a knowledge worker (including manager) performs a personally-fitting job for him / her!

If, despite a clear discrepancy between the personal and professional profiles, the applicant is accepted, the worker is left at the current job, it is a mistaken decision with serious negative consequences for both the employees and the organization!



## 4 Conclusion

The incoming information and knowledge age is limited by the surviving rooted paradigms of the industrial age. Overcoming these thought barriers is and will be difficult and time-consuming. In terms of management, it is necessary to abandon paradigms of industrial and operational management, to eliminate invalid managerial premises and to promote and implement a management paradigm shift to so-called "principal management".

The paradigm of "principal leadership" is a return to the nature of thinking and acting in the performance of managerial work. Complementarily, the paradigm of "principal leadership" in organizations is linked with the emphasis on wise value orientation of performance and its development, with the formation and maintenance of a "high trust" organizational culture, with consistent respect for timeless mental principles and last but not least with the leadership of "whole people".

For the leadership of organizations of industrial age, it was typical to perceive workers as "living things", though people were, are and will be always carriers of four dimensions: body, mind, heart and soul, and their source of motivation was, is and will be always: preservation of one's own existence, to love (relationships), to learn (growth and development), to leave a reference (meaningful activity and contribution to the events around them). So the shifting of the paradigm from "leading incomplete people" to "leading whole people" is evidence of a return to nature, yet it requires not only a radical change of leadership, but also a change in the readiness of those who lead them. Potential managers must be picking up and preparing with emphasis on their personality prerequisites for effective leadership of co-workers, and executive managers must be left in their current positions only if their personal profiles are relatively consistent with professional profiles. Applying profile analysis methods should become the basis for selecting and deploying people in organizations.

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## The Importance of Marketing the Young People's Health Policy

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### Abstract

Under the term a requested synergistic effect of managerial system the Health represents the key factor in relation to the development of society. Preserving and improving health is the best investment for a strong economy. This paper deals with the issue of alternatives related to promoting and realizing activities connected with the elimination of risks of civilizational diseases. It maps the issue of studying the life style of young people. The results of the investigation should be analyzed with the emphasize put on the risks of the emergence of civilizational diseases whilst accentuating the role of marketing from the perspective of preventing the emergence and development of civilizational diseases within the category of young people. The paper follows the solution of the MŠ VEGA grant project No. 1/0376/17.

Keywords: health policy; life style; civilizational diseases; questionnaire construction.

JEL Classification: D18, K22, M31

Article Classification: Research article

### 1 Introduction

Managing the activities supporting the elimination of civilizational diseases has become a part of the health policy ranging from the highest level within the scope of WHO, through the health policy within the European Union, national economies, to individuals on the lowest levels within the range of the strategic managing process of

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health management. The WHO (1998) states that the vision of health was created at the global health conference in 1977 with the ambition of becoming a worldwide movement. In 1978, the “health for all” policy itself defined a complex range of improving health in the countries of the region of Europe. The activity had major influence on the development of health and one can identify it with the start of initial marketing activities. The updated version called “Health for All in the 21st Century” is fulfilling the values, goals and strategies of global health for all. Principles of justice, solidarity, sustainability, one’s own participation and ethical choice are entrenched there. The needs of the region of Europe are taken into consideration by means of 21 defined goals, out of which almost a quarter is perceived as crucial in terms of the purposes of our interest. These include the following: healthy aging, decreasing the emergence of civilizational diseases, healthier life style, interdepartmental responsibility for health, mobilizing partners for health, state policy in the interest of health for all. These goals can be achieved on condition the marketing activities are supported. It is necessary to present a state policy which strives for the improvement of health for all through declared government priorities, programs and the activity of state organization itself and make it accessible. This also requires multiple departments to work as a team which leads to the interdepartmental responsibility for health. It is crucial to involve media in the wide-ranging activities in a major way and to support various communication activities that might mobilize other partners to support health. So the goals related to healthy aging can be achieved, it is necessary to support and promote healthier life style that can result in the decrease of the emergence of civilizational diseases. All of the activities having been mentioned are perceived as crucial in terms of potential implementation of marketing activities as a tool of health support. These scopes have been considered when working on this paper.

## **2 Material and Methods**

The subject of our interest covers marketing activities which aim at mitigating the negative effects of civilizational diseases. We are mapping the initiatives within the complex of a strategic scope ranging from the initiative of WHO, through national levels and selected departments to particular activities of individuals. Except for secondary data, we needed to construct a questionnaire aimed at a group of young people. Mapping the parameters of their health and overall life style is perceived as a crucial fact in terms of coming up with suitable marketing and communication activities striving for the prevention of civilizational diseases. From the perspective of objectivity, we thought that the research should be aimed at the age group of 18-25 years old so various fields of study of selected high schools are involved. In case of the group of high school students, the field of study must be taken into consideration as it assumes various levels of study load as well as different amounts of time available for leisure activities. Other differences may also be anticipated in terms of overall health. By means of acquiring a relevant data base mapping health and demonstrations of life style of individuals it is possible to design such marketing measures that will respect potential peculiarities of the target segment so they can get as effective as possible.

We intend to supplement the sample with university students, in case of which one year should be involved in the selection. All of the addressed respondents must be acquainted with the fact that it is a research realized in the form of a questionnaire, aiming at investigating the life style of young people, though they should not be aware that the questionnaire investigation also covers health measurements. Doing that, we strive to prevent individuals having an aversion to health measurements from ignoring

to take part in the research intentionally. In the initial phase, we pay attention to a selected part of the city with over 250 000 citizens of Košice, a regional capital. Prospectively, we plan to extend the research to a wider geographical area in order to be able to compare the diversity of demonstrations of life style of selected countries such as Slovakia, Czechia, Ukraine or Poland. The IBM SPSS Base software shall be used for the purposes of analysis. We shall apply the qualitative analysis of nominal data, to be precise, Chi-square tests realized on the level of importance of 0.05, complying with the condition of minimum anticipated associated multiplicity.

### **3 Results**

The results of this paper may be summarized into a few areas. First of all, a summary of knowledge resulting from the strategic range of health care was realized; after that, samples of particular health supporting initiatives from various levels were enumerated. When analyzing the importance of health in the health policy of young people, we mapped activities on various strategic levels. The highest level was represented by the WHO activities that were subsequently applied to the conditions of individual national policies through various departments and eventually, they are reflected in the individual approach of each person. We worked with the unanimously perceived definition of health which is, by WHO, presented as a state of complete physical, mental and social well-being and not merely the absence of a disease or infirmity. Subsequently, we designed and constructed the questionnaire the aim of which was to follow the civilizational challenges within the segment of young people.

#### ***3.1 Strategic Scope of Health Care for 2013 – 2030 and Health Supporting Initiatives***

The strategic scope of health care for 2013 – 2030 represents the basic document defining the direction of health policy in Slovakia. In 2012, a new common political range – Health 2020 – was agreed by fifty-three member countries from the WHO European region. A part of the common objectives was, except for others, the improvement of health condition and prosperity of the population as well as the support of public health care. The emphasis is put on investing into health throughout one's whole life cycle and creating opportunities to support the citizens' responsibility for health. That being said, the measures do not have to be of medical nature exclusively: they can also be of public-healthcare nature, which might help prevent modern civilizational diseases such as obesity, oncological diseases, cardiovascular diseases, hypertension, skeleton damages, metabolic diseases and many others from emerging. Supporting good health condition of citizens throughout the whole life cycle leads to an increased life expectancy and longevity. New approaches to health support should encourage an effective strategy of healthy way of living by means of marketing activities. The youth acquiring defining habits important for their future life, pregnant women but also the elderly represent the target audience of communication related to the promotion of healthy life style in order to eliminate the consequences of civilizational diseases. An important role is played by retail and the ability to provide the access to healthy food and nutrition.

In the following part, we shall introduce a sample of selected activities focused on health support.

Since 1950, WHO has been annually declaring the World Health Day which happens to be on April 7. Except for that, the European Sports Week is organized, representing the initiative of the European Commission to support sport and physical

activity in the whole Europe. In 2017, it took place from September 23 to September 30 and on behalf of Slovakia, the National Sports Centre became the coordinator, its aim being to encourage people to move during the whole year. In 2016, more than 140 thousand people from the whole Slovakia took part in 473 events.

The health support initiative is provided by the Public Health Authority of the Slovak Republic by means of the following programs:

- The National Action Plan in the Prevention of Obesity for the Years of 2015-2025;
- The National Health Support Program (2011, 2014);
- The National Program of Care of Children and Adolescents (2008-2015);
- The National Mental Health Program (2002);
- CINDI Program of the Slovak Republic – the main hygienist (*checking the basic parameters to define the health risks of chronic diseases*);
- I Am over 65 and Glad That I Live Healthily;
- The Program of Supporting Health of Disadvantaged Communities (2007-2008, 2009-2015).

For the purposes of working out the submitted paper, we focused mainly on the activities related to young people.

The Ministry of Agriculture and Rural Development of the Slovak Republic is organizing the fifth volume of an event called Let's Speak about Food from October 16 to October 20, 2017. Pupils and teachers of primary schools seated in the Slovak Republic represent the target group. The objective of this competitive-educational activity is to encourage and support the cooperation and active participation of children, youth and adults in building the capability to choose suitable food and life style, the ability to take responsibility for one's own health, awareness of the importance of food in supporting regional development, employment and environment protection.

The Ministry of Education, Science, Research and Sport of the Slovak Republic declared a priority (3.1) focusing on the support of a healthy start to life as well as a priority (3.6) of supporting physical activity within the range of the national action plan of preventing obesity. The multimedial project called *Môžebyť.sk* promotes sports and physical activities for children and youth.

It draws attention to young sport talents, provides space for coaches, physical education teachers as well as the organizers of awesome sport events for sporting children and youth. It publishes interviews with popular athletes as well as future sport stars, though being only children or youth now. It offers free media promotion for lots of quality people who strive for new generations with positive attitude towards moving and sports in Slovakia. In terms of the communication platform, it is a unique solution of the problem of lacking media promotion of children's and youth club and school sport events.

### ***3.2 The Influence of the Life Style of Youth on the Quality of Life in the Adult Stage***

The most crucial risk factors of the youth's way of living include wrong eating habits, unsuitable life style and emotional stress. According to WHO, the following factors are risk factors of civilizational diseases: hypertension, smoking, high cholesterol, being overweight or obese, insufficient consumption of fruit and vegetables, lack of physical activity and excessive consumption of alcohol.

Nutrition represents one of the most important elements of healthy life style. The composition of food, its amount as well as the way and time it is consumed is important.

Wrong eating habits can be reflected in a wrong eating routine, it includes food with high content of animal fats and low share of fruit and vegetables. It is characteristic of insufficient water intake, too much soda or caffeine as well as the consumption of fast food and chips. In terms of the eating habits of adolescents as well as young people, the nutritious doses of fat and sugar as well as the overall energy intake which is very often much higher than the outtake are exceeded. Lots of young people do not have breakfast at all or they only have it from time to time. Many students do not have lunch at the cafeteria and so they eat all the more food in the afternoon or in the evening, after they return home. Preferring good eating habits can protect from many civilizational diseases not only in the childhood, but mainly in the adult stage. When it comes to the observation of the life style of young people, the consumption of habit-forming substances is not an unusual phenomenon. Alcohol, along with tobacco, are considered to be so-called legal habit-forming substances in our country. Despite the fact that in accordance with the valid regulations of our country, it is prohibited to sell alcohol and tobacco products to young people under the age of 18, the truth is that the youth drink and smoke. In higher doses, alcohol increases the blood pressure, damages the vascular walls and vital organs. Smoking has unfavorable effects on the organism – whether it is regular, occasional or passive. Young people also experiment with drugs. Other risk factors include lack of physical activity and sleep, too much time spent at the computer, TV, mobile phones and tablets.

The level of psychosocial factors is equally important, covering the issue of mental stress, the way we deal with it, overall load as well as conflicts and emotional stress. As a result of a wrong way of living, some serious diseases may emerge among youth. These diseases have major impact on the quality of one's life and frequently, they can even be life-threatening. These are mainly represented by cardiovascular diseases, atherosclerosis, hypertension, obesity, diabetes mellitus, cancer, as well as chorea, sterility or various psychosocial problems.

### ***3.3 Constructing the Questionnaire to Research the Life Style of Youth***

So it was possible to realize the research process, it was necessary to define the research problem. In our case, we strive to map the crucial facts related to the consumer behavior of young people and their overall life style. We assume that the conclusions might serve not only to acquire a more complex picture of the youth life style, but also to come up with measures leading to the improvement of the quality of life and prevention of the emergence of civilizational diseases at young age. In relation to that, processing actual marketing recommendations can be expected once the research is over and relevant results are processed.

The articulation of the need for information resulted from the awareness of the most crucial risk factors part of which was observing selected attributes of health, way of living, life style and emotional state. Necessary information was distributed into several groups of issues. Our objective was to collect and process information related to the following: objective parameters of health; subjective assessment of respondents' own health condition and description of their actual health; perception of themselves as such as well as of their bodies; drinking alcohol and smoking; consumer behavior when buying and consuming selected types of food; health restrictions when consuming food.

After having come up with the idea of the extent regarding the acquisition of the necessary information, we proceeded to the actual formulation of concrete questions belonging to areas having been defined in advance. The emphasis was put on appropriate formulation of questions, their stylization as well as the sequence.

The questionnaire served as the inquiry tool; it was combined with a record sheet with personal measurements of each respondent. The questionnaire assumed the presence of trained specialists who had to be present when the measurements were being done as well as when the responses were being recorded during the questionnaire investigation.

In order to acquire objective parameters of health we planned to observe the following quantitative data: height, weight, blood pressure, pulse, waist circumference, hips circumference, measurement of fat in the upper part of the body, blood sugar measurement. In addition, we paid attention to whether the respondents wear glasses or contact lenses, whether they prefer using their right or left hand, what they think about their health condition, whether they have been monitored by some sort of medical specialist, whether they regularly use medication, food supplements or vitamins, whether they were vaccinated, whether their blood pressure, cholesterol and blood sugar was measured by a qualified medical worker. It was necessary to consider the existing health condition determinants in the form of the individual attitude towards health, life and work environment, health care, life style and job as well as the consideration of age and sex of the respondents. These health condition determinants were incorporated into the questionnaire where it was crucial not only to consider the extent of the acquired data but also their logical coherence and structure, that is to say, the form and the content.

In order to be able to describe the findings related to the respondents' life style accurately, we tried to discover how much time each individual addressed spends at the computer, how much time s/he spends watching TV, how much time s/he spends doing sports, how s/he uses his/her free time and whether they work in return for money, that is to say, whether they take part in the work activities. We formulated 10 questions in relation to the area in question.

The mental well-being was observed through nine questions in which we focused on discovering in what mood the respondent had been during the past month, whether s/he was satisfied and relaxed, whether they were in good spirit, whether they woke up well-rested, to what extent they were influenced by stress situations at school and at home and whether they perceived themselves as incapable and whether they were able to realize their hobbies.

The perception of school and study results was investigated through five questions, in which we were interested in finding out how the respondents feel at school, how they evaluate their study load, to what extent it is important for them to have good grades, how many hours a day on average they devote to studying and what were they average grades over the last semester.

The area related to the acquisition of data regarding respondents' eating habits, consumption of alcohol and smoking was a rather extensive one as ten questions following more complex division were formulated. We were investigating the frequency of consumption of various types of food (19 kinds), drinks (7 kinds), preferred warm or cold food, the frequency of food intake, its division throughout the day, we were interested in the alternatives of preferences regarding the place the respondents have lunch at, their preference related to a particular type of sweetening agent or salt. We also paid attention to how many times a week the respondents drink a large beer, a glass of wine, a shot of alcohol and how much they had smoked over the last month.

This was followed by the decision regarding how we should collect the data. As it was a rather extensive questionnaire covering both quantitative and qualitative data, it was necessary to provide the presence of specialists responsible for valid and relevantly collected data. That is why we engaged specialists from the area of health care into the

activities. We started a close cooperation with the High School of Health Professions in Košice and we agreed on their authority and presence at all measurements and data collection. Except for the pedagogical management of the High School of Health Professions, the students of the school also participated in the research. The realization of the research was provided in accordance with strict compliance of all medical-safety measures.

#### **4 Discussion and conclusion**

The questionnaire compilation covered a wide spectrum of the issue that may serve as a potential tool to deal with civilizational challenges. Except for the health parameters that can be assessed as quantitative data, there was also a large set of qualitative questions. Altogether, there are 75 questions in the questionnaire. Filling in the questionnaire as such is thus rather demanding in terms of time. In addition, one needs to count on exceeding the time period in order to collect selected health parameters related to individual measurements of each respondent and recording the values measured into the record sheets. As it was already mentioned in the paper, it is necessary to collect data from various categories and fields of study that would consider their individual peculiarities. That is why we, in the initial stage, paid attention to schools that operate in the regional capital of Košice. Prospectively, we aim at extending the research into other cities in Czechia, Poland and Ukraine in order to be able to compare both common and distinct features of young people in terms of their life style. Based on that, we plan to design adequate marketing measures in an effort to build healthier alternatives of young people's behavior.

The objective of the submitted research was to map the life style of the youth, their habits, preferences as well as their perception of themselves in a way as complex as possible which shall eventually result in getting to know the demonstration of their consumer behavior in a particular age group of respondents. The construction of the questionnaire covering the investigation of consumer behavior and life style of youth was the basic step to other planned activities focusing on the recommended marketing activities. It is necessary to take the recommendations of individualization of communication specifics of particular target audiences into account and adapt not only the form and the content of the information to that but also the appropriateness of the communication canals in an effort to achieve the highest possible effectiveness of the communication activities. Along with the own communication suggestions resulting from the conclusions of processing the primary researches of the resolving collective of the VEGA project, it will be necessary to map the communication activities on various levels of management complexly. Whether we speak about the WHO activities, the initiatives of the country or its individual departments, it will be necessary to summarize the frequency of activities, their general accessibility and awareness of them as well as to examine the following effectiveness with an impact on creating other measures leading to a gradual improvement of the health condition of young people by means of which the effort to prevent civilizational diseases at young age would be highlighted.

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## Factors influencing the rate of state budget tax revenues

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### Abstract

Fiscal development during the last decade in the member states of the European Union points out to the growth of budget deficits. The reason the above mentioned budget deficits growth is caused by increasing public expenditures, inefficiency of public resources control, as well as endogeneous and exogeneous macro-economic factors. All these facts influence public incomes whose important part are state budget incomes. The paper is focused on reviewing the decisive factors which determine the rate of state budget tax revenues in the context of the actual economic development.

Keywords: budget deficit; public expenditures; tax revenues; tax policy; income taxes; capital assets tax.

JEL Classification: B22, E62, H61

Article Classification: Research article

### 1 Introduction

The negative trend of fiscal development and increasing indebtedness of member states of the European Union caused disruption to fiscal stability and balance of the fiscal system. Fiscal problems required states' interventions aimed at assurance of fiscal discipline and prevention of the growth of the states' indebtedness. All this resulted to the general implementation of fiscal measures and tools whose aim was to improve public finances and fiscal system stability.

The initial bases of fiscal instruments and measures, which can be described as fiscal rules, were enshrined in the Maastricht Treaty and later extended and made more restrictive in the Stability and Growth Pact. The countries have committed themselves to adhere to the basic fiscal rules and to consolidate public finances not only as a

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remedy of fiscal imbalances already in place, but also to prevent the emergence of fiscal imbalances and the destabilization of the fiscal system.

The incidence of fiscal imbalances and the ever-increasing indebtedness of the EU Member States, despite the measures in place in the form of fiscal rules, is still a highly current and live problem. The fiscal authorities of the individual Member States and the European Union continue to seek optimal solutions to the efficiency of public finance management.

The Slovak economy has been experiencing favorable developments in recent years. Its basic parameters are being improved - from GDP growth, the fall in unemployment rate, to a decline in government debt to GDP. In 2016 GDP grew by 3.3% and reached 80,958 million. EUR at current prices. The most significant growth factor was household consumption and net exports. The fall in growth by 0.5% compared to the previous year reflects, in particular, a lower utilization of euro-funds in the new programming period.

The society demands for financing public needs are constantly rising. This increase brings the need for a deeper analysis of sources financing public needs as well as the need to direct these resources in both time and volume. Increasing of spending on public services raises pressure on the growth of public revenues. For this reason, it is necessary to evaluate the factors determining the level of public revenues of individual countries. The most important element of the budgetary system is the state budget. The state budget is an essential part of the budget of the public administration and ensures financing of the main functions of the state in the respective budget year.

The state budget for the respective budget year is approved by Parliament by the state budget law. The State Budget Law approves in particular the level of state budget revenues, the state budget expenditures limit, the maximum limit of budgeted deficit or the minimum budget surplus of the state budget if the revenues and expenditures are not balanced.

The amount and structure of revenues of individual parts in the budget system are of key importance for the scope and focus of public consumption. These revenues have a certain limitation (especially since the level of tax burden of economic subjects should not exceed a certain limit), and it is therefore necessary to look for additional non-budgetary sources of public financing.

These resources may be of a different nature and their share in the total volume of public revenues may also be different (Dvorak, 2008). The state collects a certain amount of funds, public revenues, at a rate that corresponds to the tasks to be performed by the state in the area of public consumption (Sivák, et al., 2007). The ability of governments to predict the size and structure of public budgets effectively can be affected by different factors as well as the relationships between them.

The highest part of the revenue that can be used to finance public spending is concentrated in the state budget. Therefore, in the paper, we deal with the determinants of the creation of one part of the income, namely tax revenues.

## **2 Material and methods**

The introductory part of the paper describing the current state of knowledge is based on the evaluation of existing domestic and foreign literature. The obtained information, subjected to the analysis of opinions, comparison of obtained source materials and explanations, enables clarification and evaluation of the theoretical backgrounds of the issue of factors determining the amount of tax revenues of the state budget. The part summarizing the results is based on secondary sources obtained from

domestic and foreign statistical databases as well as resources published by domestic and foreign authors dealing with forecasting tax revenues development.

### **3 Results**

The structure and amount of public revenue of a particular country is subject to several factors. In countries where the economy is based on market principles, most of the public revenue comes from taxes. In view of this, the level of tax burden on different tax subjects is decisive. No state can exist without tax revenues coming from a system of interrelated taxes that make up the tax system. The satisfaction of the needs of the citizens of the state is partly realized in the form of private consumption of individual economic subjects and the degree of satisfaction of these needs depends on their economic activity.

On the other hand, some of the citizens' needs are met in the form of public consumption where citizens receive and consume certain types of goods and services provided directly by the state or by its organizations through public funds. From the point of view of public revenue assurance apart from collecting tax revenue, important is also correct direction of tax revenue to the relevant budget, based on specific needs in each period, supported by appropriate legislation, to ensure the most efficient use of funds in the area of financing public needs.

#### ***3.1 Determinants of tax revenues***

There are many factors that affect the level of tax revenues of the state budget. Many authors refer to different divisions of these factors. Most often mention the following determining factors: the level of the economy and the size of GDP, the level and development of the price level, the wage policy, the approach to taxing unearned income, the fund economy, the fiscal and tax policy of the state.

Kubátová (2005) divides factors influencing the level of tax revenues of the state budget as: economic factors, political factors, cultural-historical factors, administrative - institutional factors, factors of technical progress and factor of globalization. Economic factors include geographical structure, labor force structure, economic growth, inflation rate, the rate of economic integration into international trade, and so on. Political factors are related to the way in which tax laws and the political cycle are adopted. As cultural and historical factors, she mentions payment morality, tradition, functioning state apparatus. Especially these factors that, in her opinion, point to the need for a change in the tax system to increase indirect taxes if there are frequent tax evasion in direct taxes in the country. Administrative-institutional factors are related to tax administration. The development of tax-related technologies may lead, on the one hand, to acceleration of trade - new forms of trade are emerging, the sales cycle is accelerating, which leads to an increase in consumption, thus indirectly affecting excise duties. The second level of technical progress allows tax administration to speed up the tax revenue collection process and also helps fighting the tax evasion. Globalization as a determining factor in tax revenue is becoming increasingly important. The adjustment of national tax systems results from the laws adopted by the national authorities of individual states. The EU also enforces its interference with national systems for the purpose of harmonization by means of legal documents, directives, and expects very close co-operation and coordination between the Member States in order to achieve tax harmonization in the EU. The individual Member States gradually incorporate into their national tax

legislation the EU's legislative guidelines, proposals and adjustments, so called Community legislation.

The paper is based on the division of factors into economic factors and political-societal factors. Microeconomic as well as macroeconomic factors belong to the economic factors. Microeconomic and macroeconomic factors do not act in isolation. Changes in macroeconomic factors will also affect the functioning of microeconomic factors. The macroeconomic factors that affect the level of tax revenues include GDP, economic cycles, inflation, unemployment, price level. The microeconomic factors include the change in household consumption, the change in the corporate investment sphere connected with the change in the tax burden on subjects.

Political-social factors are neither measurable nor quantifiable economic variables, but also influence the level of tax revenues of the state budget. They either act directly to change the tax collection or indirectly affect tax revenue (changes in demographic structure, technical progress, etc.). Both the state budget and the tax system are defined by applicable laws, and therefore the policy of the country significantly affects the level of tax revenues of the state budget. Political factors include fiscal policy, tax policy, stabilization policy, budgetary policy and globalization.

Socio-societal factors are closely related to the demographic structure of the society and the development of society (social change). Taxes fulfill the function of redistributing pensions and their aim is also to reduce the differences in society. The demographic structure of the society influences the amount of spending on the social system and at the same time affects the tax income from that part of the population that is employed. Social changes can be both scheduled and unscheduled. From the point of view of the tax revenues of the state budget, dangerous changes in society are the ones that require immediate government decisions. These are unforeseen and unplanned events, and although they can significantly affect the final amount of tax revenue, they are not included in the government revenue forecasts.

The state budget is just one, but an important part of public finances, a strategic tool of economic governance. It is an important instrument in the hands of the state to intervene in the economy. The state budget represents the sum of money operations operating in the field of their creation, distribution and use, with the factor of time and economic and political changes changing the content and extent of monetary relations associated with the functions of the state budget. (Belickova et al., 2010)



Figure 1 Development of SR state budget revenues, expenditures and balance

State budget expenditures grew in the monitored period, even though their growth rate was lower than the growth rate of government revenue, which was reflected in a decline in the state budget deficit. Growth in revenue was positively impacted by growth in the economy, rising employment and a better collection of taxes and transfers. The growth in the number of newly created jobs has positively influenced not only revenue but also expenditure, as there was a lower need to pay contributions to the unemployed. Expenditures were also influenced by the high utilization of EU funds in 2015.

In 2016 the lowest cash deficit of the state budget was reached by 990,140 thousand EUR and due to it there was the lower need for refinancing. The state budget deficit in 2016 fell by almost 50% in 2015. In 2016, the state budget cash receipts amounted to 14,275,917 thousand EUR, which means a year-on-year decrease of 12.06%. Cash expenditures reached 15,256,172 thousand EUR which represents a year-on-year decrease of 16.02%.

### 3.2 Tax revenues structure

The revenue structure of the state budget consists of tax revenues, non-tax revenues and transfers and grants. Each category contributes to the total amount of the state budget by different degrees. In modern economics, taxes are an important economic, financial, social and political tool of government. In a more similar way of monitoring the composition of state budget revenues, it is clear that the largest part is tax revenue. Correct accurate tax revenue prediction is therefore necessary when drawing up the state budget.

In the monitored period, the level of tax revenues influenced the external environment. The euro area countries recorded economic growth, although its rates were different.

Table 1 Development of selected Eurozone indicators; State closing accounts

Indicator	2012	2013	2014	2015	2016
GDP ( % growth)	-0,7	-0,3	0,9	1,6	1,7
Employment (ESA, % growth)	-0,8	-0,7	0,5	1,0	1,3
Rate of unemployment (VZPS, %)	11,4	12,0	11,6	10,9	10,0
Rate of inflation (HICP, %)	2,5	1,4	0,4	0,0	0,2

The euro area economy at the aggregate level reached stable growth rates. However, persistent political uncertainty remains a major barrier to higher economic growth acceleration and, at the same time, primary risk. Another risk of tax revenue development is the unclear political developments in Europe, the instability of the banking sector, Brexit, and the rise of protectionism in world trade. The threat of stable economic growth is the development of the commodity market - the rise in oil prices.

In 2012, the GDP of the Slovak economy recorded a growth of 1.6% compared to 2011. From the point of view of tax revenues, the growth structure of the economy was not favorable. Growth was mainly due to net exports, and most macroeconomic basic taxes developed worse than projected in the budget. In total, economic development created negative risks for budgeted revenues. In 2013, GDP growth was 1.3% and did not meet the assumptions used in budgeting, particularly in terms of tax revenue. GDP growth has been driven exclusively by net exports and most of the macroeconomic basic taxes was worse than projected in the budget. In 2014, GDP

growth was 2.4%. It has exceeded the expectations that were used when setting up the budget.

Table 2 Development of SR macroeconomic indicators; State closing accounts

Indicator	2012	2013	2014	2015	2016
GDP, real growth in %	1,6	1,4	2,4	3,6	3,3
GDP, b.c.,mld. eur	71,5	72,1	75,2	78,1	81,0
Rate of unemployment	11,4	14,2	13,2	11,5	9,6
Index of consumer prices	-0,1	1,4	-0,1	-0,3	-0,5
Balance of current account of balance of payment, % GDP	2,2	2,1	0,2	-1,1	-0,6

A more favorable, balanced development of tax bases has been achieved. A positive development was recorded in the wage base, of both employment and nominal wages, which is the most important basis for personal income tax and tax payments. On the other hand, there was a slight decline in the price level, which affects the nominal consumption of households and GDP, which is the basis for VAT and corporate tax. The economic development of the Slovak republic in 2015 was favorable. GDP grew by 3.6%. Government investment has grown significantly. The growth structure was favorable in terms of labor market and job creation. On the other hand, the decline in price levels continued, despite expectations of its growth. The economic development in 2015 was also favorable also in terms of macroeconomic basis for taxes and tax payments. The wage base development was positive. Slightly slower nominal wage growth was more than offset by faster employment growth. As in the previous year, even in 2015, there was a negative drop in price levels. Favorable economic development continued in 2016 and was characterized by GDP growth by 3.3%. Growth in GDP was driven by household consumption and net exports. Growth in household consumption was the result of a favorable labor market situation and a fall in price levels. Deflation reached -0.5% in 2016. Exports in 2016 reached lower levels than in 2015 when even record production in the automotive industry failed to offset slowdown in the V3 countries. Gross fixed capital formation declined by 9.3% in 2016. Employment growth by 2.4% has led to the creation of 54,000 new jobs. This was reflected in the decline in the unemployment rate, which after ten years reached 9.6%. Wage growth also had a positive impact on tax revenues. The average nominal monthly wage reached 912 euros, in 2015 it was 883 euros. The balance current account of payments reached -0.6% of GDP. The decline of the balance of payments balance was mainly due to lower primary and, to a lesser extent, secondary revenues. The payroll base recorded a positive development. The decline in price level has influenced nominal household consumption and GDP, which is the basis for VAT and corporation tax.

The structure of public revenues as well as state budget revenues is specific for each country and takes into account the historical development, traditions and economic needs of society. The structure of government revenue is subject to constant economic and political influence. State budget revenues recorded only a slight rise in the monitored period despite the stable GDP growth. The total volume of tax revenues of the state budget since the beginning of the monitored period increased by 2,605,874 thousand euros. Looking at the year-on-year change in tax revenue volume, it is possible to identify a slight increase in tax revenue. Growth recorded income taxes and capital assets taxes despite the change in the legislation concerning reallocation of revenues of income tax. Corporate taxes increased by 1,456,386 thousand euros in the

monitored period. The volume of collected taxes on goods and services increased by 394,012 thousand euros.

Since 2005, personal income tax has been a shared tax. Under Act no. 564/2004 Coll. of Laws related to the budget determination of revenue from the income tax of territorial self-government and on the amendment and supplementation of some laws, the income tax is redistributed by the established mechanisms between municipalities and higher territorial units. The share of municipalities in the personal income tax rate increased to 70%. Higher territorial area accounts for 30% of the revenue. Only parts of the tax revenue remain on the state budget account due to the shift between the tax credit to the state budget account and its transfer to municipalities and higher territorial units.

The actual performance of this tax revenue was negative - 11,479 thousand euros. The negative revenue at the state budget account was generated due to the annual accounting process, when it is necessary to settle the statutory claims of the local authorities on the revenues from the personal income tax revenues against the actual funds paid for the given calendar year.

Table 3 Structure of SR state budget tax revenues in mil. eur.; State closing accounts

Tax/year	2012	2013	2014	2015	2016
Income and capital assets taxes	2 129, 59	2 384, 09	2 318, 95	2 826, 35	3 354, 79
- Income taxes – Personal entity	231,77	208,58	232, 62	60, 41	-11, 479
- Income taxes – legal entity	1 730,67	1 997, 72	1 911, 27	2 603, 93	3 187,06
- Tax collected by deduction (withholding)	167,14	177,78	175,06	162,00	179,21
Property taxes	0,190	0,123	0,090	0	0
Taxes for goods and services	6 277, 32	6 699, 58	6 912, 22	7 739, 27	7 671, 33
- VAT	4 298,80	4 722, 85	4 902, 81	5 501, 50	5 360, 70
- Consumer taxes dane	1 978,44	1 976, 66	2 009, 33	2 096, 60	2 170,50
MO and transactions taxes	30, 76	27, 55	31, 51	28, 89	28, 88
Penalties imposed in DK	14,40	23, 07	30, 29	18, 20	13, 14
Other taxes	10, 03	0,012	0,096	0,00	0,00
Total tax revenues	8 462, 28	9 134, 43	9 293, 15	10 612,72	11 068, 15

Actual collection of value added tax in 2016 in the amount of 5,360,699 thousand EUR represents 94.9% implementation of the budget. The actual income of this tax was lower than the budgeted value equal to 286,731 thousand EUR and compared to the yield in 2015 it was lower by 140,800 thousand EUR. The estimated VAT cash revenue for the year 2016 also included the expected increase in the revenues of the state budget for VAT by 200,000 thousand EUR. However, this budget reserve



has not been met. At the same time, the budget did not include the introduction of a lower tax rate for selected foods with an estimated negative impact on revenue of 65,822 thousand EUR.

Changes in other taxes were recorded in the period under review. Other taxes consist of a tax on emission quotas and property taxes. The emission quotas tax was abolished based on the initiative of the Ministry of Finance of the Slovak Republic with effect from 30 June 2012, due to the European Commission and the Constitutional Court proceedings against the Slovak Republic for breach of European legislation. The amount of the abolished tax in 2014 amounted to 6 thousand EUR. In 2015 there was no return on this tax. In the case of property taxes, in 2014, there was only the current income from these taxes, in total equal to 90 thousand EUR. The largest part of this amount was the property transfer tax in the amount of 85 thousand EUR. Other taxes in 2016 included only property taxes whose revenue in 2016 amounted to 26 thousand EUR.

If we wanted to compare the situation with the V4 countries, it should be noted that the tax revenues of these countries in the current period showed an increasing trend and it is assumed that such development will continue in the next period. The tax revenues of Poland have only begun to grow since 2014.

Table 4 Comparison of tax revenues of V4 countries in mil. eur.; own elaboration based on Proposals of SR state closing accounts 2011-2015, Reports on the activities of Tax and Customs Bureau of the Czech republic in 2011-2015, State budget revenue of Poland 2011-2015, A központi költségvetésbevételei 2011-2015.

Tax revenues	2011	2012	2013	2014	2015
SR tax revenues	8 700,10	8 462,28	9 134,43	9 293,16	10 612,72
Tax revenues of the Czech republic	25 689,97	26 293,01	27 040,33	28 268,59	29 837,22
Tax revenues of Poland	61 201,70	58 742,36	57 175,19	60 277,96	61 439,37
Tax revenues of Hungary	16 357,41	18 520,64	18 641,92	19 932,43	21 794,46

Poland has the highest tax revenue. The second is the Czech Republic, followed by Hungary. The lowest tax revenue in the comparison of the countries is reported by the Slovak Republic. Not only the number of inhabitants and the area make Poland the state with a significant position in Europe and in Vyšehradská group. Its strength lies in strong domestic consumption. Poland is also an important trading partner of several countries, including Slovakia, and Poland's economic cooperation with these countries is increasing steadily. In recent years, trade has grown steadily as well and is particularly affecting mining, food, agricultural, automotive and electrotechnical products. Poland is the country that has a number of foreign direct investment, and this is another factor for the country, which may partly affect the level of tax revenue.

#### 4 Discussion

The application of a tax system based on the existence of various taxes is typical for economy based on market principles. The creation of an appropriate tax structure and its application in practice in the particular country is to a certain extent a contradictory process. On the one hand, it is necessary to promote the principle of stability, which is reflected in the long-term validity of adopted solutions, on the other

hand, there is the requirement to adapt the structure of the tax system and the construction of individual taxes to economic conditions in certain phases of economic development. Central European countries created tax systems based on market mechanism principles after socio-economic changes in the 1980s and 90s. These systems have undergone significant developments and have made several important changes in their construction. Although some of the changes were stimulated by objective facts of economic development, some changes were undoubtedly caused by the subjective approaches of the involved actors.

In countries with a more advanced economy, the tax burden of taxpayers is shifted to the sphere of indirect taxes. Tax revenue is also shifted to indirect tax at the same time as the tax burden. This trend is also applied in the conditions of the Slovak Republic. This results from the intention of individual states to support the business activities of taxpayers by reducing the tax burden on direct taxes. By achieving a sufficient revenue for the budget system, the missing income from direct taxes should be supplemented by an increase in indirect tax revenue. In essence, it is about transferring the tax burden from an economically active person to the consumer.

The Member States of the European Union have paid attention to the adherence of the common principles of indirect taxation, whether it concerns the value added tax applied in all the countries of the European Union, or individual excise duties. The Council of the European Union has developed binding guidelines for Member States concerning indirect taxes. Under these directives, individual states are required to proceed with their legislation. Even though the Council directives for the Member States are binding, it is necessary to look at individual states in a longer period of time, not just after the accession of individual countries to the Union. A large part of the states in the current period use so-called transition period.

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## Perception of communication skills in the context of neuro-linguistic programming

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### Abstract

The NLP concept explains seemingly autonomous behaviour as constructed behaviour by a series of successive stages which we often perceive as one action. By accepting the idea that what we experience comes out from programmed sequences of thinking and behaviour, NLP offers us knowledge and tools for discovering the structures of these programmes. The aim of this paper is to identify the effect of NLP trainings based on verifying the existence of statistically significant differences in perceiving communication skills among the respondents who attended NLP trainings and the ones who did not attend NLP trainings. The research was conducted on the sample of 104 respondents out of which 48 were women and 56 were men. The findings show that the respondents who attended NLP trainings assessed the factors of communication skills more positively as the respondents who did not attend the NLP trainings.

Keywords: communication; communication skills; neuro-linguistic programming; NLP training.

JEL Classification: Z13, D23, L29

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## 1 Introduction

Social environment, including the economic one, is characterized by an unusual dynamics, turbulence, and never-ending stream of changes. Social environment, including the economic one, is characterized by an unusual dynamics, turbulence, and never-ending stream of changes (Drucker, 2001). There is nothing permanent except changes (Drucker, 2000). There is a chance to be effectively employed only for people who love changes and do not see reprobation but also an opportunity in them (Peters, Waterman, 1982). Managers are expected not only to face the changes but also to suggest and implement these changes (Peters and Waterman, 1992).

The effectiveness of human resources management in this context is multi-factor conditioned and it is interdisciplinary examined at the same time. An important role within this rich mosaic of the concepts for the human resources development is also played by the form and the way of communication among people. According to McKay et al. (1995), one of the issues discussed from the point of view of the effectiveness of human work, mainly in a social context, is the issue of communication skills. These are important by increasing the performance and the quality of work as well as by the development of the abilities of individual people.

Effective communication is one of the fundamental pillars of activities for which the cooperation of people is inevitable (Vymětal, 2008). At the same time, it is one of the significant issues discussed in the context of managerial work (Daňková and Droppa, 2015), entrepreneurship, business (Suhányi and Svetozarovová, 2016), services, marketing (Korauš et al., 2016) and many other areas of the economic environment. In many cases, communication fails for different reasons. Neuro-linguistic programming (NLP) is one of the possibilities how to increase the quality and effectiveness of communication and subsequently to that also social, psychological, and economic effects. The answer to the question how to communicate better, how to effectively communicate with our surrounding and how to communicate with ourselves is also offered by neuro-linguistic programming (NLP). It arose in the 70ties of the last century and its founders are Richard Bandler and John Grinder (O'Connor and Seymour, 1998). According to the authors, NLP is a set of models, abilities, and techniques for effective thinking and behaviour in the world.

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According to Knight (2010), the essence of this approach lies in the study of perfection. It is an approach to learning, curiosity, and respect to a unique way of existing in the world. Hamill and Kerr (2013) claim that the NLP concept shows that the major part of our seemingly autonomous behaviour is a constructed behaviour created by a series of successive stages which produce a final result. These stages run very often so quickly and spontaneously that we perceive them as one action. By accepting the fact that what we experience comes out from programmed sequences of thinking and behaviour, NLP provides us with the knowledge and tools for discovering the structures of these programmes. NLP is often presented as a magic tool for self-improvement of individuals and in this sense, it is recently more relied on the assumptions of NLP than on a qualitative and quantitative research. It is also caused by the fact that there are only a few researches which prove the reliability of NLP tools. In this context, we can mention the study of Oberholzer (2013). The author points out that the intelligent

management by NLP application in the techniques of interpersonal and intrapersonal communication in the management can relate to the success of a whole organization. The given study was conducted in a cooperation of the Solidarity Union and large non-profit organizations in South Africa where five strategic leaders who were using and implementing NLP in their organizations were analysed. The result is that NLP improves interpersonal and intrapersonal behaviour of the leaders and this subsequently contributes to the success organizations by using NLP in their behaviour, communication, and leadership. Supporting results were also brought by the studies of Scott (O'Connell, 2006) and Albalawi (2014). Witkowski (2010) pointed out the disunity of the research results which supported the NLP method, or which did not support it.

It is obvious that the major part of examining the NLP method was conducted in the context of communication researches (Oberholzer, 2013). NLP relates to the idea that the meaning of communication is in a reaction which it creates. Therefore, it is needed to adapt our communication until a required result, a reaction, occurs. In this context, according to Knight (2010), one of the first discoveries of NLP is the knowledge that experienced communicators use their language in order to create the climate of trustworthiness and understanding.

## **2 Material and methods**

It is clear from the presented research results that NLP relates closely to the issue of communication. From a methodological point of view, one the possible approaches to examine NLP methodology is the comparison of respondents who attended an NLP training and the respondents who did not attend such a training. The concept of a research project that we present in this paper accepted the two mentioned attributes of examining the issue. NLP was studied in the context of communication skills based on the comparison of the answers of the respondents who attended an NLP training and the ones who did not attend an NLP training.

### **2.1 Research**

The conducted research was focused on evaluating the impact of the knowledge from NLP area on communication skills. The aim of the research was to find out the effect of NLP trainings based on verification of the existence of statistically significant differences in perceiving the communication skills among respondents who attended or did not attend an NLP training.

### **2.2 Methodology**

In the research, we used an original questionnaire which contained 20 items. Based on available literature, we identified 4 factors which were most frequently considered as communication skills. Each factor was specified by the means of 5 statements related to a given communication skill. The factors were identified as:

- Body language - it is the skill outside verbal communication
- Active Listening – the skill to pay a focused attention to a communication partner
- Assertiveness – the skill to express our opinions, attitudes, feelings in communication with other people.

- Asking questions – the skill to ask appropriate questions by which we can get important information.

The research sample consisted of 104 respondents, out of which 48 (46,2%) were women, and 56 (53,8%) were men in the age from 22 to 63 years (average age 40,20 years, standard deviation 10,187 years). The sample was made up by 42 (40,4%) top managers, 28 middle-level managers (26,9%), 10 (9,6%) first level managers, and 24 (23,1%) respondents were executive workers. The training in NLP was attended by 36 (34,6%) respondents, out of which 18 (50%) were men and 18 (50%) were women with an average age of 43,5 years. 68 (65,4%) respondents out of which 38 (56%) men and 30 (44%) women with an average age of 38,4 years did not attend the NLP training.

The mathematic-statistical data analysis was carried out by the means of Student T-test in a statistical programme SPSS 20. We compared the answers of the respondents who attended the NLP training and the ones who did not attend the NLP training.

The discovered results were presented first from the point of view of the 4 mentioned factors of communication skills (Table 1, Figure 1) and subsequently, we analysed the differences at the level of individual items which supplement these factors (Table 2).

### 3 Results

Table 1 presents statistically significant differences in assessing the factors of communication skills from the point of view of attending or not attending the NLP training. We found out that the respondents who attended the NLP training assessed the factors of communication skills more positively than those respondents who did not attend the NLP training.

Table 1 Differences in perceiving communication skills from the point of view of general factors; own elaboration

	NLP training	Average	Standard deviation	T - test	Significance
Body language	attended	3,36	,799	3,478	,001
	not attended	3,92	,747		
Listening	attended	3,52	,725	4,465	,000
	not attended	4,16	,513		
Assertiveness	not attended	3,16	,733	2,378	,019
	attended	3,49	,542		
Asking questions	not attended	3,44	,864	6,187	,000
	attended	4,42	,553		

In communication, the respondents who attended the NLP training pay more attention to and use nonverbal communication, they can better listen to a partner and pay enough attention to the partner. From the point of view of body language, the respondents who attended the NLP training claim that they pay attention to the body language of the others in a conversation. They think that their nonverbal expressions are developed at a high level and their body language reveals more about their inner attitudes than a verbal speech. From the point of view of active listening, they focus on their partner, with their verbal and nonverbal expressions they show their partner that they pay attention to him/her and they think that their ability to listen is at a high level.

In the factor of asking questions, statistically significant differences were recorded in all items which create the factor.

Table 2 Differences in perceiving communication skills from the point of view of individual items; own elaboration

	NLP training	Average	St. dev.	T-test	Sig.
1. In conversation, I pay attention to the body language of my counterpart.	not attended	3,65	1,14	-3,77	0,00
	attended	4,39	0,84		
2. There are situations when I consciously suppress my own negative body language signals.	not attended	3,28	1,24	0,22	0,83
	attended	3,22	1,29		
3. Body language often says more about emotions and inner attitudes than verbal speech.	not attended	3,91	1,03	-2,44	0,02
	attended	4,39	0,90		
4. Nonverbal accompaniment of my verbal speech follows the rule of the golden mean.	not attended	3,15	1,01	-2,89	0,01
	attended	3,78	1,15		
5. My nonverbal communication skills are at a high level.	not attended	2,82	1,13	-5,13	0,00
	attended	3,83	0,85		
6. When listening to my partner, I focus myself on verbal as well as nonverbal displays of the partner's speech.	not attended	3,69	1,19	2,570	0,01
	attended	4,17	0,70		
7. Even if I have a problem to listen to my partner, I control myself and do not show my indifference	not attended	3,16	1,19	-0,88	0,38
	attended	3,39	1,36		
8. When listening to a speaker, I show with my verbal and nonverbal expressions that I pay attention to the speaker.	not attended	3,46	0,98	-2,84	0,01
	attended	4,06	1,09		
9. Listening is for conversation very important therefore I pay a great attention to it.	not attended	3,78	1,06	-6,31	0,00
	attended	4,72	0,45		
10. My ability to listen is at a high level.	not attended	3,53	1,03	-5,38	0,00
	attended	4,44	0,70		
11. I always try to achieve the satisfaction of both sides in communication.	not attended	3,72	1,03	-5,18	0,00
	attended	4,56	0,61		
12. If it is needed, I can say no in every situation.	not attended	3,03	1,21	-3,34	0,00
	attended	3,72	0,88		
13. If somebody behaves to me unfair, I would tell him/her about it.	not attended	3,16	1,29	-1,42	0,16
	attended	3,50	0,85		
14. There are situations when I must behave aggressively.	not attended	2,54	1,54	1,58	0,12
	attended	2,06	1,41		
15. I am open and decided by expressing my positive and negative feelings towards the other side.	not attended	3,34	0,97	-1,46	0,15
	attended	3,61	0,77		
16. In communication, I use one of the techniques of asking questions.	not attended	2,85	1,44	-5,52	0,00
	attended	4,17	0,97		
17. By asking appropriate questions, I get precise information.	not attended	3,50	1,09	-5,70	0,00
	attended	4,50	0,70		
18. I ask questions to have a clear idea what my communication partner thinks.	not attended	3,60	1,00	-5,69	0,00
	attended	4,50	0,61		
19. I realize that by asking wrong questions, I can disrupt communication.	not attended	3,99	0,86	-3,94	0,00
	attended	4,56	0,61		
20. My skill to ask questions is at a high level.	not attended	4,17	0,70	-2,57	0,01
	attended	4,39	0,84		

The respondents who attended the NLP training scored again higher. The participants in NLP trainings realize that questions are very important in communication and that it is very important to pay a great attention to them. In communication, they use the techniques of asking questions and by asking appropriate questions, they get precise information. They realize that by giving inappropriate questions, they can disrupt the communication and therefore, they want to have a clear idea of what their communication partner thinks.

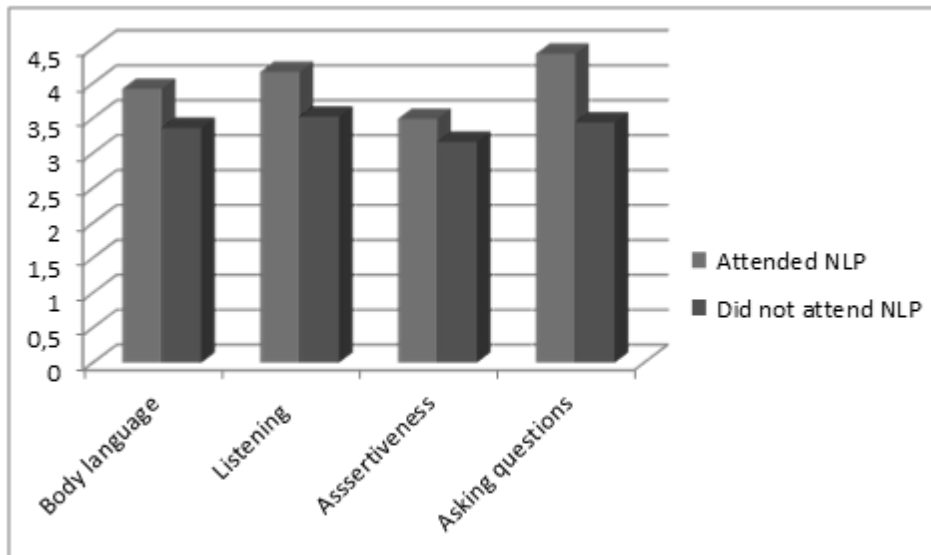


Figure 1 Differences in perceiving communication skills from the point of view of general factors

The respondents who attended the NLP training differ in their assertiveness from those respondents who did not attend the NLP training only in several indicators. In communication, they always try to achieve the satisfaction of both sides and if needed, they can say no in every situation.

Based on the presented results and findings, we can think about the knowledge gained by attending the NLP training as the knowledge which helps to improve communication skills.

#### 4 Discussion

Many authors and users of NLP techniques have an opinion that NLP improves communication. Considering the mentioned, the aim of the research was to find out how the participants of an NLP training perceive communication in comparison to those respondents who did not attend an NLP training. We wanted to find statistically significant differences in perceiving their communication skills. In all discovered differences, higher scores were given by the respondents who attended the NLP training.

We recorded the biggest differences in statements related to asking questions. NLP offers a technique of unprejudiced questions. It is a technique by which it is possible to ask questions at a higher level or to get closer to the core of a problem.

Neuro-linguistic programming is not only about understanding communication with the other. It is first of all about understanding oneself. By understanding how our brain functions, we will be able to understand the behaviour of others. The purpose of giving information about NLP is to have a choice. Understanding communication from the point of view of NLP provides us with the possibility to find reasons how and based



on what people communicate the way they communicate or they behave. Whole communication takes place in our heads and it is therefore important to know that not circumstances but reactions to circumstances determine our behaviour in a given situation (Krištofovič, 2016).

One of the supporting researches in the area of NLP is also a research conducted in India which found out that NLP offers managers and employees a significant improvement in the effectiveness of work, understanding and motivation of other people, individually but also in groups (Singh, 2008). According to Tripathi (2012), by using NLP, we will understand our emotional and behavioural patterns of our behaviour. It is possible to apply them to improve interpersonal and intrapersonal skills of people. Through this, individuals can achieve results they thought were unreachable and can overcome obstacles in their personal development.

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## **Dystopia vs. reality: In the Intercultural context**

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### **Abstract**

In this paper I concentrate on teaching goals of intercultural competence. Teaching goals of intercultural competence as a competence as a complex interplay of inside and outside perspective. Knowledge of the cultural code, knowledge about the stereotype, which shape the perception of other culture, about partial cultures, subcultures and alternative cultures. A grasp on communication strategies gained in one's own culture.

**Keywords:** intercultural competence; stereotype; culture; communication strategies.

**JEL classifications:** Z1, Z12

**Article Classification:** Conceptual article

### **1 Introduction**

The phenomenon of multiculturalism is closely linked with the existence of the postmodern society. In connection with critical current social development trends, the role of multiculturalism in the paradigm of the factors of the society's structure and functioning is fundamental. It should be added that the term 'intercultural competence' is firmly established in the context of this phenomenon. Certainly it is not easy in the limited space of this essay to fully define the given terms but we can at least attempt to summarize them. Thus when defining the essence of this phenomenon, we have to take into account a multifaceted view of reality of today's world characterised by 'otherness' not only in terms of language differences but also in terms of a cultural code as an essential condition for the coexistence of diverse and often very different cultures. This coexistence has a direct or indirect influence on the everyday life of a society.

It is therefore very important, even existentially necessary, to make every effort to reflect both theoretically and practically on this phenomenon not only in order to understand existing cultural differences and to develop appropriate strategies to avoid

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cultural misunderstandings, but also to reduce cultural barriers between members of different groups to ensure peaceful everyday life. Of course, there are problems that cannot be avoided but these occur even in homogeneous societies. Given these factors, the phenomenon of multiculturalism is complicated and multifaceted, and requires interactions between several scientific disciplines: philosophy, sociology, pedagogy and the field of foreign language acquisition. When it comes to teaching foreign languages, it is necessary to abandon traditional language teaching methods that deliver grammatical structures of a language, such as the popular and most preferred grammar-translation method, and to integrate intercultural competence teaching into foreign language education which makes it a phenomenon that takes into account the 'otherness' of different cultural codes. This is also confirmed by the influential Slovak Germanist and linguist Martina Kášová: "The first step towards the culture-sensitive selection and preparation of subject matter or content is the production of new textbooks and teaching materials which focus on intercultural learning. Research clearly demonstrates that the language used in the classroom and a student's classroom behaviour are influenced by cultural factors. In order to develop appropriate teaching methodologies and approaches, there must be research into didactics and teaching methods, as well as their development, and also experts' willingness to adapt teaching practices to differences stemming from students' diverse cultural backgrounds. It does not mean there is or must be a specific teaching method, such as an African or Asian, whose perspectives on teaching are remarkably different to our European conception but there are various forms of education and teaching in each European country." (Kášová, 2003).

## **2 Dystopia vs. reality**

At first glance it may seem that the concept of interculturalism plays a key role in the definition of the postmodern society as the cornerstone of the ongoing process of globalisation and integration at the end of the 20th century and in the first decades of the new millennium. In fact, the concept as such has its roots in the period following the outbreak of the bourgeois revolution in France in the late 18th century. The primary significance of the French Revolution was that it brought about radical social structural changes and laid the groundwork for a new economic system which, naturally, led to an industrial revolution.

In Central Europe, the aforementioned issue became more important especially in the light of the refugee crisis in 2015. The crisis - even the failure of multiculturalism - had already been mentioned by German Chancellor Angela Merkel in 2010, which caused quite a stir not only in political circles but also among the general public back then. It was Merkel's remark that set the stage for arguments over refugee admissions and resettlement in European countries especially after 2015. Given the fact that society in this increasingly interconnected world is constantly developing, it is surely not easy to define or anticipate

In this context, Pascal Bruckner, an influential French philosopher, says: "In the 1960s, two major shifts transformed the right to happiness into the duty of happiness. The first was a shift in the nature of capitalism, which had long revolved around production and the deferral of gratification, but now focused on making us all good consumers. Working no longer sufficed; buying was also necessary for the industrial machine to run at full capacity. To make this shift possible, an ingenious invention had appeared not long before, first in America in the 1930s and then in Europe in the 1950s: credit. In an earlier time, anyone who wanted to buy a car, some furniture, or a house followed a rule that now seems almost unknown: he waited, setting aside his nickels and

dimes. But credit changed everything; frustration became intolerable and gratification normal; to do without seemed absurd. We would live well in the present and pay back later. Today, we are all aware of the excesses that resulted from this system, since the financial meltdown in the United States was the direct consequence of too many people living on credit, to the point of borrowing hundreds of times the real value of their possessions.

The second shift was the rise of individualism. Since nothing opposed our fulfilment any longer—neither church nor party nor social class — we became solely responsible for what happened to us. It proved an awesome burden: if I don't feel happy, I can blame no one but myself. So it was no surprise that a vast number of fulfilment industries arose, ranging from cosmetic surgery to diet pills to innumerable styles of therapy, all promising reconciliation with ourselves and full realization of our potential. "Become your own best friend, learn self-esteem, think positive, dare to live in harmony," we were told by so many self-help books, though their very number suggested that these were not such easy tasks. The idea of fulfilment, though the successor to a more demanding ethic, became a demand itself. The dominant order no longer condemns us to privation; it offers us paths to self-realization with a kind of maternal solicitude.

This generosity is by no means a liberation in every respect. In fact, a kind of charitable coercion engenders the malaise from which it then strives to deliver us. The statistics that it publicizes and the models that it holds up produce a new race of guilty parties, no longer sybarites or libertines but killjoys. Sadness is the disease of a society of obligatory well-being that penalizes those who do not attain it. Happiness is no longer a matter of chance or a heavenly gift, an amazing grace that blesses our monotonous days. We now owe it to ourselves to be happy, and we are expected to display our happiness far and wide." (Bruckner, 2011).

It seems that within this social change another agent is entering into the intercultural paradigm and gaining a universal character, especially given the deepening process of globalization and integration. This agent is becoming part of the paradigmatic chain and constitutes a potential shift by which a mature and rational individual is replaced by an individual characterised by immaturity, which paraphrases the opinions of French sociologist Michel Maffesoli who is also a principal theorist of postmodernity. He often remarks that whereas in the past the emblematic figure was that of a mature, rational and productive adult, in today's society it is the figure of the eternal child.

This is Michel Maffesoli's definition of postmodernity: "Postmodernity is a spiral. It is neither an infinite straight line - there is not just an evolution, but also a regression - nor a circle that repeats itself. People today want to combine technological advances with traditional values. Through mobile phones, which have become an essential part of modern life, we connect with our 'fellow tribesmen'. We gather around them just like primitives tribes gathered around totems. We have the need to belong to a nation, a region, or the place where we live, but at the same time, we use the Internet every day. We want everything, we have materialistic desires and pursue bodily pleasures but we are also deeply fascinated by spirituality, volunteerism. For me, postmodernity is like an oxymoron - we are like a tribe that uses modern technologies, we want this and we want that. Today, the emblematic figure is that of the eternal child. Everyone wants to dress young, talk young, look young. It is as though the old were obliged to imitate young people." (Maffesoli, 2012).

In view of relatively recent social changes in the post-Soviet states it may seem that the problem of multiculturalism arises in those Western European countries where

the principles of democracy are well established while the process of ever-deepening globalization and integration has become a decisive factor in the requirement for the spread of multiculturalism in the countries that broke free of the influences of the Communist ideology. This was also caused by the refugee crisis after 2015 and daily cross-cultural encounters that go hand in hand with it. Slovak society that is considered traditional, conservative and closed, which is in direct contradiction to multicultural requirements, will have to deal with this issue even though in the Central European post-Soviet space it is still seen as a marginal phenomenon. This should happen even though it is not a theme which has gained a universal character here in Slovakia – however much our society in the context of its development conditioned by social changes at the end of the 20th century and postmodern tendencies should be open to greater cooperation and respect of otherness, it seems that in essence, it is a society which prefers a conservative world view building walls on foundations of selfishness, prejudice and insular thinking. The problem is becoming more urgent especially since we cannot automatically rely on changes in societal attitudes just because the torch is being passed to members of the new generation. Since they did not grow up under a totalitarian regime but in an open world in which they are free from ideological constraints, they are expected to have an open mind and to use common sense - they are not weighed down by the ideological heritage of totalitarian regimes or by a repressive regime that does not favour any efforts to open up to the outside world. What relativizes this assumption, however is the fact that in their ranks the very problem addressed by Maffesoli's thoughts is most palpable. He speaks of the existence of the modern phenomenon of the eternal child that is a distinctive feature of today's generation of Millennials who, even though they cannot escape the inevitable and often desirable task of having to lead society, they paradoxically, as though in accordance with Maffesoli's concept of the eternal child refuse to accept the inevitable end of puberty and to take responsibility for further social development. The emerging generation are often characterized within this context by their need to gratify any need and desire without taking responsibility for long-term consequences.

With this in mind, fear arises within wider social discourse about what such a generational change may bring in terms of how society is led. On the one hand, it is the generation which - thanks to the chance to travel abroad without any restrictions - speaks foreign languages and also, having free access to information as the result of the removal of ideological shackles and the ability to use modern information technologies, has the ability to keep an open mind on social and political issues. On the other hand, these positively perceived social phenomena cause that young people today want everything, notably their own material security and comfort on the principle 'put your welfare above others' whose accompaniment is also impatience if things do not go their way without obstacles and if they do not get immediate gratification. A logical consequence of failing to satisfy these needs is among other things frustration or depression.

It is therefore a reflection of today's grim reality corresponding to concepts of dystopia as, on the one hand, the image of a society that promotes individualism, hedonism and egoism, which in accordance with the paradigmatic chain of dystopia versus reality is a paradox on the other hand in that the mentioned phenomena - even though they seem to be on taking on horrifying dimensions are actually balanced by new forms of interpersonal coexistence characterised also by generosity and solidarity. It is not possible within this limited space to explain the reasons for this tendency nor is it a priority of this work. However it does seem that despite the emergence of secularism in today's society, we can search for reasons for this state also within the

Christian values that are still alive in Slovakia. When it comes to this, Slovakia can be a shining example for other countries, which was also confirmed by the late Pope John Paul II who had paid 'grateful tribute' to all witnesses to the Gospel in Slovakia during his pastoral visit to our country.

It is necessary to note that even though Christianity is a traditional and inseparable part of Slovak collective consciousness, it seems that postmodernity is beginning to render the traditional ecclesiastical communities - whether they be the Roman Catholic Church or Protestantism as fundamental and doctrinal communities-obsolete. At the same time the justified impression arises that the intolerance and emphasis on differences characteristic of large church communities are balanced by a higher level of tolerance and ecumenical dialogue, illustrated for example by the fact that both Protestants and Catholics are now celebrating the 500th anniversary of the Reformation in spite of the fact that some beliefs of the Roman Catholic Church and Protestant denominations are in direct opposition to each other. The two churches are taking part together in various events, which is surprising despite the perceived multicultural spirit of today. This may serve as inspiration for the renewal and rejuvenation of certain churches during the 'dystopia' of the postmodern society.

It is also worth noting that answers to these questions can be found not only in theological writings of famous theologians of both Catholic and Protestant provenience but also in a modern form of social co-existence as well as in artistic literature, which is, after all, confirmed by British prolific novelist and essayist Salman Rushdie. Rushdie has been a victim of religious fundamentalism and persecution since 1989 when Muslim fundamentalists accused him of blasphemy and issued a fatwa against him. Paradoxically, Rushdie declares himself an atheist - a person who does not believe in the existence of a higher power. "We all carry many selves. We are kind to our children but cruel to our colleagues. We love God but despise people. We are aware and concerned about damage to the environment but let the lights on when leaving the house. We are serene but then mutate into hooligans during a football match. No matter how much we would like to defend our individual autonomy - an idea that has its roots in the Renaissance, which has probably been Italy's greatest gift to the world - the self is always free but at the same time imprisoned inside our personas. It is independent but at the same time it is not. No one is born 'tabula rasa' - we are limited but on the other hand are enabled to play the role of a prisoner or a free person. We sustain the belief that we can make decisions for ourselves and are morally responsible for them. Which is not completely incorrect, though we do not have the power to determine the framework within which we make a decision or have to make such a decision.

We - people nowadays as well as our ancestors - are paradoxical creatures. We are mortal but just like Shakespeare's Cleopatra we have immortal longings. This split is the lifeblood of our lives." (Rusbdie, 2011).

In order to at least partially clarify this issue, we need more than the answers of theologians or authors of artistic literatures - the search for clarification should be much more complex, and we also should not omit the voice of current office-holders and social representatives. Whether we see the world through an atheist or a believer lens, we also cannot omit the voice of Pope Francis who received the International Charlemagne Prize of Aachen, a European prize awarded for work done in the service of European unification, in 2016. In this context, we can legitimately assume that this prestigious prize represents the Pope's message of hope for Europe. The legitimacy of this assumption does not lie only in a very narrow understanding of Catholicism but also in the European Union's fundamental values and in everything that Europe has achieved. Regarding these values, the former president of the European Parliament

Martin Schulz and the president of the European Commission Jean-Claude Juncker issued a joint statement on the necessity to respect Europe's strengths and put emphasis on the fact that all EU countries need each other. According to them, there are three major current challenges facing the European Union: "The first challenge is to preserve the European way of life. In the world that is becoming increasingly interconnected, with many other regions and countries asserting themselves, we must all join forces because Europe is lagging behind the world average in terms of economic and population growth. Given a dire prospect that awaits the majority of countries in the European Union, the mere thought of nation states seems to be out of touch with reality.

The second challenge is to ensure peace and safety. As a united Europe, we can achieve remarkable results - as we have already done by reaching an agreement with the Islamic Republic of Iran and signing the Iran nuclear deal framework, or by signing the Paris Agreement. These examples should encourage Europeans to start acting as one on the world stage and also to take more responsibility. The world is becoming more chaotic, some would even say more dangerous.

The third challenge is to deal with migration. Nowadays, there are more people fleeing wars, conflicts and persecutions than at any time since World War II. Men, women and children are flooding into Europe to seek refuge from Assad's barrel bombs and Islamic State brutality. The scale of the challenge is so immense that none of the EU member states can overcome it on its own. However, as a continent with a population of over 500 million people, we can share responsibility for refugees. The Pope's visit to the Greek island of Lesbos was not just tokenism. Unlike the steps the EU member states have taken so far to deal with the refugee crisis, the Pope's gesture was a concrete act of solidarity and a call to action. 'Be sympathetic and love thy neighbour as thyself' ought not to be just a grandiloquent statement; these values only matter when they are truly embedded in everything we do." (Schultz, 2016).

A multitude of people who have dedicated their lives to helping others play an irreplaceable role in these humanitarian efforts. This way, they show a compassionate side of Europe to the world and especially to refugees. We can also say that solving the Refugee Crisis is a historic task and challenge to European politics since Europe is a continent that experienced firsthand the true horrors of trenches, barbed wire fences and walls surrounding the concentration camps.

The Argentinian Pope places a lot of trust in Europeans. He believes that people living in Europe have the potential to overcome European disunity. In this context, it is important to note that thanks to bridge-building and the ability to cooperate, Europeans have already demonstrated this potential. Nowadays, these teamwork skills might come in very useful. At the same time, the legitimate question arises as to what could be the main driving force behind unification - this question paraphrases the Pope's opinion that the difficult issues facing the European Union might serve as such force. One way and another, the essence of the issue lies in the drive of inhabitants of Europe towards creating a common multicultural continent.

Although the phenomenon of this postulated struggle and its final goal cannot be ignored in the context of modern society, we cannot forget about the fears connected with it and the parallels searched for in history and expressed by the highly apposite cliché "historia magistra vitae est" which we often associate with the collapse of advanced civilisations that once flourished and then fell apart - whether it be the Fall of the Roman Empire, the downfall of Nazism in Hitler's Third Reich or the Fall of the Soviet Empire. These concerns are currently not just the topics of everyday conversation but also the subject of serious scientific discussion among experts who believe that internal



contradictions and the fact that people have lost faith in the communities they belong to lie at the root of this phenomenon.

There are many publications that confront this issue. Out of all new publications, we should particularly mention the publication *Suicide of the West* written by British thinkers Robert Koch and Chris Smith. Their central concerns are questions touching on the existence of our postmodern society and whether, in its multicultural concept, it can provide answers to them: can we survive and prosper or are we doomed to a self-induced demise?

It seems that despite the real threats to contemporary world civilisation, there is always hope, especially when we realise what it lived through in the 20th century and at the beginning of the new millennium - not only Fascism, Nazism and Communism as, in essence, two identical totalitarian regimes, but also the financial crisis, the collapse of European empires and the rise of nationalist tendencies. This is the world of the United States as a global superpower, and of the European Union, which is quite successful in spite of all the negative phenomena accompanying its existence, as a major power. What is a paradox within this perception of modern reality is also a reality which in the above publication by the British authors is stated clearly through its analysis of recent centuries and the expected developments in the new millennium. These mainly reflect the view of members of this society on civilisation - Koch and Smith suggest that pride in our civilisation is beginning to disappear, which is not primarily caused by the economic situation or existence of an external enemy but by the loss of faith in thoughts that prompted the success of Western civilisation.

Values of Christianity, optimism, science, development, liberalism and individualism are the main ingredients of the West's success. According to Koch and Smith, the collapse of these values could probably cause the decline of the whole civilisation whose weakness primarily lies in liberalism in terms of the fight against terrorism. We should specifically draw our attention to potential but also real restrictions on individual liberties. On the one hand, the authors of the mentioned publication greatly appreciate liberal values, but on the other hand they point out that even though these values contributed to the abolition of slavery and discrimination, they seem to be dying today; "Indiscriminate respect for all cultures, all peoples and all views shades into acceptance of anti-intellectualism and anti-liberalism. If everything is relative, then anything - cannibalism, genocide - can be justified. Liberals can be soft touches. An attempt to see all points of view, filtered through the liberal mind, can lead to a belief that if fanatics such as suicide bombers hate us, then we must have done something terrible to generate this hatred. That way lies our own suicide." (Gális, 2011). It seems that these words are not just an idle threat or mere scaremongering. Although it is obvious that not everyone who is concerned with these issues has adopted a visionary perception of the relationship between reality and dystopia, we should not take such thoughts lightly. It is important to see how these themes have been explored in fiction and to consider how they are treated in individual ways.

The fact that literary texts should be considered an integral part of collective consciousness is also proved by the works of American writer Harper Lee. It is remarkable that the message she conveys through her novels -even though they were written in the sixties- is relevant even in today's postmodern society whose essential feature is the concept of multicultural coexistence. Here we should above all mention two of Lee's novels - *To Kill a Mockingbird*, which won the Pulitzer Prize in 1961, and *Go Set a Watchman*. The latter was written much later but the order does not matter. What is important is the story setting - it takes place in a small town whose inhabitants follow a provincial way of thinking. Racial segregation and injustice are illustrated by

trial of a black man who has been accused of raping a white woman. A defence lawyer, whose character was modelled on the author's father, believes in his innocence. He defends his client despite the other townspeople's disapproval and his moral courage is one of the most significant themes in the book. His closing argument - a passionate plea for racial prejudice reduction - sounds inspirational even in today's world. It seems that in her novels Harper Lee foresees the phenomenon of multiculturalism in modern societies although the place of blacks in her works could be substituted by practically any minority group. We should note that the story is narrated by a child who is free of all prejudices and hatred towards otherness.

### 3 Discussion

The author develops similar ideas also in her second novel. While in her previous book, *To Kill a Mocking Bird*, Lee uses a child's perspective, *Go Set a Watchman* unfolds through the voice of a grown woman narrator. However, the perspective does not matter. What is important is that the novels revolve around the Southern way of life; calls for racial segregation in schools or for racially segregated public transport in the hypocritical belief that God created racial diversity and that white people were privileged, which led to a segregation of blacks under the banner 'Christian civilisation must maintain its racial purity.'

Little by little, the story itself is being neglected in favour of the characters' opinions and arguments, which we can illustrate with the following passage: "And speaking of God, why didn't you make it very plain to me that God made the races and put the black folks in Africa with the intention of keeping them there so the missionaries could go tell them that Jesus loved 'em but for 'em to stay in Africa? That us bringing 'em over here was all a bad mistake, so they're to blame? That Jesus loved all mankind, but there are different kinds of men with separate fences around 'em, that Jesus meant that any man can go as far as he wants within that fence - " (Ballová, 2016).

Our narrow-mindedness is probably the cause of our rejection and dislike - sometimes masked, but many times undisguised- of otherness based on race, religion or opinion that we do not consider right. It happens even in today's postmodern society that promotes multiculturalism and makes it a high priority. However, it also shows that literature is timeless, which is proved by the literary work of Harper Lee, whose ideational message foreshadows human small-mindedness, arrogance and rejection of everything that goes beyond our narrow-minded thinking. Her message is not just a statement but also an appeal to some kind of holy right to condemn, to know and to go beyond the imaginary boundaries of conservative prejudice that has nothing to do with rationalism and moral principles.

The aforementioned literary works speak volumes to today's reader even though they were written in the second half of the 20th century somewhere on the other side of the Atlantic Ocean. However, the place of publication does not matter. What is important is a return: s return to genuineness and naturalness and to a life without lies and hypocrisy. It is also a call for faith in human goodness and a command not to judge others, which was also mentioned by Pope Francis at the beginning of his pontificate, already in the new millennium, when he asked himself who he was to judge other people. It is also one of the possible partial answers to the question as to what is the essence of multiculturalism in the 21th century.

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## **Session C:**

**Tourism – history, present time and future**

## Tourism in the Czech-Polish Border Area of Euroregion Nisa

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### Abstract

The aim of the paper is to mark out the surroundings of the tourist regions of the Czech-Polish border area of Euroregion Nisa and to point out the attractions and interesting features of the regions. In 2016, the Faculty of Economics at the Technical University of Liberec carried out a joint project with Uniwersytet Ekonomiczny, Wydział Ekonomii, Zarządzania i Turystyki w Jeleniej Górze in Poland, as part of which joint research was conducted into tourism in the Czech-Polish area. The paper will summarise the constituent results of research, which students carried out in individual parts of the tourist regions.

Keywords: region; attractions; marketing research; cross-border travel.

JEL Classification: M31, Z32

Article Classification: Research article

### 1 Introduction

Tourism has become an extremely dynamic industry, and as such deserves the requisite development and care. It is recognised throughout the world as being a special sector of the economy as a result of its financial impact on economic growth. The term tourism is now used to show the economic significance of such activity. (Tomic, et al., 2012)

It is a well-known fact that the economic functions of tourism are very important from the perspective of economic development and that tourism plays a significant part in reducing global malfunctions in a national economy (Janičková, 2008).

Regional tourism policy is based on a set of conditions, among them the attractive tourist potential, integrated marketing and management, proper and fair

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cooperation between the private and the public sector, the existing organisation structure of tourism at a national, regional and local level, the regional information system and the positive opinion of the population to the development of tourism (Dědková, 2014)

Competitive potential can be divided into two parts: the social and environment conditions in the regional economy and the attractiveness of tourism. (Gryszel, 2015, Hong, 2008) Determining features in terms of attractiveness are of extreme importance and have indirect impacts on the basic categories; these can be changed over a longer period of time. Social and environmental factors can be developed within the short-term and can be used to directly influence the fundamental categories of tourism. (Papp, 2011)

At a time of global competition, when a range of alternative products and tourist destinations are on offer, what a destination has to offer (natural and historic attractions), the offer of services derived from this (infrastructure and human factor) and, above all, the quality of services combine to provide a strong competitive advantage. (Papp, 2011) It is precisely under such conditions that it is appropriate to apply key customer management as a differentiated approach to a customer with a special offer of cooperation. (Poliačiková, 2012)

The demands placed on the quality of services rise together with the development of society. A strategy which focuses on the quality and differentiation of the offer therefore plays a decisive role in traditional tourist destinations. Quality is a broad term and can be considered from many angles. It stands in general that quality is that which the customer wishes plus that which the destination or provider of services wants to and is able to offer in addition to this. At the same time, quality is a factor that is interwoven with all dimensions that combine to create value for the customer in tourism. (Červová, 2013)

Quality in tourism does not only concern the services provided, but the entire chain – from properly set up, offered and mediated product, and provision of information about this and about the destination, to the faultless provision of all services. A definition of quality must be combined with an analysis of costs and revenues. (Ryglová, 2011)

The political situation is currently changing in a number of international tourist destinations and this brings about changes in terms of which destinations visitors choose.

The proximity of Poland led the Department of Marketing and Trade at the Faculty of Economics of the Technical University of Liberec to its decision to conduct primary research into how each side of the Czech-Polish border area visits the other side. The Faculty of Economics works with Uniwersytet Ekonomiczny, Wydział Ekonomii, Zarządzania i Turystyki w Jeleniej Górze in Poland, meaning that the research was carried out on both sides of the border. **The aim of the paper is to identify the most important tourist attractions in the Czech-Polish region and, based on primary research, to uncover the outcome of cross-border travel.**

The Czech-Polish border area that is under consideration is part of Euroregion Neisse – Nisa– Nysa. This Euroregion was created in 1991 in the area in which the Czech Republic, Germany and Poland border each other. All three parts of the region are united by many common problems and interests. (BusinessInfo.cz, 2011)

The Czech part of the Euroregion takes in four tourist regions: Bohemian Paradise, Česká Lípa area, the Krkonoše Mountains and Jizera Mountains. Its natural formations and attractions, historic monuments and cultural institutions, sport

complexes and facilities make this area a significant one for recreation and tourism. (Liberecký kraj, 2017)

The Polish part of the Euroregion encompasses 51 communities of Województwo dolnośląskie (Lower Silesian Province). It is a medium-sized province with a denser population that is divided into 26 districts and 4 city districts. The capital of the province is Wrocław. (Euroregion Nisa, 2014)

## **2 Material and methods**

Cross-border tourism can be understood as an indicator of a common economic space. (Cimlér et al., 2014) Each region that wants to be successful must find its own competitive advantage, on which it can base and build its future. Marketing research shows that competitive advantages change over time. What do remain, however, are the values offered and originality in the sense of the added value for a region, community, its people, customers and other involved parties. (Budaj et al., 2015)

Tourism in border areas is divided up according to several criteria, primarily according to social-psychological aspects, in which the predominating motivation of tourism is recreational tourism, cultural sightseeing tourism or tourism aimed at seeing natural attractions. Segmentation can also be made according to the age of the tourists – children, young people, the economically-active population and senior citizens. The "stay" aspect divides tourism into city breaks, rural breaks and spa breaks and, according to the length of stay, into short- and long-term. The way in which travel and accommodation are arranged provides a further classification – organised and unorganised. (Srovátková, 2012) The most common activities for which tourists travel to places in the Czech Republic are sightseeing and walking and sporting and social entertainment. What a destination has to offer must go hand-in-hand with a broad range of quality accommodation and catering facilities and with a developed infrastructure that makes it possible to reach the location with ease. Some regions are also popular as a result of less common activities, such as religious tourism, architectural monuments and wellness. The Czech-Polish area is able to boast excellent natural conditions for the development of tourism. From the perspective of tourism, the most attractive and most often visited national cultural monuments of historic interest in a location are, for example, castles, stately homes and religious monuments (churches, monasteries, etc.).

The most significant tourist attractions in the region at issue will now be described for the purposes of achieving the objective of the paper.

### ***2.1 The attractions of the Czech part of Euroregion Nisa***

Each tourist region of the Czech part of Euroregion Nisa is attractive as a result of many interesting features. There is considerable natural beauty here – part of the Krkonoše Mountain National Park lies within the area, there are 7 national nature reserves, 36 nature reserves, 68 natural landmarks and 3 nature parks. (Modrý, Sýkorová, 2004) The area is also home to the Bozkov Dolomite Caves, which are among the most popular places in Bohemian Paradise as a result of their stalagmite and stalactite caves and underground lake. (Sdružení Českého ráje, 2015) The larger rivers that flow through the Liberec region include the River Jizera (popular with water sportsmen and women) and the smaller River Ploučnice or River Kamenice. There are also several waterfalls in the area, the best-known including the Mumlava Waterfalls, among the most beautiful and mightiest waterfalls in the Czech Republic, which lie in close proximity to Harrachov, a town that borders Poland.



There are several ski resorts in the border areas of the Krkonoše Mountains, whilst the Jizera Mountains are home to some excellent cross-country skiing tracks. There are also plenty of cycling trails for cyclists, including the international Odra – Nisa trail that runs through three countries – Germany, the Czech Republic and Poland. The area is also home to countless viewing towers. (Euroregion Nisa, 2014).

The Jizera Mountains can boast some important natural locations, among them its peat moors, places of interesting flora and streams with several smaller waterfalls.

Sandstone rocks are typical of Bohemian Paradise, combining to form large rock towns, the most significant of which is the Hrubá skála rock town that holds around 400 sandstone towers. There are also several rock viewing points at various stages along the path that looks down on the rock town, which is part of “Bohemian Paradise Gold Trail”. (Sdružení Českého ráje, 2016)

The limitations to the length of the paper make it impossible to mention all the attractions in the area at issue, meaning that only the most important will be chosen.

### *2.1.1 Castles and stately homes*

The Czech part of Euroregion Nisa is filled with historic monuments as a result of its long tradition of royal and aristocratic families.

The most popular castles and stately homes include the castles of Bezděz, Grabštejn and Lemberk, the rock castle of Sloup v Čechách, the stately homes of Sychrov, Frýdlant, Hrubý Rohovec and Zákupy and the castle ruins of Trosky, Frýdštejn, Valdštejn, Ralsko, Rotštejn, Bradlec and Zbirohy. There are also many examples of folk architecture in the area. (Sdružení Českého ráje, 2016)

Most castles and stately homes are open to the public and provide regular tours of their interiors. They also frequently stage special events, such as thematic or night-time tours, and cultural and social events, such as theatre performances, concerts, markets and so on. (Atlas Česka, 2015).

### *2.1.2 Religious monuments*

The most significant religious monuments include the Church of St. Anthony the Great in Liberec, with its dominant 70-metre steeple, the Church of the Invention of the Holy Cross and the Church of Mary Magdalene. Visitors to other districts can also visit examples of religious architecture; for example the Plague Column in Jablonné v Podještědí. However, the most important religious building in the region is without doubt the Basilica of St. Lawrence and St. Zdislava in Jablonné v Podještědí. The unique monastery church is home to the remains of St. Zdislava and the church was awarded the status of Papal Basilica Minor in 1996. It is rightly the dominant feature of the town.

### *2.1.3 Museums and galleries*

North Bohemia is well-known for its glassmaking industry. Although the industry has gradually declined, there are still many enterprises that have upheld the tradition and whose products are still popular. It is in such areas that we usually find museums of glass and jewellery, such as the Glassmaking Museum in Nový Bor or the Museum of Glass and Jewellery in Jablonec nad Nisou. Natural museums and museums of local history are also popular, such as the Krkonoše Museum in Jilemnice and the Museum of Local History in Česká Lípa. There are also museums that focus on specific

areas of interest, such as the Bohemian Paradise Museum in Turnov or the Museum of Teddy Bears and Dolls in Troskovice. (Sdružení Českého ráje, 2016)

#### *2.1.4 Technical monuments*

The dominant feature of the area as a whole is Ještěd Mountain, which has a television transmitter at its summit. In addition to this function, the structure, designed by architect Karel Hubáček, serves as a hotel and restaurant. The breweries in the region that provide excursions and beer tasting include the Svijany brewery, the Konrad brewery in Vratislavice nad Nisou and the Rohozec brewery in Turnov. Other technical monuments that are worth visiting include the raised walkway on Rieger Trail, Burst Dam on the River Bílá Desná, the hydroelectric plant in Liberec-Rudolfov, the observatory in Turnov, the viaduct and water tank in Sychrov, the astronomical clock in Kryštofovo Údolí and Giant Barrel restaurant and hotel at Javorník.

#### *2.1.5 Other places*

Tourists can pay a visit to the Zoo in Liberec, the oldest zoo in the Czech Republic and home to a rarity – a white form of the Indian tiger. Other tourist destinations include the Botanic Gardens in Liberec or the Aquapark and IQLANDIA at Babylon entertainment centre, Liberec. There are several reservoirs and dams in the region, including Bedřichov, Fojtka, Liberec-Harcov, Souš and Mšeno, commonly known as Jablonec Dam. (Turistik, 2015) The highest concentration of ponds is found in the Česká Lípa area, the best-known of these being Mácha's Lake. Visitors in search of learning, peace and quiet or medical procedures can head to one of the two spa resorts in the region - Lázně Libverda and Lázně Kundratice, where illnesses of the motor apparatus, heart, blood circulation and rheumatism are all treated. (Liberecký kraj, 2017)

It is clear from all the tourist destinations mentioned above that the Czech part of the area truly does have something to offer all tourists, irrespective of age or preference. The shape of the landscape, with its many mountains, provides the opportunity for enjoyment during winter and summer. Historic monuments of all kinds are scattered throughout all tourist areas of the region. In spite of being small in size in terms of the Czech Republic as a whole, this area is very popular with tourists, a fact witnessed by its visitor figures. A total of 863,520 guests travelled to the Czech part of Euroregion Nisa in 2016, 27,886 of them Poles. (ČSÚ, 2015 b).

There are 53 tourist information centres on the Czech side. (Liberecký kraj, 2016).

## **2.2 Attractions on the Polish side**

Poland is a common destination for tourists, who come to see the beauty of the cities and their historic monuments and for the more remote beaches during the summer. The Polish part of Euroregion Nisa takes in the northern slopes of the Krkonoše Mountains as far as Kłodzko Valley and is enjoyed a great deal during summer and winter alike. There are excellent conditions for winter sports here, summer hiking and climatic spas. The best-known centres are Karpacz and Jelenia Góra.

The capital of Lower Silesia, the area under consideration, is Wrocław, which stands on the River Odra. (Gryszel, 2014) It boasts a large Old Town, built on several islands and connected by more than one hundred bridges. There are a great many

Gothic, Baroque, and Art Nouveau structures to be seen here. Visitors are also attracted each year by several music and theatre festivals. The city is home to the Gothic Cathedral of St. John, the Renaissance buildings on market Square, the Baroque university and many fine examples of Art Nouveau and Functionalist architecture.

### *2.2.1 Castles and stately homes*

Many Polish castles were home to affluent families in the past. The medieval structures that were later reconstructed contain elements of Renaissance, Baroque and neo-Gothic architecture. Collections of art, furniture, fabrics and weapons can be seen inside. Nowadays, visitors are able to visit such places as part of regular tours or attend interesting cultural and other events that are organised on the grounds of castles and stately homes. Tourists are able to sample the specialties of Polish cuisine or take part in various cultural programmes that present the atmosphere of the past. One of the most popular mountain resorts is Karpacz, which is located in the district of Jelenia Góra on the northern slopes of the Krkonoše Mountains. The biggest tourist attraction here is Vang church, the only Romanesque Nordic structure in Poland. This church was originally built at the turn of the 12th century in southern Norway, but was purchased by the Poles during the 19th century and transported. It is now one of 23 churches of this kind that remain preserved to this day. Karpacz is a starting point for hiking and is located on the edge of the Krkonoše National Park, most hikers from there heading to Sněžka Mountain. More than 200 thousand tourists visit Karpacz every year.

Szklarska Poręba is another recreational, sporting and tourist resort in the southwestern part of the country, on the boundary of the Jizera Mountains and the Krkonoše Mountains, not far from the state border with the Czech Republic. One popular destination here is Kamiencyka waterfall, the highest waterfall on the Polish side of the Krkonoše Mountains. Other attractions include the Dinopark and the glass museum at the Julia glassworks. There are many other, mainly natural, attractions in the surroundings of the town. Szklarska Poręba also has a good infrastructure, with a wide range of accommodation and catering facilities to choose from.

There are 12 spas in Lower Silesia, the largest of these including Polanica Zdrój, Duszniki Zdrój, Jelenia Góra-Cieplice Zdrój, Ladek Zdrój, and Swieradow-Czerniawa.

The attractiveness of the region as a whole is matched by its accommodation capacity. There were 1,313 accommodation facilities within the Czech-Polish part of Euroregion Nisa at 31.12.2015, with almost 76 thousand beds. The highest number of beds per 100 head of population is found in the Krkonoše Mountains, while the figure is 27.7 beds in the Jeleniogórski district. (ČSÚ, 2015a) Visitors can choose from a wide range of facilities in all locations here according to the type of activity they favour. Quality, availability and capacity are the factors applied when making a choice. Tourists can choose from hotels, guest houses, camps, tourist chalets, holiday complexes and hostels. There are also places for visitors that decide to spend their holiday time on a ranch or farm.

There is clearly a higher concentration of accommodation facilities in the mountains resort on the Polish side of the Krkonoše Mountains, while the northern Polish part of the Euroregion is not as attractive from the perspective of tourism. In contrast to this, the Czech side is more homogenous, in that the entire region is attractive (Euroregion Nisa, 2014).

### **3 Processing and compilation method**

Secondary sources of information and primary research on the Czech and Polish sides of Euroregion Nisa were used to write the paper. Secondary sources led to a listing of selected attractions in the area in question. Primary research, meanwhile, was conducted by students at the Faculty of Economics at the Technical University of Liberec and at UE Wydział Ekonomii, Zarządzania i Turystyki w Jeleniej Górze in Poland. Quantitative data collection was the method chosen, in the form of a written questionnaire.

The structured questionnaire had several sections to ensure that all objectives of the research were achieved. This paper looks at the frequency of journeys made to the border area, the destination of border area visits and the satisfaction or otherwise of tourists on their travels.

Research was carried out in 2016 in the Czech-Polish part of Euroregion Nisa. Logical methods, analyses and a comparison of the results for both countries were used during compilation. The results are provided in the form of tables. A Pearson chi square test was used to evaluate sorting questions (sex, age, education) in order to find out whether there were any statistically significant differences in the answers provided by respondents. Critical values are not presented in the paper, only the p-value, and tests were conducted at a significance level of  $\alpha=0.05$ . The hypothesis defined was as follows:

- H0: There are no statistically significant differences in answers to the sorting question.
- H1: non H0

### **4 Results and discussion**

Marketing research was carried out among a research sample of 320 respondents living in the Czech Republic and 180 respondents living in Poland. The sample was chosen at random. The group in question can be characterised in more detail based on the sociodemographic criteria stated in Table 1.

The sample of Czech respondents consisted of 216 women (67.5 %) and 104 men (32.5 %). The largest group of respondents (51 %) came from within the 18-29 age range, the next largest group (15.7 %) coming within the 30-39 age range. Ten per cent of respondents came from the 40-49 category. 11.2 % of respondents came from the 50-59 category, while the lowest representation was found in respondents under 18 (7.1 %) and respondents older than 60 (5 %). Over half of the respondents had university education (55.9 %), secondary education 41.1 % and primary or college education 3 %.

One hundred and eighty respondents took part on the Polish side of Euroregion Nisa, of them 62.8 % (113) were women and 37.2 % (67) men. The majority of Polish respondents, 57 %, belonged to the 18 – 29 years group. 17.2 % of respondents were aged between 30 and 39, 10 % of respondents between 40 and 49, 8 % of respondents were part of the 50 – 59 years age group and a negligible share of 3 % of respondents were under 18. 4.8 % of respondents were over 60. 48 % of the respondents had secondary education, 47 % university education and 5 % primary education.

Statistically significant differences were identified in gender and education from Czech respondents and education from Polish respondents, where by the H0 hypothesis can be rejected and the H1 hypothesis accepted. There are no statistically significant differences in the evaluation of respondents for the other sorting questions.

Table 1: Sorting criteria of respondents; own elaboration

		Czechs		Poles	
		Frequency	%	Frequency	%
gender	male	104	32.5	67	37.2
	female	216	67.5	113	62.8
		320	100	180	
Total		p-value = 0.02355		p-value = 0.09781	
education	University	178	55.9	84	47
	Secondary	132	41.1	86	48
	Apprenticed	10	3	10	5
		320	100	180	100
Total		p-value = 0.00956		p-value = 0.01027	
age	under 18	23	7.1	5	3
	18-29	163	51	102	57
	30-39	50	15.7	31	17.2
	40-49	32	10	18	10
	50-59	36	11.2	14	8
	60 and over	16	5	10	4.8
		320	100	180	100
Total		p-value = 0.08951		p-value = 0.12317	

We were first interested in whether the respondents had already visited the neighbouring country. 87.5 % of respondents had visited Poland at least once. Approximately 22.5 % of respondents stated that they had not yet been to Poland. Over 67.6 % of respondents stated that their journeys were day trips, a quarter had spent at least a week in Poland and 3.4 % go to Poland regularly for work or studies. Around 4 % of respondents had spent more than a week in Poland. The places most commonly stated were as follows: the close border area, the sea and lakes and, in third place, the mountains. A more detailed division of visitor destinations is shown in Table 2.

Table 2 Main visitor destinations; own elaboration

	Czechs %	Poles %
Shopping centres. markets and shops	49.3	19
Other cities (Karpacz. Jelenia Gora. Liberec. Jablonec nad Nisou. etc.)	27.8	49.2
Cultural and historic monuments – castles. stately homes	18.7	43
Spa towns. etc.	16.9	22.1
Natural attractions	15.5	6
Transit country	9.4	7.6
Capitals – Warsaw. Prague	8.7	63.3
Visiting friends. family	3.6	2.8
Religious monuments	3.5	17.4
Technical monuments	1.9	6.5
Cultural. sporting events	1.3	1.2

It was found on the Polish side that only 4.3 % of respondents had never been to the Czech Republic. Poles not only travel for sightseeing and day trips, but for longer holidays and entertainment. Over one-half of respondents (61.5 %) had spent one day in the Czech Republic, 23 % one week and around 7 % longer than one week. Approximately 8.5 % of respondents stated that they return to the Czech Republic for work or studies. To Poles, the Czech Republic is a very attractive destination, and one

to which they return. When Poles travel to the Czech Republic, most go not only for day trips, instead travelling for sightseeing in other places in the Czech Republic, where they see other cities and historic monuments. In terms of the countryside, they most often visit the Krkonoše Mountains.

It is clear from the table that Czechs continue to visit markets and shops the most – of the 280 people who had travelled to Poland, a total of 49.3 % went for the shopping. Only 9 % of respondents had been to the capital, Warsaw. 28 % of respondents had been to other cities, such as Karpacz or Jelenia Gora. 19 % of respondents visited cultural and historic monuments and around 17 % spa towns. Half of the respondents that travelled to Jelenia Gora visited natural attractions such as the Kamienczyka waterfall.

Most interest among respondents, therefore, is in shopping tourism, which is based on geographical position, quality foods and favourable prices. When Czechs decide to go to Poland for sightseeing, they generally choose cities other than Warsaw. The Polish capital is further from the Czech border than other historic cities, which are more popular. Czechs mentioned the mountains and the sea as their favoured natural attractions. By contrast, the least common reasons for travel were sport, sporting events, family and friends. Approximately 9 % of respondents indicated Poland as being a transit country.

The main destination among Poles on their visits to the Czech Republic was Prague, a total of 63 %, with a total of 49 % of Poles visiting other cities and towns, for example Liberec, Jablonec nad Nisou, Harrachov and other border towns. Prague is very attractive to the Poles and is a city they enjoy from a cultural and entertainment perspective. Historic monuments and attractions were a destination for 43 % of respondents. In terms of historic monuments, respondents most commonly mentioned the stately homes of Frýdlant and Sychrov. Although the number of Polish tourists is falling, it was found that a total of 22 % of respondents visit a spa town, primarily Lázně Libverda, during their stay. Respondents from the 50 years plus category were most common here. Around 19 % of respondents came to the Czech Republic for shopping, a far lower figure than among the Czechs that travel to Poland. 6 % of respondents are attracted by the Czech mountains and winter sports and around 3 % of respondents came for work and studies. Almost 17 % of Polish respondents paid a visit to a religious monument, including the basilica in Jablonec v Podještědí. Almost all of the respondents that had visited Liberec had been to the technical monument of Ještěd.

The least common reasons to travel were shown to be work, visiting relatives and friends and school. This is almost identical to the answers provided by the Czech respondents.

Only 6.8 % of respondents had travelled to Poland through a travel agency, the remaining 93.2 % of people having gone on their own. When Czechs decide to go to Poland, they usually go for a day trip, meaning they do not need to use accommodation services.

Only 16 % of the Poles asked travelled to the Czech Republic through a travel agency, the remaining 84 % predominantly going on their own. It is clear from this that Poles too travel individually, the reasons for this being the lower cost and greater level of independence.

Respondents stated that they prefer travelling without any pre-arranged catering or transport. When travelling, they prefer to stock up on supplies before they go or to buy something at the destination.

Czech tourists are more critical of the level of services in tourism than visitors from abroad. Foreigners state satisfaction in 80 % of cases, but Czechs in only 67 %.

Each tourist expects something different from the destination he or she is visiting, each has a different priority. If these priorities are not met, tourists can easily become dissatisfied. One question focused on the satisfaction and dissatisfaction of tourists in the foreign environment.

Czech respondents most commonly complained of the poor infrastructure (29 %), the level of prices in tourism (26 %) and the conduct of travel agencies (23 %). Respondents also stated dissatisfaction with traffic signs and disorder in towns.

By contrast, respondents were most satisfied with the pleasant people working in tourist services and at information centres, with the quality of goods, the favourable prices of goods, the monuments, Polish cuisine, transport accessibility, the similarity of the languages, the culture, willing tour guides and willing sellers.

Polish respondents were most satisfied with catering, accommodation and cleanliness, order and the information obtained at information centres. They were dissatisfied with public toilets and the quality of the roads and there were even responses that appeared which stated dissatisfaction with the attitude of the locals and the prices of certain services.

## **5 Conclusion**

Border areas are influenced by cross-border visits, which are usually short-term in nature. Shopping, seeing natural attractions, commuting to work, visiting friends and relatives, attending cultural and social events and transit transportation are all involved. Information centres should provide information in more than one language, primarily in German and Polish. Border regions should take a common marketing approach through their information centres. They should create joint publicity materials in order to promote tourism and should present themselves together at tourism fairs.

Poland and the Czech Republic have plenty to offer each other. Geography ensures that they have excellent transport accessibility to each other. At present, the range of services on offer from travel agencies more or less copies the demand of tourists from both countries. This range includes the most common tourist destinations and the services most commonly demanded. Of course, this must be updated in the future, broadened, changed and made more attractive to young people. Young people are naturally the future of tourism and they will form their own opinions about destinations and not be influenced by others. According to our findings, the 18—29 year group accounted for more than half of the respondents that had not yet visited the neighbouring country. This age group likes travelling, and often, and is happy to discover new places, meaning that tourism organisations should direct their communication at this category.

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## Evaluation of tourism in Poprad in the years 2014-2016

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### Abstract

The aim of the paper is to evaluate the tourism in the city of Poprad and to quantify the requirements of the customers based on the data of the Poprad Municipal Information Office for the period 2014-2016. The article also focuses on finding facts through records of the number of visitors in the Slovak Republic in 2016. In conclusion, it points to the economic aspect of tourism in the city of Poprad, through the examination of the final accounts of the city for the period 2014-2016.

Keywords: tourism; Poprad; visitors; GDP; information; final accounts.

JEL Classification: L83, R58

Article Classification: Research article

### 1 Introduction

The importance of the tourism industry is steadily rising. Significant indicators of tourism are its impact on the balance of payments, employment development - job creation and a positive impact on the economic and social development of regions. Due to its dynamic, low investment and import demand, as well as a high share of manual work, tourism is one of the decisive instruments for reducing unemployment and regional development. The most significant contribution of tourism to the economy of the state is its foreign exchange effect.

Tourism, according to the World Tourism Organization (UNWTO), represents a global contribution to GDP of 3-5%, employment of 7-8%, exports 30%, unfortunately still lacks sufficient political and economic recognition.

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Tourism in Slovakia represents the potential that can positively influence the country's economy. According to information from the Statistical Office of the Slovak Republic, more than five million guests were accommodated in the Slovak Republic in 2016, an increase of 16% compared to 2015. For the first time this year, the five-millionth threshold of visitors was exceeded. Sixty percent of visitors were home visitors (14.9% increase), the remaining 40% foreign visitors (an increase of 17.8%). One of the main reasons for increased traffic to the Slovak Republic last year was the international security situation that caused people to change their desired holiday destinations.

However, it is important to note that in absolute numbers of visitors the Slovak Republic is far behind its neighbors. For example, the Czech Republic visited five times more foreign visitors in 2015 and Austria more than four times as many visitors compared to the Slovak Republic. The reason for this state can be seen in the lack of state promotion (The Slovak Republic, as the only country in Europe, has remained without a national tourist board - a marketing organization that is in charge of promoting the country as a tourist destination. This function was previously performed by the Slovak Tourist Agency) versus the countries mentioned. However, we can not expect a change in this area in the near future because the perception of tourism by governments and the public in the Slovak Republic is to a great extent different from that of abroad.

## **2 Material and methods**

The analyzed period covers the period 2014-2016. During the processing of the analysis of the number of visitors in the Slovak Republic we used data from the Ministry of Transport and Construction of the Slovak Republic - tourism section as well as data from the Statistical Office of the Slovak Republic in processing the number of visitors in accommodation facilities.

We also worked with the World Travel Tourism Council data for 2016, on the basis of which we evaluated the Slovak Republic's position in the indicator travel & tourism's direct contribution to GDP.

On the basis of the internal materials of the Poprad Municipal Information Office for the period 2014-2016, we prepared a section on tourism in Poprad. In this part of the paper we worked with statistics on the number of visitors to the city of Poprad and with data on the structure of the surveyed information for individual years, as the purpose of the article is to quantify the needs of customers - visitors to Poprad.

When examining the economic aspect of the city of Poprad, we used the final accounts of the city for the period 2014-2016, which are publicly available on the official website of Poprad.

## **3 Results**

The following part of the paper includes an analysis of tourism in the Slovak Republic in 2016 and the subsequent assessment of the tourist potential of the city Poprad in 2014-2016.

### ***3.1 Tourism in the Slovak Republic in 2016***

As we mentioned in the introduction of the paper the tourism industry in 2016 in Slovakia saw a favorable development.

Figure 1 represents the proportion of visitors in the regions of Slovakia for the year 2016. The blue color is represented by home visitors to the country and red foreign visitors. The number of visitors has increased from all the most important markets, which are primarily neighboring countries and Germany.

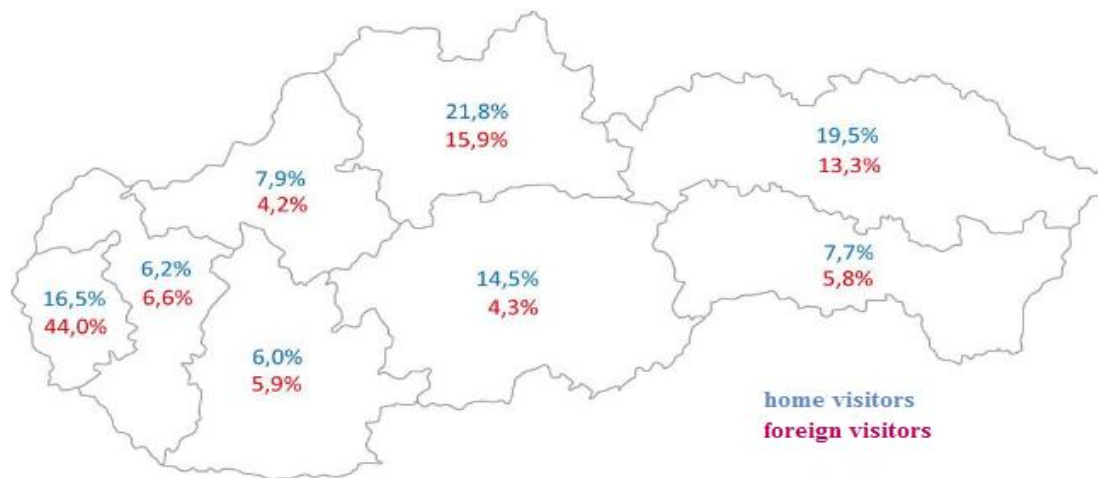


Figure 1 Share of visitors in individual regions of the Slovak Republic (in%); source: (Ministerstvo dopravy a výstavby Slovenskej republiky 2016)

From the region's statistics of visitors in 2016 it is clear that almost half of foreign visitors visited the Bratislavský region (44%). Visitors from the Slovak Republic preferred the Žilinský and Prešovský region. Together in these two regions 41.3% of Slovaks spent at least one night.

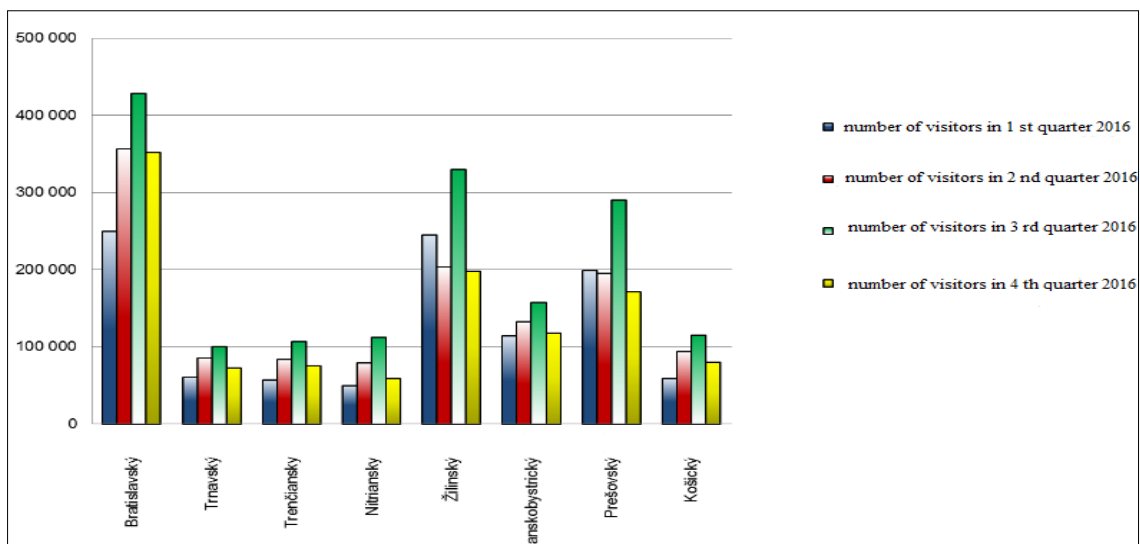


Figure 2 Number of visitors in accommodation facilities in 1st , 2nd, 3rd and 4th quarter 2016 by regions ; source: modified by (Štatistický úrad Slovenskej republiky 2016)

Figure 2 shows the number of visitors in accommodation facilities by region for each quarter of 2016. As we can see in all monitored regions, the highest number of visitors was recorded in the third quarter, which is understandable in terms of the nature of the summer holiday months. The fourth region with the highest number of visitors to the Bratislavský, Žilinský and Prešovský region was Banskobystrický region as can be seen from the data in Figure 2.

Last but not least, it is important to keep in mind the macroeconomic indicators that reflect the performance of the economy. From this point of view, it has an irreplaceable place indicator of the share of tourism GDP creation (travel & tourism's direct contribution to GDP).

According to the report issued by World Travel Tourism Council for the Slovak Republic in 2016, TRAVEL & TOURISM - ECONOMIC IMPACT 2017 SLOVAKIA (2017, p. 8), the value of the indicator was 2.4% (140th place). The Czech Republic has achieved 2.5% of the GDP's share of GDP for comparison, which was 131st of the surveyed countries. The value of this indicator in Hungary reached 4.1% (74th place). The average value in EU countries was 3.7%.

Table 1 The share of tourism in GDP creation in 2016 and its forecast; World Travel Tourism Council 2017

Slovakia	2016 USDbn <sup>1</sup>	2016 % of total	2017 Growth <sup>2</sup>	USDbn <sup>1</sup>	2027 % of total	Growth <sup>3</sup>
Direct contribution to GDP	2,2	2,4	3,3	3,2	2,7	3,6
Total contribution to GDP	5,6	6,2	3,8	7,9	6,7	3,1
Direct contribution to employment <sup>4</sup>	62,0	2,5	0,4	70,0	2,9	1,2
Total contribution to employment <sup>4</sup>	150,0	6,0	0,8	160,0	6,7	0,6
Visitor exports	2,5	3,0	2,3	4,0	3,0	4,8
Domestic spending	2,4	2,7	3,1	3,3	2,8	2,8
Leisure spending	3,5	1,7	1,7	5,0	1,8	3,6
Business spending	1,4	0,7	5,2	2,3	0,8	4,3
Capital investment	0,7	4,0	5,2	1,1	4,1	3,4

<sup>1</sup> 2016 constant prices & exchange rates; <sup>2</sup> 2017 real growth adjusted for inflation (%); <sup>3</sup> 2017-2027 annualised real growth adjusted for inflation (%); <sup>4</sup> 000 jobs

The data in Table 1 show that the share of tourism in GDP creation is projected to grow, reaching a level of 3.3% in 2017. However, the long-term forecast by 2027 estimates it to decrease to 2.7%.

### 3.2 Statistics of the Poprad city visitors in 2014 - 2016

In the following part of the paper we will analyze the statistics of the number of visitors in Poprad in 2014-2016, according to data provided by Poprad Municipal Information Office (MIK Poprad). At the same time, we point out to the structure of the required information for individual years, as it is our aim to quantify requests of the customers - visitors to Poprad.

From the data on the structure of visitors to MIK Poprad, can be said that, there was the highest number of visitors from the Slovak Republic (2014 - 53%, 2015 - 60% and 2016 - 66%) during the monitored period. The second largest group were tourists from the Czech Republic, with a share on the total number of visitors ranging from 13% to 16%. An increase was also recorded for visitors from Poland, with an average of 8.3%.

When looking at the structure of the surveyed information over the years under review, the information about the town of Poprad is prevalent. As illustrated in Figure 3 in 2016 it accounted for 24% and in 2014 even 33%. In addition, Poprad visitors asked about information on tickets for cultural events and information on the High Tatras.

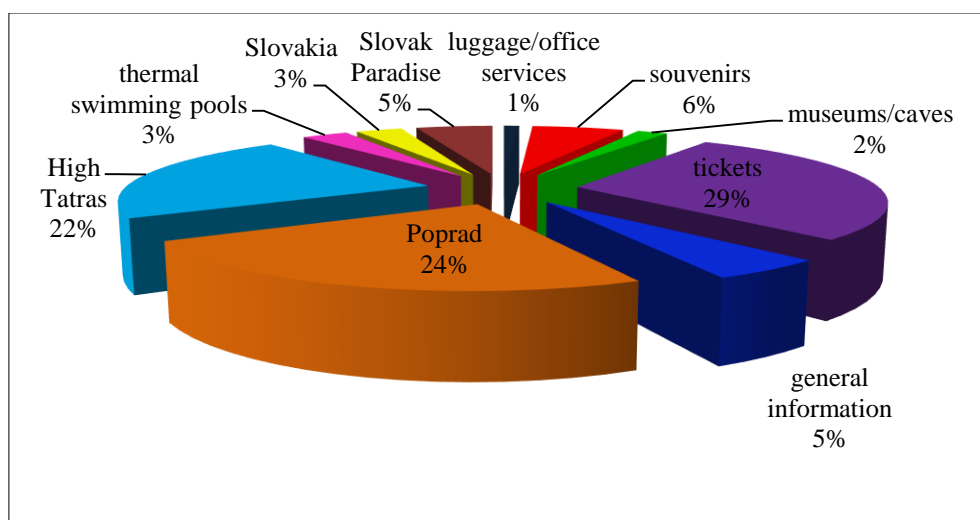


Figure 3 Structure of the surveyed information in MIK Poprad for 2016 (in%); source: own elaboration by data (MIK Poprad 2016)

In 2014, information on the city of Poprad was dominated by the so-called general information. Other requested information from the visitors of Poprad included information about souvenirs, Slovak Paradise, Slovakia, thermal baths, about museums and caves, luggage, accommodation possibilities, office services and biking.

In addition to the statistics on attendance and the structure of the requested information in the Poprad Municipal Information Office, it is necessary to mention that there are several out-of-city branches in the town of Poprad which also provide above-mentioned data. These are the extended working sites: Infopoint at the Poprad-Tatry railway station, Infopoint Spišská Sobota and Infokiosk in the Adventist town on the square of St. Egida, which MIK Poprad is used to operate during the advent and during the Christmas holidays. Last year, the total number of visitors, or serviced clients in MIK Poprad and its extended working sites represented 51 372 visitors.

According to the statistics of visitors to Infopoint Poprad-Tatry Railway Station, the largest number of visitors in 2016 (March-December) was from the Slovak Republic (8 680) and the Czech Republic (2 131). The countries from which the remaining visitors came from were: Philippines, Australia, Germany, USA, Great Britain, Lithuania, Estonia, Korea, Hungary, Russia, Japan, Belgium, Taiwan, Denmark, Finland, Iceland, France and others.

In the structure of the requested information at the MIK Poprad - Infopoint Poprad-Tatry Railway Station site were information about the connections (6 983), which is understandable because it is a railway station from which visitors are transported to High Tatras and surrounding areas. The second largest item is general information (4 185) (The general information that interested visitors of the Poprad-Tatry Infopoint Poprad-Tatry were: currency exchange, photographic services, free transportation, accommodation, pharmacy, public transport, ATM, various events and other). Next followed information about the High Tatras and Poprad.

MIK Poprad provided us with information for only two months of the summer season, i.e. from July 1 to August 31, 2016, in the Spišská Sobota Infopoint statistics. The number of clients in July was 509 and in August 702 people. The most numerous group of visitors were Slovaks, followed by tourists from the Czech Republic, Poland, Hungary and England. Among exotic visitors who visited Infopoint in Spišská Sobota, we can include tourists from Malta, Korea, Argentina and New Zealand.

The structure of the surveyed data was dominated by information about the museum (256 people) and Spišská Sobota (200 people). In general information, visitors asked mainly about this group of information: postcards, accommodation possibilities, Levoča, Kežmarok, Slovak Paradise, maps, rafting, churches, legendary, caves, souvenirs and a tourist train.

### ***3.3 The Economic Side of the Town of Poprad***

At the beginning of the next part of the paper it is necessary to clarify several theoretical aspects concerning the municipal budget area, which forms the basis of the financial system of self-government. It includes budget revenues and expenditures associated with self-government activities as well as financial relations with the state budget, budget and contribution organizations of the municipality, as well as business entities and individuals. The modern budget of the municipality is a multipurpose document, which should be compiled to meet the needs of financial management also of elected representatives and citizens (Spišiaková, Turčány, Medlen 1998).

The budget for the year is a key point in the process of managing all municipal activities.

The composition of the municipal budget is based mainly on the multi-annual budget, on the determined share of the tax revenues in the state administration and on the approved financial relations of the state budget to the budget of territorial self-governments (Veverková 2010).

For improving the allocation effectiveness of the funds it was stipulated in the provision of Section 9 of Act No. 583/2004 Coll., On the Budgetary Rules of Local Self-Government and on Amendments to Some Acts, as amended, to prepare multi-annual budget as a medium-term economic instrument of the municipal financial policy. As any amount budgeted for the years following the previous financial year is not binding on the municipality, it can be considered as a budget forecast (Mahďáková 2011).

Under Section 6 of Act No. 91/2010 Coll. on tourism support - the municipality in the tourism sector, among other things, creates its own financial resources for the implementation of tourism activities and concentrates statistical data on tourism in the municipality.

Thus, we can say that the politics of the town of Poprad is manifested through financial instruments, where the budget is irreplaceable.

As the city of Vysoké Tatry is one of the most important tourist destinations in Slovakia and information from the visitors of the city of Poprad included requests for information about this destination among frequently asked questions, it is important to mention at this point that the economic aspects of the support of tourism development of the city of Vysoké Tatry through the city budget were included the paper prepared by Piteková (2015). The author also states that in 2016 the tourism program in the city of Vysoké Tatry gained about 7% of the total expenditures of the city. This amount amounted to about 60% of the income tax on accommodation.

When processing our paper, we used data from Poprad's final accounts for 2014-2016. In the budget structure, we mainly focused on tourism spending - for the promotion and presentation of the town of Poprad and the Municipal Information Office of Poprad.

In 2014, current expenditures on tourism were 111 965.09 €, slightly higher at 138 037.59 € in 2015 and 206 950.74 € in the last year surveyed in 2016.

Program 2: Promotion and presentation is divided into two sub-programs: Subprogram 2.1: Promotion and presentation of the city, where 77 844.33 € was drawn in 2014 and to Sub-Program 2.2: The Municipal Information Center, where the actual expenses were 34 120.76 €. In 2016, 86 950.74 € was spent on sub-program 2.1 and 120 000 € on Sub-program 2.2.

In terms of earnings directly from tourism, we focused mainly on the accommodation tax. Tax revenues in 2014 reached 18 535 493.25 €. The increase over 2013 was recorded for accommodation tax by 3 682.03 €. Compared to 2015, this increase was even higher, i.e. 10 976.67 €. Similar trend was evident also for 2016, when the tax for accommodation increased yet by 11 299.50 €.

#### 4 Discussion

The development of tourism in Slovakia, and especially its analysis in Poprad, documents that the tourism industry has great potential in our country. However, it is important for the tourism sector to be sufficiently competitive and to ensure its sustainable development.

In connection with the evaluation of the performance of the Slovak economy, tourism should not be primarily evaluated by the indicator of the increase in the number of visitors, but especially in terms of getting closer to the EU average in the ratio of tourism income to GDP. Positive is that, according to this ratio, the Slovak Republic has the potential to grow to the EU average.

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## **New Trends of Cooperation in Tourism between the Private and Public Sector in the Liberec Region**

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### **Abstract**

The article deals with the issue of cooperation of municipalities and regions with the business sector in the field of tourism in the Liberec region. It examines the possibilities of the involvement of local and regional authorities in the development of tourism in the region. Furthermore, it lists various documents, strategies and concepts promoting the cooperation between the public and private sector in the field of tourism. It also focuses on different opportunities for direct support of local tourism by municipalities.

Keywords: cooperation; regional authority involvement; new trends in tourism.

JEL Classification: M31, Z32

Article Classification: Case study

### **1 Introduction**

Tourism is an important sector in the Liberec region. It provides services to tourists who a number of businesses and institutions rely on. These are, in particular, enterprises providing accommodation, transport, travel agents and tour operators, restaurants, spas, exchange offices, etc. Moreover, it creates opportunities for sectors that provide services to tourists as a complementary activity to their core business. This group includes trade, insurance, health, culture, municipal services and others. Its role in sectors that are indirectly related to tourism, e.g. construction, agriculture and a number of industries such as the glass, furniture, textile and engineering industries, is also significant.

The Liberec Region lies in the far north of the Czech Republic. The area covers the North Bohemian Basin, the Jizera Mountains, the western part of the Giant Mountains with its foothills and the eastern part of the Lusatian Mountains. The region borders with the Hradec Králové Region in the east, the Central Bohemia Region in the south, the Ústí Region in the west and in the northwest there is a 20-kilometre long state

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border with the Land of Saxony and the Löbau - Zittau District in the Federal Republic of Germany, which is followed by a north-east 130-kilometre long border with the Lower Silesian Voivodeship (Województwo dolnośląskie) in Poland (Syrovátková 2011).

The territory of the entire Liberec Region is divided into four districts (Česká Lípa, Jablonec nad Nisou, Liberec, Semily). There are 215 municipalities in its cadastre, which accounts for only 3.5% of the total number of municipalities in the Czech Republic. On average, one municipality has almost 2,000 inhabitants (in the Czech Republic - 1,648). 38 municipalities in the Liberec region have the statutory city status. According to the Classification of Territorial Units for Statistics in the EU, the region together with the Královéhradecký and Pardubický regions form NUTS II Northeast, which is the largest and most populated unit in the Czech Republic. The territory of the Liberec Region is further divided into 7 tourist areas (České středohoří, the Lusatian Mountains and Ještěd Ridge, the Mácha's Region, the Frýdlant Region, the Jizera Mountains, the Giant Mountains and its foothills and Bohemian Paradise), which cover the whole area and sometimes extend beyond its borders.

The vision for the Liberec Region states that the Liberec Region in 2020 is a region that people choose as a place to live and work thanks to its stable and varied offer of job opportunities and educational institutions, as well as the high quality of its environment and services. The interest in educating its citizens and creating cross-border partnerships places the Liberec Region closer to the most developed European regions. Its citizens are actively involved in planning and decision-making in public affairs. The high quality social, cultural and natural environment makes the region attractive for the development of sustainable tourism, organic farming and small and medium-sized enterprises (Sustainable Development Strategy for the Liberec Region).

In 2011, the Liberec Region became a member of the Healthy Cities of the Czech Republic Network (hereinafter referred to as HCCR), an association of legal entities. HCCR is certified by the World Health Organization (WHO) as the platform for implementing the Healthy City/Healthy Region Project in the Czech Republic.

## **2 Material and methods**

### ***2.1 Strategic documents at the national level***

On the part of the European Union, there has been a decrease in the support of tourism activities. Consequently, tourism in the Czech Republic has not received support for the 2014+ period, however, it can benefit from its synergies with the activities financed by the European Structural and Investment Funds through partially supported operational programmes.

Every region that wants to be successful has to find its own competitive advantage which it can build its future on. Marketing research shows that competitive advantage changes dynamically over time. However, offered values and originality still remain the added value for the region, municipality, its inhabitants, customers and other stakeholders (Budaj, Liptáková Havašová and Vitko, 2015).

#### ***2.1.1. The Concept of the State Tourism Policy in the Czech Republic for 2014–2020***

It builds on the Concept of the State Tourism Policy in the Czech Republic for the period 2007–2013. At that time, tourism was a highly supported activity. The

concept is a basic medium-term strategic document in the field of tourism for 2014 – 2020. Its main objective is to increase the competitiveness of the entire tourism sector at both the national and regional level and to maintain its economic performance and positive impact on the socio-cultural and environmental development of the Czech Republic.

By applying the new strategy, tourism management system which has been lacking will be created, and financed long-term. The most important proposals of the concept are clearer definitions of the status of the Ministry of Regional Development (MRD), the CzechTourism Agency and other entities such as regional authorities. The concept also includes a change in the way subsidy policy is applied. This will focus on the use of integrated approaches at the regional level, the use of new financial instruments (subsidized loans), etc. In the past, direct subsidy policy had led to distortions of the market environment (the support for commercial infrastructure and tourism services), which was criticized by the entrepreneurs themselves.

With the help of the forthcoming law on the support for tourism development, the MRD wants to promote and stabilize regional cooperation between public, private and non-profit sectors on the principles of destination management. Efficient destination management organizations should serve as the information and marketing basis for high-quality representation of the Czech Republic abroad and promote the marketing of Czech destinations within domestic tourism.

### *2.1.2 CzechTourism Agency Marketing Concept for 2013–2020*

The concept is linked to the implementation of national marketing, which is described and specified in the approved Tourism Agency marketing concept of CzechTourism. Both materials were being prepared simultaneously and, therefore, are interconnected.

The marketing concept presents the extended vision of the Czech Republic. The Czech Republic, unveiling its current face where channels of communication intersect as a modern, attractive European destination, welcomes new visitors (tourists) and those who like to return to a safe, friendly and unique part of Europe. It is a country that has given many important personalities to the world, enriched literature, science and sport. It proudly builds on Czechoslovakia's strong position during the interwar period, which is comparable to Switzerland, and it is aware of the exceptional reputation of its capital of Prague in the world. It wants to show the untapped potential of places yet to be discovered in the regions that increase the destination's offer and help extend sojourns in the Czech Republic. The Czech Republic is a friendly, hospitable, safe, joyful, warm, fun, peaceful, cozy and sympathetic destination that offers exceptional story-filled experiences (CzechTourism Agency Marketing Concept 2013-2020).

### *2.1.3 Action Plan for the Concept of State Tourism Policy for 2014-2020*

The Action Plan is a tool for the implementation of the Concept of the State Tourism Policy in the Czech Republic in 2014-2020, which specifies and develops its individual measures and activities, namely the way they are executed, including the identification of schedules, the implementers, outputs, indicators and sources of financing.

Given the limited allocation of resources to support tourism, and the short time frame of the Action Plan, it is not possible to implement all activities of the concept

within two years. The activities that are not included in the current Action Plan will be implemented subsequently through forthcoming action plans. Therefore, the current Action Plan includes measures to support further development of the Czech System for Service Quality, tourism in the destinations (infrastructure and marketing) and monitoring of the effectiveness and benefits of the implemented activities, including measures to improve the monitoring of concept performance, data security and decision-making support, promoting sustainable development and tourism policy coordination, crisis management and security.

### ***2.3 Strategic tourism documents in the Liberec Region***

The Tourism Marketing Concept for the years 2013-2020 sets out a vision for the regions. We are aware of the hidden and untapped phenomenon of our regions, their easy access and their intrinsic importance. Prague is a unique and important place; however, it is not the only identifiable point for the regional spreading of foreign demand.

The SWOT analysis of Tourism in NUTS II - Northeast lists the strengths of significant potential – an attractive area with good conditions for tourism development, a variety of landscapes and attractive natural sites (areas of water, streams, rock formations, protected areas, etc.) and an increasing offer of winter resorts of national importance along with their constantly improving quality. According to the SWOT analysis of the sustainable development of the Liberec Region, the region has the right natural and cultural conditions for the development of tourism, sport, spas and recreation. It can build on a significant number of cultural heritage sites, sacral monuments, folk architecture and numerous sites of historical settlement. In addition, the position of the region at the borders with the Republic of Poland and the Federal Republic of Germany has a positive influence on the proportion of foreign visitors preferring multi-day tourist stays.

On the other hand, the weaknesses are the uneven intensity of recreation and tourism related to the level of natural, sporting and cultural offerings in NUTS II, a large disproportion in the development of individual recreational sites and resorts, the insufficiently utilised potential of tourism due to non-systemic coordination and the lack of promotion, the uneven capacity and location of accommodation facilities in NUTS II with regard to the needs of tourists, the uneven quality of accommodation and gastronomy (quality, diversity, amenities) and a small number of integrated tourism products. Furthermore, the list of weaknesses comprises insufficient basic and complementary tourism infrastructure including services, the absence of destination management for tourism development and the poor technical condition and inappropriate use of cultural monuments. The opportunities include the development of new forms of tourism (conference tourism, sport tourism, rural tourism, eco-tourism, etc.), new tourism products based on the unique offer of the region (cultural and historical monuments, rock formations, military monuments, mountains, spas, etc.) for specific target groups, expanding the offer of services of cultural institutions for the development of tourism, creating a functional system of coordination of activities in the CR based on the mutual cooperation of regions, the private and state sphere, interest and professional organizations, the use of tourism as an important source of income with a significant multiplier effect for the development of the regional economy (trade, services, crafts, transport, construction, etc.), the development of cross-border cooperation in the CR area, interconnected recreation areas on the Czech, German and Polish sides of the border as a result of joint cross-border tourism projects (with the

participation of cities and entrepreneurs in projects). The preservation and diversity of the region's natural and cultural heritage facilitates the wider business development in the field of sustainable tourism and related industries. This aspect is enhanced by the presence of borders with the Republic of Poland and the Federal Republic of Germany. The development of spa, health and congress tourism is also characteristic for the region. Its cultural landscape provides the opportunity for the development of ecological agriculture, the growth of energy crops and rural and eco-tourism. The restoration and quality maintenance of sports, cultural and historical monuments ensures the development of cultural and sports life in the region.

The SWOT analysis shows that, as a threat, there is a risk of overloading the visitor capacities of existing recreational and tourist centres and preserved natural sites in the region. Furthermore, there is insufficient promotion of not only monuments but also other tourist attractions throughout the whole region (limited interest of visitors and travel agencies, cultural services offered only in larger settlements). Among other threats, one could find the low level of coexistence between environmental conditions and tourism development requirements, the uncoordinated development and low quality of tourism services (the lack of accommodation and gastronomic services), landscape disruption due to inappropriate construction of accommodation, catering and sports facilities, the low quality of infrastructure of recreational areas, congestion of tourist areas by car traffic and neglecting public transport, especially railways .

The Association for the Development of Tourism in the Liberec Region operates in the territory of Liberec. It states in its statute that the Liberec Region, towns, municipalities and other entities are aware of the need to support the development of tourism in the Liberec Region as a major economic agent of the area; they hereby declare the endeavour to coordinate tourism activities as well as meaningful use of the natural and cultural heritage. The association has 18 members.

#### ***2.4 Strategic regional documents in the field of tourism***

There are 215 municipalities in the Liberec Region. The author of the paper decided to examine the town of Jablonec nad Nisou, which created the Jablonec nad Nisou Strategic Plan, the Tourism Development Strategy of the Jizera Mountains, the Development Strategy of the Local Action Group Podještěd for 2007–2013 and the Community Plan of Social Services of the Jablonec Area.

The administrative district of Jablonec nad Nisou is located approximately in the middle of the Liberec region. The territory includes the town of Jablonec nad Nisou and 10 municipalities, 8 of which directly border on Jablonec. The Jablonec area is an important place for individual recreation. There are numerous houses (cottages and recreational properties) that are used mostly at the weekends and on holidays. The natural conditions of the district of Jablonec nad Nisou predetermine the development of tourism in this area.

The principal strength of the district of Jablonec nad Nisou with regard to tourism is its location on the edge of the Jizera Mountains. This locality has been a popular destination for tourists from the Czech Republic as well as abroad and a second home for many cottage and recreational property owners. The visitors are attracted mostly by its sports and hiking opportunities in both summer and winter. There are numerous churches and other historical and listed buildings in the area. Consequently, Jablonec nad Nisou was declared an urban conservation area. A number of museums in the region provide information on its rich glass tradition. One of the phenomena of the

Jablonec area and the Jizera Mountains includes lookout towers. These buildings were originally built to attract tourists. This proves that the town of Jablonec nad Nisou offers sports-oriented recreation as well as the attractiveness of urban tourism.

A SWOT analysis of tourism was developed for the administrative district of Jablonec nad Nisou. According to this document, its strengths include the locations of high potential for the expansion of tourism in the southern part of the territory. On the contrary, the weaknesses are represented by the poor state of some cultural monuments, the lower quality accommodation facilities and the lack of public toilets for the visitors in the region. In addition, not all municipalities are involved in destination management and their fragmentation and the lack of cooperation between the various bodies and associations involved in tourism also contribute to the slow development of tourism in this area. The opportunity for the development of tourism is mutual communication and cooperation between other municipalities, entrepreneurs, and NGOs in creating the image of Jablonec, tourism projects, promotion and further development of tourism in the area and the adoption of the law on the support of tourism development

### **3 Results and Discussion**

#### ***3.1 New trends in tourism in the Liberec Region***

In creating the offer for the development of tourism in the Liberec Region, the institutions involved have to consider the tourist demand and possible opportunities the region can offer. Economic impacts are created by every subject who pays their suppliers, employees and the members of the chain (Ungerma and Honzáková, 2014).

Why will people travel here during the year? How will they decide on what to do and where to stay? Will they spend more or less money than in previous years? What impact will their decisions have on the whole tourism industry?

According to the results of some survey questionnaires, tourists will seek new experiences, will be willing to spend more money than in the past and will choose to visit a destination according to various criteria, e.g. on the basis of so-called TV tourism, which relates to the technical equipment in the accommodation facilities (WI-FI connection included in the room). In addition, the volume of direct reservations will increase.

Every year, the Department of Culture, Monument Care and Tourism announces a theme for tourism, e.g. Cycling and Culture in 2010, Family Holiday in 2011, Fragile Beauty and Refined Taste in 2012, Transformations of Time in 2013, In the Footsteps of Annual Leaf and Bud Formation in 2014, The Liberec Region Revealed in 2015, Filming the Liberec Region in 2016 and Colourful and Lively Liberec Region in 2017. As part of this activity, the Liberec Region cooperates with entities involved, especially with entrepreneurs, municipalities and others.

#### **Film tourism**

The Liberec Film Office has been operating under the Tourist Information Centre since 2015. Thanks to the alliance, Liberec has become an example of the effective cooperation between a town and filmmakers. The Film Friendly title was awarded to Liberec in 2016. The office provides filmmakers with advice and assistance for filming in the town while successfully communicating with the local public. The announcement of the winner of Film Friendly 2016 took place at the closing ceremony of the 30th Finale Plzen Film Festival. The Film Office has cooperated successfully

with a number of film crews not only from the Czech Republic but also from the USA, China and Germany. In addition to collaborating with the filmmakers, the Liberec Film Office lets the locals and visitors of the town take a look behind the scenes. It also organizes regular filmmaking tours of the town hall. Through photographs and videos, it illustrates how the filmmakers transformed the interior of the place for filming purposes. Thanks to these tours, the visitors learn a lot not only about the work of the film crews, but also about the activities of the Liberec Film Office and the benefits of film production for the town.

**Urban tourism** has been thriving over the past twenty years thanks to the rising interest in short stays. As it does not depend on any season, it can be enjoyed throughout the year. In its own way, it is the easiest means of escape from everyday life.

Apart from the Internet, though sometimes considered a non-transparent resource, the main information providers are tourist information centres. Therefore, their position and possibilities will influence the development of urban tourism.

The number of ideas is constantly on the rise. You can get to know the town from a balloon or riding on a segway; streets and monuments come to life through street performances and jugglers of all kinds. On the other hand, are the towns not the mere backdrop of our entertainment? Do we really know them? Are long weekends not just a glimpse at the way digital applications work? Do we want more than an illusion? The world has seen the emergence of volunteer guides, city dwellers who know the town intimately. The concept of the services they provide is closest to tourism, which helps bring people together. The focus of tourism is more and more on people themselves. However, all the responsibility cannot be put solely on volunteers. There is a strong need to look for other ways of tourism transformation. Fortunately, even regular guides are changing and a lot of them add concerts, boat rides or discussions to their offer of tours.

The factors that will play a major role in the field of urban tourism in the future are creativity, authenticity, healthy lifestyle, IT and transport. The first two factors will be related to a need for escape from technologies, which will result in a growing interest in a town's character, its distinctiveness, originality and local, authentic experiences both cultural and gastronomic.

Visitors will travel to towns to see their architecture, culture, to go shopping, eat in interesting restaurants, experience street life and enjoy the town atmosphere in general. They will be well prepared and before their arrival, they will explore the town virtually wondering if the reality matches their expectations or even exceeds them. They will probably tend to get lost in the streets less often, which could be a shame, but they will continue to marvel at them.

On their holiday, a lot of tourists want to be accompanied by their pets, like dogs, cats or rats. Statistical data show that two million dogs were registered in the Czech Republic in 2012. There are various hotels that provide a range of services for pets abroad. These 'dog friendly' facilities offer dog walking, dog sitting and a rich variety of food to choose from. For example, the Pet Kit at the Barceló Hotel in Cádiz includes even a small crib, a dish, a bag of granules, a visit to a vet and a team of specialists for walking the dog in the package.

### **Sharing gardens**

This idea is aimed at travelers seeking contact with local communities and returning to traditional and modest forms of accommodation. The gardens all over the world reflect the individuality of their owners, who can offer services ranging from



'basic camping' to 'glamping' (glamorous camping) so everyone has a chance to find the right one for them.

### **Social tourism**

The term 'social tourism' or rather 'tourism for all' means not only tourism for financially challenged or disabled citizens, but also youth tourism aimed at education or pensioner recreational stays. It is anticipated that people who travel actively in their young age now will probably want to travel even later in their life and thus will increase the number of pensioner tourists. (Černá, 2016)

The European Union is paying increasingly more attention to it, realizing its possible impact on boosting the tourism in a number of regions. The Czech Republic, which included social tourism in the National Tourism Promotion Plan, has been invited by the European Union to contribute to the preparation of a new document on the development of social tourism, which is valid until 2020.

The fall of the Iron Curtain and the expansion of the European Union eastwards have resulted in increased travel to western European countries. People who once emigrated are returning to the places of their birth. This trend is called 'diaspora tourism' and is also reflected in the Czech Republic.

### **Ascetic holiday**

Some people perceive a holiday as a relaxation, others as an exploration or adventure. However, there are some who look for an opportunity to fight the stereotypes that have taken over their everyday life. The experience of shortage, deprivation or even pain can be liberating for them.

### **CouchSurfing - free accommodation for travelers**

Nowadays, more than a million people around the world use communication networks that allow them to share their home free of charge while they are on holiday. There are several projects based on the concept of free sharing of accommodation and hospitality. Perhaps, the most famous one is CouchSurfing.com. In addition to minimizing travel costs, the proclaimed goals of these projects are establishing new friendships, spreading tolerance and improving intercultural understanding.

### **Medical tourism - pilgrimage to medicinal waters or miracle healers**

The term 'Medical Tourism' is a combination created by travel agencies and the media. It describes the purpose of a trip for therapeutic or beauty treatment in a country different from the tourist's residence. It is a phenomenon of the 21st century, but as well as pilgrimage tourism it originated in ancient times when the Greeks and after them the Romans wandered hundreds of kilometers to medicinal waters or miracle healers.

### **Responsible travel**

In the world of tourism, 'Responsible Travel' is becoming a more and more common term. It expresses the effort to minimize the negative impact of this industry not only on the environment; it also has an ecological, socio-cultural and economic aspect.

### **Voluntourism**

This type of tourism was created by combining the words volunteer or voluntary and tourism, which implies the connection between a holiday and helping in the places visited.

### **3.2 Proposal for expanding tourism in the Liberec region**

**The Liberec Region** is improving the presentation of offers and tourism opportunities thanks to a project called Modern Tourism Marketing Opportunities, which is now being implemented. The Liberec Region wants to make better use of new trends in tourism like mobile phones, iPads and tablets. Nowadays, the visitors to the region have the possibility to plan the whole trip, the route and tourist attractions they want to see on their mobile phones or tablets. Moreover, they can easily look for other sights they could visit during the trip. Therefore, the intention is to make good use of available technologies and to make the stay easier for them. (New Trends in Tourism in the Liberec Region)

#### **Support for tourism infrastructure**

The Liberec Region supports the development of cycle paths and regularly updates the data on its map portal. It also continuously supports the maintenance and adjustment of cross-country trails in its ski resorts. It cooperates with Czech Tourist Club on a project aimed at maintenance of hiking trails and their marking. The Ridgeway, which runs along attractive ridge parts of the mountains from Karlovský Bridge to Orle and Jizerka and further to the German part of Lusatian Mountains, Zittau Mountains, Černostudniční and Ještědský ridge, can be used by hikers, cyclists and cross-country skiers. In addition to marking the routes and trails with the Ridgeway logo, this project helps supply equipment like bicycle stands, maps, shelters, benches and relaxation areas with children's playgrounds.

#### **Products in the Liberec Region**

Regional products can be effectively used to promote regions. However, their success depends on good ideas and the amount of energy the authors of these products put into the projects. (Dědková, 2014)

On the Czech side of the Czech-German border, regional products are labelled as 'Regional Product of the Jizera Mountains'. Since 2010, they have been presented at various trade fairs, exhibitions or tourism events promoting the Liberec Region. The main seasons for the sale of these products include Christmas, Easter or the time of traditional pilgrimages such as Svatoanenska Pilgrimage in Jizerka or Mariánská Pilgrimage in Kristiánov. Last but not least, they play an important role in a number of local farmers' markets and brick-and-mortar stores that focus on the sale of regional products within the Liberec Region (jizerky.cz, [online], 2017).

Since 2000, the Regional Chamber of Commerce in Jablonec nad Nisou has been organizing the Exhibition of Regional Products in Euroregion Tour Fair. 35 Czech and 15 Polish companies regularly participate in this exhibition. In 2017, the exhibition was held from the 17th March to the 18th March. The participants of this 17th annual event were 27 Czech companies and only two Polish companies. The competitors could take part in 4 different categories – a souvenir, a food product, a regional product and an extraordinary contribution to the region. The winners in the food category, for example, were blueberry marmalade, beer REZEK and ZINA's coffee. The special award for the contribution to the region was awarded to sheltered workshops presenting products made by the disabled. The products were made of local glass and metal materials, and the souvenirs represented mainly Liberec and the mountain of Ještěd (Syrovátková, Tourism in the Liberec Region, 2011).

### **Regional certification of accommodation facilities in the Liberec Region**

The Regional Authority wants to offer accommodation services to the visitors through a regional quality label, which takes the range of services provided by the facility and the overall impression into account. It also respects both the local requirements for accommodation and the criteria of the Official Classification of Accommodation Facilities in the Czech Republic, which is part of the international certification system Hotelstars Union. It provides certification to the following accommodation facilities: a hotel, motel, boarding house, private residence accommodation and apartments. The regional certification provides a lot of room for entrepreneur's initiative. If you are interested in getting the certificate for your facility, you can find relevant information about the certification, procedure and the application form here.

### **Promotion of camps and cottage settlements in the Liberec Region**

In 2015, Regional Authority published a promotional brochure of camps and cottage settlements located in the Liberec Region and its main parts: Bohemian Paradise, Českolipsko, the Jizera Mountains and the Giant Mountains. The entities were introduced free of charge and the brochure is presented at tourism fairs in the Czech Republic and abroad (especially in Germany, Poland, the Netherlands and Slovakia) and other events where the Liberec Region participates.

The most important trends influencing tourism include healthy lifestyle, agrotourism, sight-seeing, sport and relaxation. Healthy and active lifestyle, for example, attracts more and more people at different levels of sports performance. The visitors to the region can enjoy cycling, hiking, Nordic walking, running, etc.

Most of the tourist programmes and products in the Liberec Region are currently in the preparatory stage. One of the completed ones is the tourist product 'Bohemian Paradise', which reaches beyond the regional borders thanks to its significance and location. It represents a remarkable collection of natural, cultural and historical heritage.

Families with children are of great importance in the region too, which is reflected in the offer of local businesses. The restaurants provide children's play areas and meals for children. The shopping centres have introduced children's playgrounds with babysitting service or swings. There is an entertainment centre for children, Dinopark, or IQLandia and IQPark in Liberec and Happy Country park in Radovanovice near Turnov.

The centre of culture is Jablonec nad Nisou. The list of events that are held here contains, e.g. International Triennial of Glass and Jewellery, EuroregionTour Tourism Fair, NISA Euroregion Festival - the River that Joins Us Together, an exhibition of glass and jewellery with the Fragile Beauty or an international folklore festival organized by a folk ensemble Nisanka.

## **4 Conclusion**

In the Liberec region there are very favourable conditions for the development of sustainable tourism. They result mainly from the aesthetic value of its landscape, the quality of its natural environment, the structure and history of its settlements and its local production tradition.

Successful topic-based programmes and products include those whose preparation and creation depend on their originality, distinction, uniqueness (based on, for example, special landscape or cultural and social environments) and the skills and

creativity of their authors (shopping tourism, leisure and entertainment, programmes and products aimed at various interest groups - athletes, hunters, fishermen, firefighters, scouts, women's clubs, musicians, children and youth, pensioners, western programs, programs focusing on exploring hydraulic, educational, retraining or coaching programmes, the ones related to cultural performances, sporting events, trade and craft fairs, annual markets, craft youth presentations, heritage trails, rural holidays and many more).

The conceptual documents in the Liberec region have been assessed with regard to sustainable development. Among the strengths of the region is its constant effort to improve communication and cooperation with the public in discussing strategic and conceptual documents. The region has sufficient infrastructure for the development of tourism (transport infrastructure, accommodation facilities, restaurants and cultural monuments). It is affordable for foreign visitors and, therefore, the share of foreign tourists especially from Germany and Poland is increasing. On the other hand, the weaknesses include bureaucracy of public administration, overload local authorities, which often results in low operability and slow progress in the decision-making process. There is no mechanism in place to facilitate the rapid and convenient transmission of information from citizens to authorities and their representatives providing, which could provide essential feedback. The transfer of relevant information from the national and regional level to the level of the municipalities or within the bodies and departments of the public administration does not work. In the context of opportunities, it is necessary to use the principles of sustainability to increase attractiveness and competitiveness of tourist regions, gradual transition from quality certification to the next level, environmental certification. The Liberec Region is threatened by the lack of public involvement in decision-making at regional and local level, by the failure to meet the goals of conceptual and strategic documents, by deterioration of the state of historical buildings and tourist infrastructure due to their insufficient funding and by low competitiveness of some less attractive areas and insufficient capacity of renowned winter and summer resorts.

Local action groups have been successfully operating in the region. The Local Action Group (LAG) is a form of local partnership that provides an effective way to use available resources. Its members can be municipalities, their associations, public institutions, private business entities, non-profit organizations and citizens themselves as natural persons. All of these who are included in the local action group work together to develop and restore the countryside. Their projects and activities are financially supported by national or EU programmes. A large number of the local action groups are associated in the so-called National Network of Local Action Groups (NNLAG), which represents its members at both national and international level, in media and it supports the activities of individual LAGs in the implementation of the programme for the restoration and versatile development of the country. The LAGs are classified according to the regional jurisdiction of their seat. They have a legal form registered by the association. In the Liberec region, LAGs include LAG Frýdlant Region, LAG 'Přijďte pobejt!' and LAG Podještědí.

The Liberec Region, which has a great potential for tourism development, regularly tries to create new trends in tourism. All the stakeholders try to come up with new ideas. For example, for this year and next year, the focus is on the Mysterious Places in the Jizera Mountains on the level of a tourist region and the Jablonec Wandering on the level of the town of Jablonec nad Nisou. Others include Exploring Lookout Towers or Discovering Small Monuments (like headstones, crosses, etc.).

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## Application of analysis methods in logistics of tourism

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### Abstract

The article is focused on the definition of tourism of logistics, the basic principles for the successful introduction of logistics into the tourism business and the general logistics chain of tourism. The application part of the article refers the appropriate methods of analysis for selecting the tourist resort on the ground of geological and geomorphological conditions, climatic conditions of the environment, hydrogeological conditions, fauna and flora, cultural and historical monuments, population and residence, transport and other conditions.

Keywords: logistics; tourism; services; transport; resort.

JEL Classification: R40, Z32

Article Classification: Research article

### 1 Introduction

The definition of logistics of tourism is difficult because the definition of tourism itself is not precisely defined. There are a number of definitions of tourism, but all coincide with the fact that it is a summary of activities that are based on the active movement and residence of people, oriented to understanding the natural and cultural-historical condition of the visited areas, to rest, to regenerate and develop physical and mental health. In defining the area of logistics of tourism, we can appear from the theory of logistics of services, which describes in detail (Schejbal, 2009) that the logistics of the tourism destination represents the optimization of the flow of materials, people, information, energy, knowledge, capital, and waste in the area of interest. The optimization of tourism products is described in detail in the publication (Schejbal, 2011).

Logistics is a science, which deals with the overall coordination and optimization of all activities whose chains are needed to achieve a flexible and

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economical achievement of the final effect. This fact also applies to the sector of tourism. Figure 1 (Schejbal, 2009) illustrates the division of logistics by specialization.

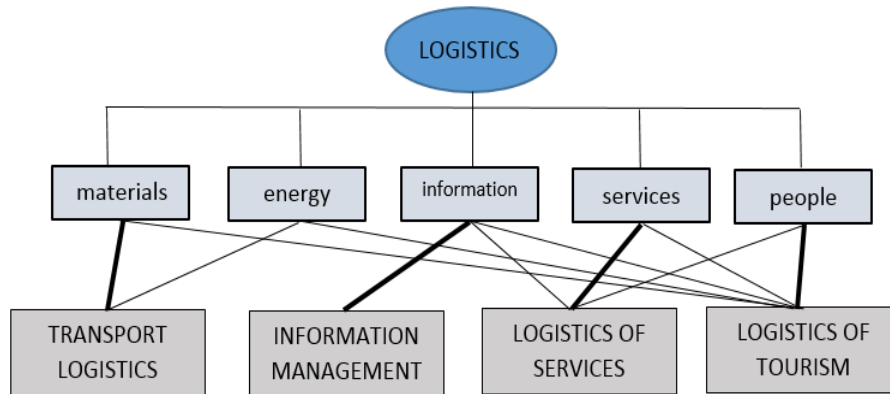


Figure 1 Scheme of division of logistics departments; source: modified by (Schejbal 2009)

For the implementation of logistics into the tourism sector apply to the same principles as for any kind of enterprise. Figure 2 (Schejbal, 2011) illustrates the general logistics chain of tourism.

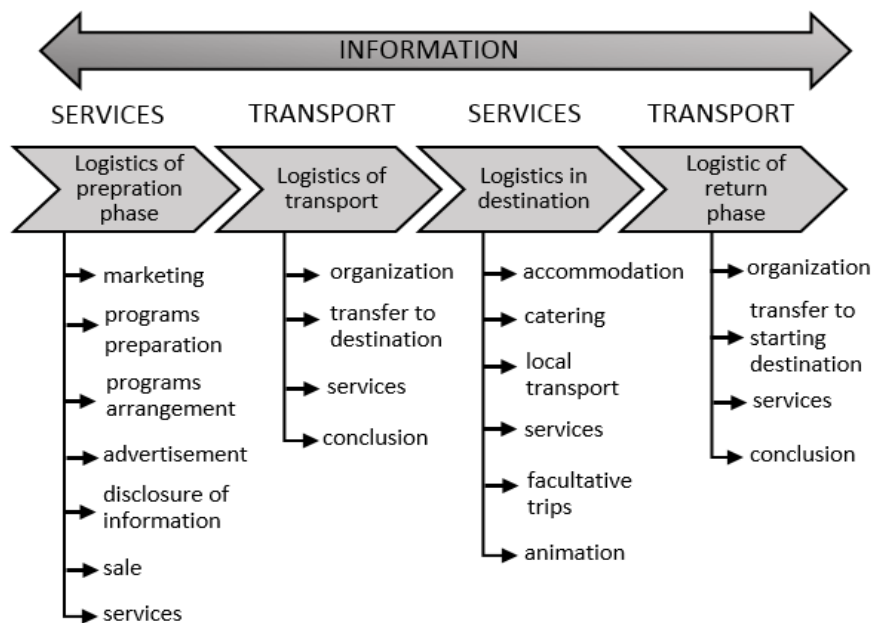


Figure 2 General logistics chain of tourism; source: (Schejbal, 2011)

The product of tourism is produced largely by services. Services in the tourism have their own specificity and specific core, as they are useful activities of an immaterial character (Torma, 2004).

## 2 Material and methods

In practice, logistics improve the system of services management and business philosophy by the help of modern marketing methods and integration of all partial logistics processes in the supply chain, way to quality control (TQM – Total Quality Management) (Marasová,D., Tomková,E., Husáková,N, 2016). Strategic planning marketing is very important in enterprises services because if the product is not sold, it

is a loss for the spa resort (Marasová, Tomková, Puškáš, 2015). In contrast to marketing strategies commonly used by production enterprises “4P”, the tools of the marketing mix are expanded for tourism to “7P” (price, product, promotion, partnership, package and program, people, place) (Morrison, M., 1995).

For a selection of a tourist center can be used principally SWOT analysis and methods of multi-criteria decision making. We can find problems of multi-criteria decision making in many fields and everyday life. In addition to common decisions, there are also those that have a major impact on society (Marasová, 2014, Andrejiova, 2015).

SWOT analysis can be used for assessing, comparison and evaluation of enterprise activities on the base of analysis of the external and internal environment. SWOT analysis allows to combine both fields, determine results and summarize into a complex that has four key points expressed by the initial letters of the relevant English terms (strengths, weaknesses, opportunities, threats). SWOT analysis should identify significant and critical factors, i.e. factors with key importance for the searched field. Basic conclusions of the SWOT analysis present the most important strengths of the enterprise services in relation to the most serious opportunities and threats.

Methods of multi-criteria decision-making. Methods of multi-criteria decision-making include also method DMM (Decision Matrix Method), FDMM (Forced Decision Matrix Method) and AHP (Analytic Hierarchy Process). The DMM method is considered to be the basic method (it provides multiple solution variants). The FDMM method somewhat eliminates the disadvantages of DMM. The rates of the individual criteria, such as the assessment of the variants as meeting the individual criteria, are determined by paired comparison. It eliminates subjectivity in the determination of rates and impact of criteria (they are more precise) and it has a relatively simple solution. Its disadvantage is the relatively large differences in the evaluation of the different variants and criteria (although they differ only slightly), in the determination of the rate of the criterion or the assessment of the alternative of "0", they have no impact on the final evaluation. AHP eliminates the shortcomings of DMM and FDMM in some measure. Its essence is also based on a paired comparison of the level of importance of the individual criteria and the extent to which the evaluated solution variants meet these criteria. However, the rating scale is significantly more complex.

### **3 Results**

The aim of the paper is to apply the methods of analysis for assessing the suitability of the tourist center for the use of geothermal energy in order to provide the spa services. Among the possible appropriate methods, a SWOT analysis was chosen for the solution (to determine the spa center's strategy when entering the spa services market) and a multi-criterion decision to determine the ranking of the assessment criteria according to the importance of the selection of the spa center.

#### ***3.1 Application of SWOT analysis***

Input information in these methods were criteria (Table 1) for assessment of the suitability of the area for allocation of the spa center.

Criteria and their rates have been determined expertly based on the experience of experts from practice. Based on the analysis of the primary and secondary offer of the area Rapovce, the assessment of the economic indicators in the field of tourism and the mapping of the competition.



Table 1 Incoming criteria within the evaluation; own elaboration

Indicator	Criteria
K1	relief - gradient and orientation of the relief, relief diversity, altitude
K2	climatic conditions - climate, weather, air temperature, air humidity and rainfall (total precipitation for the period, intensity, duration), wind conditions, duration of sunshine
K3	cleanliness of the environment - air cleanliness or degree of pollution, its side effects, climatic baths, hygiene and hygienic conditions
K4	noise - (industry, transport, population density)
K5	flora and fauna - floristic and phyto-vegetative aspects
K6	water areas and streams - (purity, area, temperature, gradient, etc.), mineral and thermal springs
K7	transport accessibility - (geographical aspect, transport infrastructure)
K8	cultural and historical conditions - art, archeology, historical centers, folklore, etc.
K9	demographic conditions - status and structure of the labor force, socio-communicative assumes for the domestic population
K10	the political environment - the region's interest in the development of the territory

The SWOT analysis was developed for the area Rapovce. (Table 2). The aim of creating of SWOT analysis is to determine the strategy for the spa center at market entry. To evaluate the importance of individual factors, a scoring scale of 1 to 12 was used, the individual factors being evaluated in terms of their importance and impact on the entry of the tourism center into the assessed environment. The value 12 is the most important, 1 is the smallest.

Table 2 SWOT analysis of Rapovce; source: own elaboration

STRENGTHS	WEAKNESSES
- excellent climatic conditions - <b>9</b>	- the new product of tourism in a new location - <b>5</b>
- various accommodation and catering facilities - <b>5</b>	- medium to weaker availability - <b>7</b>
- the significant recreational potential of the area - <b>10</b>	- stronger competition on the market of already existing tourist facilities of this type - <b>8</b>
- suitable conditions for the development of cycling and hiking - <b>6</b>	- insufficiently built tourism infrastructure - social facilities, information boards, marketing, attractions - <b>12</b>
- city park of national importance with ZOO - <b>4</b>	- lack of entry and development capital for stabilization and development of companies - <b>2</b>
- geothermal well - <b>12</b>	- low purchasing power of the population and declining living standards in the region - <b>8</b>
- the temperature of geothermal water $>38^{\circ}\text{C}$ - <b>9</b>	- leaving young qualified people for work abroad - <b>6</b>
- the rich chemical composition of geothermal water - <b>10</b>	- the high population of working age approaching the post-productive age - <b>1</b>
- developed business and services - <b>7</b>	- high population in post-productive age - <b>1</b>
- the closeness of the border crossing with Hungary, experience with the Hungarian clientele, knowledge of their needs - <b>11</b>	
- functioning bus and rail transport networks - <b>10</b>	
- language skills (high percentage of	

<ul style="list-style-type: none"> <li>theHungarian-speaking population as asecond language) - <b>7</b></li> <li>- existing technical and social infrastructure - <b>4</b></li> <li>- proximity to natural, cultural and historical attractions in the surrounding - <b>11</b></li> <li>- qualified workforce - <b>7</b></li> <li>- sufficient workforce in construction and wood-cutting - <b>6</b></li> <li>- institutional security for the development of small and medium-sized enterprises - <b>4</b></li> <li>- existing network of healthcare facilities - <b>5</b></li> <li>- a high number of sunny days and appropriate climatic conditions - <b>11</b></li> <li>- spa tradition in the region - <b>4</b></li> <li>- the existing network of social services facilities within the competence of the state, public institutions and non-state subjects and the potential for their further development – <b>3</b></li> </ul>	<ul style="list-style-type: none"> <li>- a high proportion of the Roma population with bad social habits - <b>10</b></li> <li>- high unemployment - <b>2</b></li> <li>- insufficient coordination of tourism activities and a decline in the interest of foreign tourists - <b>7</b></li> <li>- insufficient quality of hotelier services, rising prices in accommodation facilities, lack of summer tourism facilities - <b>11</b></li> <li>- the poor existence of barrier-free equipment and approaches in the region - <b>6</b></li> <li>- rusty sewerage network, theexistence of wild dumps, non-connection of the population to waste separation - <b>5</b></li> <li>- insufficient financial support for the development of culture and sport - <b>8</b></li> <li>- non-cooperation of the private and public sector in the provision of services - <b>12</b></li> </ul>
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Σ155

Σ111

<b>OPPORTUNITIES</b>	<b>THREATS</b>
<ul style="list-style-type: none"> <li>- the possibility of developing infrastructure and the region - <b>9</b></li> <li>- the possibility of developing cross-border cooperation - <b>10</b></li> <li>- the possibility of using an existing bus and rail transport network - <b>8</b></li> <li>- the use of a skilled labor force, thus increasing employment in the region - <b>7</b></li> <li>- the use of local construction and timber companies, thus increasing the finance for the region - <b>8</b></li> <li>- the possibility of cooperation with institutions for the development of small and medium-sized enterprises and by it the creation of projects - <b>12</b></li> <li>- direct and indirect creation of working places in tourism (multiplier effect)- <b>11</b></li> <li>- the possibility of joining a spa tradition in the region - <b>8</b></li> <li>- unique physicochemical properties of geothermal water and the possibilities of its - <b>11</b></li> <li>- the possibility of using geothermal water for heating purposes and heating supply water- <b>11</b></li> <li>- climatic conditions for the development of recreational services, parks and sports centers - <b>12</b></li> <li>- possibility of all-season operation of outdoor swimming pools - <b>12</b></li> <li>- possibility of using water for balneotherapy - <b>10</b></li> <li>- the possibility of organizing animation</li> </ul>	<ul style="list-style-type: none"> <li>- growing competition in the domestic and foreign markets - <b>9</b></li> <li>- the caution of the population against a relatively new product on the market - <b>3</b></li> <li>- lack of suitably qualified workforce - <b>5</b></li> <li>- insufficiently motivating business environment for investors from abroad - <b>2</b></li> <li>- lack of investment capital and own resources for domestic entrepreneurs - <b>6</b></li> <li>- lack of financial resources to complete the technical infrastructure - <b>7</b></li> <li>- poor quality of infrastructure and its further wear - <b>8</b></li> <li>- missing highway or high-speed communications - <b>10</b></li> <li>- inadequately developed system of state financial resources to support the diversification of the production base in the lagging parts of the region - <b>2</b></li> <li>- the threat of unequal development of regions in Slovakia -<b>3</b></li> <li>- slow growth in service quality - <b>12</b></li> <li>- changing weather conditions affecting the quality of life in agriculture - <b>1</b></li> <li>- missing of companies using local resources - <b>2</b></li> <li>- alarming conditions of housing in Roma communities - <b>5</b></li> <li>- growth in housing costs - <b>3</b></li> <li>- the negative impact of the underprivileged environment of the socially weaker population - <b>6</b></li> <li>- high unemployment rates and better</li> </ul>

<ul style="list-style-type: none"> <li>services and incentive tourism- <b>11</b></li> <li>- suitable conditions for the development of cycling and hiking - <b>9</b></li> <li>- entry of foreign investors, creation of new working places, inflow of investments into the district - <b>10</b></li> <li>- more effective utilization of the European Union's financial assistance for development- <b>12</b></li> <li>- the possibility of developing new products based on renewable energy sources - <b>11</b></li> <li>- reducing the energy intensity of projects by companies and businesses – <b>11</b></li> <li>- State and EU funding for transport infrastructure and the environment - <b>9</b></li> <li>- cross-border cooperation and the possibility of feeding projects from Eurofonds - <b>10</b></li> <li>- the aging of the population thereby the increased demand for relaxation services - <b>7</b></li> </ul>	<ul style="list-style-type: none"> <li>working conditions in other regions - <b>3</b></li> <li>- unfavorable demographic development of the population - <b>1</b></li> <li>- under-utilized resources for science and research - <b>4</b></li> <li>- insufficient solution to current ecological burdens, thus limiting the development of tourism - <b>11</b></li> <li>- the long absence of regional policy, the partial apathy of the population to solve public problems - <b>10</b></li> <li>- a long-term process of stabilizing new partnerships and organizations - <b>4</b></li> <li>- greater demand for services than an offer due to aging populations - <b>3</b></li> </ul>
<b>Σ 219</b>	<b>Σ 120</b>
<b>Σ 219</b>	

After the final assessment of the internal and external factors, and the application of the values to the matrix of model situations (Figure 3), it is possible to determine the appropriate direction at the entry of the spa center of tourism into the evaluated environment.

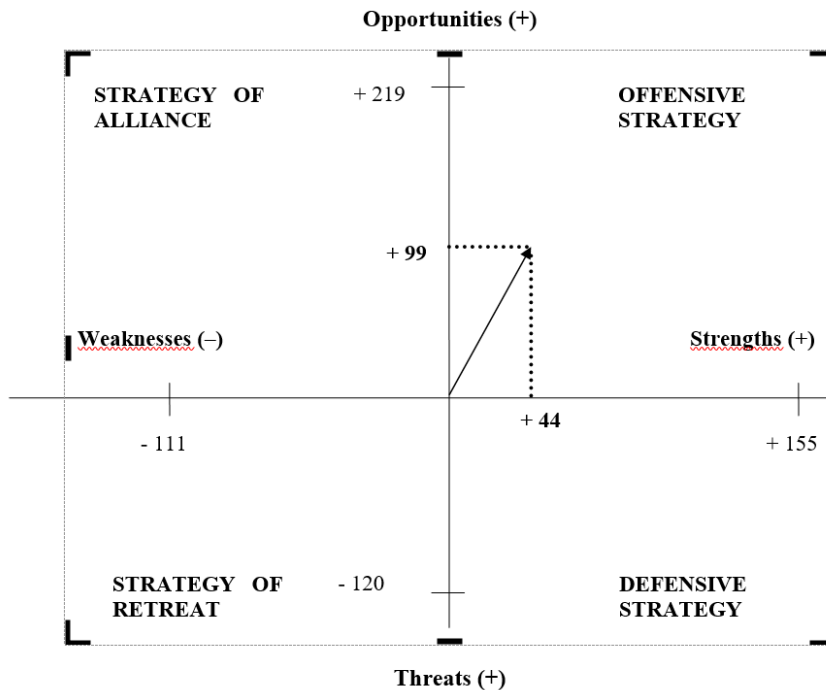


Figure 3 Matrix of model situations;source: own elaboration

Figure 3 presents the strategy's direction, taking into account the strengths and weaknesses as well as the opportunities and threats of the environment.

### 3.2 Application of multi-criteria methods

Table 1 is at the same time the table of input parameters for multi-criteria analysis with the use of the method FDMM and also AHP. The method FDMM will be applied as maximize. The most important criterion was assessed by the rate “1”, less important “0” (see table 3). By obtaining of the importance of criteria it is “normed”, that means that the sum of all scales and assessments equal 0.

Table 3 Paired comparison of criteria by FDMM method

Criterion	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	Importance	Order
K1	X	0	1	1	1	0	1	1	1	1	7/45 = 0,156	3.
K2	1	X	1	1	1	0	1	1	1	1	8/45 = 0,178	2.
K3	0	0	X	1	1	0	1	1	1	1	6/45 = 0,133	4.
K4	0	0	0	X	1	0	1	1	1	1	5/45 = 0,111	5.
K5	0	0	0	0	X	0	1	1	1	1	4/45 = 0,089	6.
K6	1	1	1	1	1	X	1	1	1	1	9/45 = 0,200	1.
K7	0	0	0	0	0	0	X	1	1	1	3/45 = 0,067	7.
K8	0	0	0	0	0	0	0	X	1	1	2/45 = 0,044	8.
K9	0	0	0	0	0	0	0	0	X	1	1/45 = 0,022	9.
K10	0	0	0	0	0	0	0	0	0	X	0/45 = 0,000	10.

On the base of paired comparison of the selected criteria of the suitability of locality for allocation of a spa center, the most important criterion is K6 – water areas, mineral and thermal springs. The least important is the criterion K10 – the political climate. For the AHP method, an assessment is made in cases of comparison of criteria based on the "expert estimates", where experts in the relevant field compare the mutual influences of two factors. The rating is based on the scale [same - weak - medium - strong - very strong], which corresponds to the value [1 - 3 - 5 - 7 - 9]. The subsequent procedure for determining the weighting criteria is more complicated than previous methods since it is necessary to define a customized vector that corresponds to the highest real value (number) of the matrix that we consider in absolute value (Table 4) within each pairing matrix.

The number is  $\lambda_{max} = 10,6166$  and correspondent normed vector is  $a_k = (0,1525; 0,2106; 0,1095; 0,0782; 0,0567; 0,2860; 0,0403; 0,0289; 0,0211; 0,0162)$ . It follows that the ranking of the assessed criteria is the same as by the FDMM method.

## 4 Discussion

To assess the selected center and determination of criteria it was studied the study about the assessment of geothermal project impact on the environment in the area Rapovce, but due to its scope, the results cannot be included in the paper. The area Rapovce was assessed on the base of geological and geomorphological conditions which are suitable for allocation of the spa center because it is a part of the Western Carpathians on the territory of the Slovak Republic with Lučenecká basin. On the part of climatic conditions, this area belongs to the warm area. The average number of summer days per year is 50 and more, with a lower rainfall and a daily air temperature above 25 °C. Hydrological ratios are characterized by a large number of mineral and thermal springs, which are not used. The important factor for allocation of the center in Rapovce is the hole GTL-2 at a depth of 1,501 m. Salted mineralized water with a temperature 39 °C was drilled, with the capacity about 20 l.s-1. The fauna belongs to

the oak zone, the beech zone presents the north-western part. There are these biotopes in this area: forests (thermophilous and dry oak forests), meadows and pastures, standing waters and marshes, water banks, anthropogenic biotopes. There is a rich occurrence of wildlife in the assessed area (wild mussels, wild cat, wild oxen, etc.), and there can be found field game (field marsupial, field hare, etc.), various bird species (hawks, mousebird, etc.), amphibians, reptiles, salamanders, lizards, fish (squirrel, catfish, etc.). There is an evidence of otter occurrence in the river Ipel'.

From the protected areas, there are areas of European importance Cerova upland – forest biotopes and Soví castle ( a natural monument). There are also Pohanský castle and Šomoška Kerčík, coast of Ružinej, Čakanovský profile, etc. Cultural and historical monuments are presented by baroque church of St. Martin bishop and classicist bath. The area is suitable for recreation and tourism, because the area provides suitable conditions for summer and winter use. Tourism in the summer season is concentrated mainly in the area of water reservoirs. These conditions create high values of sunlight in the southern and central part of the area. Water reservoir Ružiná (Ružiná and Divín resorts) is the most visited holiday resort for summer holidays. Conditions for winter and skiing sports are mainly found around the village of Ábelová. In good snow conditions is used the winter sports center Javor with two ski lifts. In the studied area of the district there are educational walkways, biking trails, and hiking trails. The project of agrotourism and rural tourism is being implemented within the development program in the village Veľká nad Ipľom.

## 5 Conclusion

At the conclusion, we can state that the task of SWOT analysis was to identify the basic factors with the greatest importance for the enterprise, i.e. very important advantages, weaknesses, significant opportunities and catastrophic threats that help management of the spa centre to predict attractiveness of its marketing politics or seriousness of its realization during the planned period that can significantly guide the formulation of marketing strategic objectives in individual market segments over a certain period of time. Methods of multicriteria evaluation have allowed defining the hierarchy of evaluating criteria for examination of the suitability of the selected SPA center.

For further research on the part of the application of the methods of multicriteria assessment, it is possible to extend their use to the selection of a suitable spa center from several localities which would make the assessment more complex and it allows the selection of the most suitable locality from the assessed alternative geothermal areas. The design needs to accept the existence of the integrated geothermal system. Without geothermal source (geothermal well) it would not be possible to consider with the creation of spa center.

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## Progressive methods of market research for retail and services

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### Abstract

The current competitive environment is associated with the re-evaluation of traditional methods and processes on the one hand, and the application of new sources of information for the report manager's decision on all levels, not only in manufacturing companies, service companies as well as commercial companies. The paper points to the new possibilities of market research and underlines the growing of need for their implementation in the form of innovative research solutions that can be used in different economic sectors (retail and services). These devices allow exploring the contentment (emotions, visual attention), but also the environmental factors acting not only with the awareness of the respondent (research vest), but even without his full knowledge (smart kiosks). The interpretation of the obtained data provides businesses with new opportunities in making economic decisions in particular markets.

Keywords: neuromarketing, progressive methods, market research, retail, services

JEL Classification: M31, M81

Article Classification: Research/informative article

### 1 Introduction

Consumer behaviour investigates the thought processes and actions of consumers – ultimate end users (rather than business buyers or organizational consumers). Consumers choose how to allocate their available resources of money, time, and energy to select, purchase, consume (use), and dispose of products – goods, services, ideas, or anything else that satisfies customers' personal needs or desires or that solves personal marketplace problems (Lantos, 2015; Kubicová, Habánová, 2013). It is necessary to understand the basic behaviour patterns of consumers. These

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behaviour patterns are quite different in the current world market as opposed to two decades ago. Some of these behaviour patterns can be identified readily. But, when attempts are made to identify consumer behaviour patterns, the general tendency is often to concentrate on the similarities and to combine markets based on certain generalities. (Samli, 2012).

Aggressive competitive market action, then demands and changing customer priorities have resulted in the need for more comprehensive and more detailed information about the target and potential market segments. The main way, how to obtain this information is through marketing research too (Horská et al., 2015). The research in marketing environment is substantially wider than conventional survey of final consumers and their decision-making (Lee et al., 2007).

(Nagyová et al., 2014) states that neuromarketing is one of the most trending topic nowadays, which many people like to speak about, but only few understand it clearly. It is brand new sector combining knowledge from three already existing science disciplines aligning to one. It derives mainly from:

- economics,
- psychology,
- neuroscience.

According to Matúš & Petranová, (2015) methods of neuromarketing research allow penetrate into the unsuspected layers of the human psyche. This opens up new, previously unknown horizons in marketing research. Experiences of agencies show that neuromarketing technologies of research are especially suitable for those projects in which it is necessary to analyze in more detail the emotions associated with the subject of the research.

Berčík, Nagyová & Horská (2016) say that concept of neuromarketing was developed in 90th years of previous century. It is based on hypothesis that major part of brain human activity (90 %) including emotional intelligence takes part in unconsciousness part of brain, which can not be knowingly controlled. When it comes to term neuromarketing, it is mostly connected to Jerry Zaltman, professor of Harvard Business School in United States of America, who was the first one to point out possibilities of usage brain mapping technology in marketing. Upon the grand opening of very first neuromarketing division by Bright House company, based in Atlanta, USA in year 2001, the synthesis of neuroscience and marketing became important idea for new era of marketing theory and practice. Neuromarketing is science, which contains knowledge from various disciplines – neurology, psychology, sociology and marketing with assistance of modern research methods and devices trying to find the answer for irrational consumer behavior.

Neuromarketing is very important in market research because people tend to say one thing, while their behavior suggests something completely different (Lindstrom, 2009). It is known that over 90 % of the information is processed in the subconscious of the human brain. This is exactly what it is a subconscious process of information that plays an important role in decision-making of consumer behavior. Since traditional research methods still do not penetrate into depth of subconscious process for to understand consumer behavior, the results of research and genuine consumer behavior were inconsistent. By finding this information, there was a reason why marketers as well as researchers should re-evaluate the research used methods (Agarwal, 2015). As in other areas as well as in the field of marketing, knowledge from several disciplines such as economics, psychology, biology and medicine (Javor, 2013) has been linked. The connection of these environments can be explored deeper than the brain



physiologically influenced by various marketing stimulus. Over the past decade, consumer neuroscience has made significant advances in generating knowledge about product marketing and consumer behavior, precisely those areas where conventional research methods have failed to adequately cover (Horská et al., 2015). Morin (2011) presents, the emergence of neuroimaging techniques has offered exciting methodological alternatives. Such techniques finally allow marketers to probe the consumers' brains in order to gain valuable insights on the subconscious processes explaining why a message eventually succeeds or fails.

## **2 Material and methods**

This paper is based on the study of existing knowledge in the following areas:

- traditional vs. innovative research tools;
- market research using biometric and neuroimaging methods;
- distribution and placing of various research methods and developing of patent technology;
- the need for the implementation of consumer neuroscience in market research and decisions making.

The result of the study finalizes the definition of main reasons for the need to implement innovative market research methods to increase the denunciation of these studies, to evaluate their use in marketing management and to obtain feedback from real conditions. The need of innovative research methods' implementation is also documented by an increasing percentage of biometric and neuro-imaging methods in research conducted, mainly abroad. In order to obtain information about new technologies, we've compared the possibilities of three research tasks in laboratory and seven in real-world conditions. Besides the comparison of laboratory and real conditions, the contribution is also presented by the most frequently used combinations of feedback gathering with participation's attendance and without participation's attendance of the respondent through the biometric method, means facial analysis (FA) and measuring of reaction time. In the conclusion of this paper is emphasized several examples obtained from primary data of neuromarketing research, possible used in academic and commercial practice.

## **3 Results**

Methods of qualitative and quantitative research by right and clear interpretations offer to researcher's very valuable access to almost all areas, which are researched on the market. Most research agencies in Slovakia are trying to provide to clients with comprehensive results through traditional research tools (see Table 1), which can be implemented in both conditions: laboratory and real too.

On a global scale, it can generally be said that the use of biometric and neuroimaging methods is constantly increasing in the use of research tools although these methods are presented separately, not as part of the neuromarketing or, respectively, consumer neuroscience. The reason is a fact that in many mainly developed countries these methods have been taught so much that they are considered as a common standard. The most frequently used innovative forms of research in laboratory conditions belong to the methods that denote the emotional and visual attention of respondents (Table 2). These forms of research allow the discovery of more detailed aspects that cannot be investigated under real conditions.

Table 1 The most offered tradition research forms (in real and in laboratory conditions) of agencies at Slovak market; own elaboration

Research Task	Output
1. Questionnaire survey	Clearly arranged graphical and statistical processing of the primary data, depending on the researched issue.
2. Individual/ focus group interview	Summarizing report of opinions, creative ideas, conflicts and knowledge*.
3. Panel	Evaluation of various products/ services attributes among scientific participation 'attendance.
4. Mystery shopping/ observation	Final report reflecting the picture of the activities taking place in real conditions.

\* During focus groups it is possible to make a detection of participants' emotions by using of biometric methods.

Table 2 Innovative research forms in laboratory conditions; own elaboration

Research Task	Output
1. Emotional attention/ focus of respondents in testing of various stimuli (e.g. logo, packaging, brand, advertising, price, discount, website, mobile application, merchandising, aromatic compounds, etc.).	<ul style="list-style-type: none"> <li>• Measured information about emotional attention/ interest of respondents during monitoring/ submission of stimuli.</li> <li>• The level of attention can be detected by multiple methods or a combination of them.</li> </ul>
2. Respondents' emotions in testing of different stimuli (e.g. logo, packaging, brand, advertising, price, discount, website, mobile application, merchandising, aroma compounds, etc.).	<ul style="list-style-type: none"> <li>• Detailed information about respondents' emotions (valance of excitement) and about their developing changing during monitoring/ submission of stimuli.</li> <li>• In case of more methods using (biometric and neuroimaging), it could interpret the consumer' emotions through emotional score.</li> </ul>
3. Respondent' visual attention during research of various stimuli (e.g. logo, packaging, brand, advertising, price, discount, website, mobile application, merchandising, aromatic compounds, etc.).	<ul style="list-style-type: none"> <li>• Final graphic maps of respondents' visual attention during tested stimulus.</li> <li>• Visual attention is processed in the form of summary heat maps, fixation points and clusters.</li> </ul>

For contractors, findings gained in field conditions are the most important because they reflect the researched reality most accurately. In this regard, different technologies are being developed around the world to facilitate, refine and provide a comprehensive basis for decision-making, including two technologies, which are the subject of a European patent application, created at the Slovak University of Agriculture in Nitra.

The first technology "Means of obtaining and / or processing neuromarketing data, a system for its implementation" allows getting feedback on feelings, visual attention and movement in any defined space. This solution enables solving multiple research tasks, as seen in Table 3, without significant limitation of the respondent. This technology can be divided into two solutions (see Figure 1).

Table 3 Qualitative and quantitative research through biometric and neuroimaging mobile devices using patented technology; own elaboration

Research Task	Output
1. Movement of target groups within the defined area of the store / shop / branch / showroom.	<ul style="list-style-type: none"> <li>Graphically processed maps of the movement of customer segments (color-differentiated) within the layout (of the store, shop, branch, showroom).</li> <li>For each target segment, it is also possible to generate aggregate heat maps ("hot line") within the layout of the store / shop / branch / showroom.</li> <li>It is possible to create a comprehensive heat map of movements (including all target groups of customers), for clear identification of preferred locations and "grey zones" within the defined space.</li> </ul>
2. Direction of orientation / access to individual attributes in the store / shop / branch / showroom.	<ul style="list-style-type: none"> <li>The maps showing the movement of customers within the selling / commercial area also include their direction of orientation.</li> <li>The sales department map is marked with the individual sales departments / sections and the most common directions from which individual customer segments approach the researched object, including the blind spots.</li> <li>Also, aggregate information about average speed, number of stops and time spent in individual sales departments / sections is generated for these segments.</li> </ul>
3. Customer emotions within the defined store / shop / branch / showroom area.	<ul style="list-style-type: none"> <li>A detailed emotional heat map of customers / visitors (showing the parts in which customers feel better in the store / shop / branch / showroom and vice versa, in which they feel worse).</li> <li>Customer emotions are expressed through an emotional score calculated on the basis of three methods monitoring the activity of the nervous system.</li> </ul>
4. Visual attention of customers / visitors.	<ul style="list-style-type: none"> <li>Detailed maps of the visual attention of customers / visitors within the defined space.</li> <li>Visual attention is processed in the form of transparent heat maps, fixation points and clusters.</li> </ul>
5. The influence of environmental factors on the overall perception of the defined store / shop / branch / showroom area.	<ul style="list-style-type: none"> <li>Environmental factors are processed in the form of scores for individual sales sections / departments, some of them also in graphical form (based on the requirements of the contractor).</li> <li>An analysis of all the key factors of a given element (e.g., intensity, chromaticity temperature, color rendering index, illumination angle, etc.) is complemented in case of deficiencies within individual elements (e.g., lighting, sound / noise, air quality).</li> <li>At the same time, suggestions for improvement are developed when identifying deficiencies in terms of environmental factors / distribution of goods / design elements.</li> </ul>
6. 360 ° Full HD video recording.	<ul style="list-style-type: none"> <li>Detailed video and audio recording, allowing playing back any time period during the movement within the defined space.</li> </ul>
7. Air sampling.	<ul style="list-style-type: none"> <li>Detailed air analysis (fragrance content) within the sampled sections / departments.</li> </ul>

\* Electroencephalography (EEG) data evaluation is performed in the presence of neurologists with a certificate for electroencephalography



Figure 1 Different solutions of patent technology

The second technology, “Information device with continuous feedback, means of presenting information”, is basically a panel / kiosk which, in addition to presenting audio-visual content to the target audience, allows to get feedback with or without participation of the respondent. The device may have any design so as to not significantly impair the homogeneity of the environment in which it is located. Examples of individual designs can be seen in Figure 2.

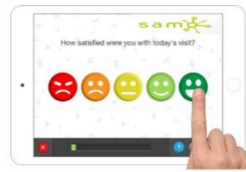


Figure 2 Design of intelligent panels with continuous feedback from the target audience

Depending on the requirements of the contractor, the device may provide three different combinations of feedback from the target audience, as seen in Table 4. The first option is to obtain feedback via a standard form for recording the responses with the respondents’ participation. The second option uses the biometric-somatic method, which involves recognizing emotions based on facial expressions without the participation of the respondent. The best solution is to combine the previous methods together with evaluating the relevance of the recorded response based on reaction time. How device works in real conditions can be seen in Figure 3.

Table 4 Possibilities for obtaining feedback with and without participation of the respondent

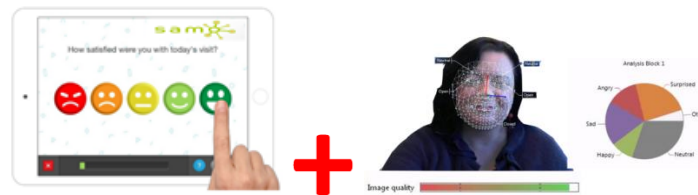
With participation of the respondent = recording responses



Without participation of the respondent = face expression monitoring



Combination, both with and without the respondent's participation = face expression monitoring + recording responses



Evaluation of the relevance of the response (combination of the recorded response with the reaction time measurement) (Multiple questions)

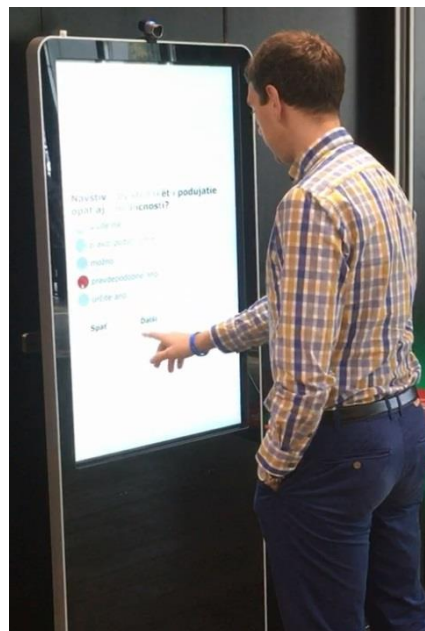


Figure 3 Intelligent panel/ kios in process

## 4 Discussion

In developed economies, the traders' investment in research is generally higher than in Central and Eastern Europe. In Slovakia, syndicated types of surveys are preferred, financed by more contractors. On the contrary, in Western countries, besides syndicated studies, more and more tailor-made surveys focus on action steps, that is, directly on implementing changes, for example, in a marketing campaign, assortment, means of introducing a new pricing strategy. Another difference can be seen in the sample of respondents. In addition to nationwide studies aimed at the whole population (such as customer satisfaction), the number of studies focusing on those specific customer groups, which the contractor plans to work with and sees potential for the development within a specific area, is increasing.

In general, research helps to understand the market, as well as all its participants, from the position of the contractor, competition and following their strategies, to customers and customers. Market research using innovative research solutions makes it possible to obtain more accurate information for making decisions directly from the real environment, which is a form of competitive advantage. It can be assumed that their further development and frequency of use depends mainly on the knowledge of managers and disseminating awareness of these research tools. It would be interesting to investigate the quality of neuromarketing research directly since the private companies of research has been found to be associated with pro-industry conclusions, in sector of services, such as in tourism, or in airlines companies, in Horeca or doing a research in banks or insurance offices.

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## Tourism and hotel business in the High Tatras by 1938

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### Abstract

The High Tatras got the status of a town in 1947, but tourism development started as early as in the 2nd part of the 19th century. Basic assumptions of its development were economic growth of Austria-Hungary in conditions of market system and building of infrastructure. The paper identifies the most important milestones of tourism and hotel business in the High Tatras in the context of political and economic environment. Establishment of Czechoslovakia in 1918 had an important impact on activities of Czech and Slovak businesses. The system of promotion, legislative and support of foreign tourism development offer inspiration for actual running of processes in tourism at macroeconomic and microeconomic levels.

Keywords: tourism; hotel business; the High Tatras.

JEL Classification: N74, Z32

Article Classification: Research article

### 1 Introduction

If under the term tourism a stay out of our place is understood, then we can say that the High Tatras became a tourist destination already in the 18th century. Interest of scientists and travellers was an impulse for a local landowner earl Stefan Csaky to make a cottage for hunters built in 1793, near to the spring of acidic water under Slavkovský peak. One of its first guests was a Scottish doctor, geographer and explorer Robert Townson, who in the above mentioned year visited a lot of Tatras valleys, peaks, studied geological situation, fauna and flora in Tatras, he measured the peaks in the High Taras by barometer and his Jahňací and Lomnický peaks climbings are considered

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as first recorded climbings there. In 1797 there were three villas and one chapel in Starý Smokovec and this year is considered as the year in which the first permanent tourist base was established in the High Tatras (Houdek, 1951).

By 1918 in the development of tourism in Slovakia we can speak about the priority position of the High Tatras. Before the buildings and facilities of tourism were built in the High Tatras, very important changes in infrastructure had been realized and thank to it Slovakia was connected with the whole Europe. Košice-Bohumín railway started its operation in 1871, the railroad between Bratislava and Žilina was finished in 1883. In the same year also the railroad from Poprad to Poprad's basin and in 1895 its branching-off from Studený Potok to Tatranská Lomnica. In 1896 the rack railway from Štrba to Štrbské Pleso was constructed. In 1908 the cable railway from Starý Smokovec to Hrebienok started its operation and in the years 1908 to 1912 it was the electric railway from Poprad through Starý Smokovec to Štrbské Pleso with a branching-off from Starý Smokovec to Tatranská Lomnica. Also a road network was built during these years. In 1897 a chalet of Ugrian Carpathian organization was built near to the Green mountain lake, in 1895 Silesian house and in 1901 Tery's chalet was constructed, etc. In 1876 Dr. Mikuláš Szontagh senior, started operating his own sanatorium in Nový Smokovec and based on experience of Swiss Davos he introduced a yearlong treatment since the winter season 1882/83. In 1904 the Grand Hotel in Starý Smokovec was opened, then in 1903 – 1905 it was the hotel Palace in Tatranská Lomnica – today's Grandhotel Praha, etc. Since 1905 the High Tatras became a reputable centre of tourism, treatment, hiking and sport (Terezčák, 1998). Activities of Ugrian Carpathian organization contributed considerably to the development of tourism in the High Tatras by the year 1918. Its successor was Carpathian organization (Karpatheverein) which was functioning by 1945. By the year 1918 Slovakia was a part of Austro-Hungarian monarchy and due to it all organizational, technical and administrative activities were executed only in Hungarian. Despite the established fact concerning development of tourism in Slovakia by 1918, it is necessary to point out that especially Hungarian aristocracy participated in tourism activities. The first World War brought radical changes to political and economical world structure. The result of national – liberational movement of Czechs and Slovaks was establishment of a qualitatively new period in October 1918 – establishment of Czechoslovakia, a common state of two related Slavonian nations, but whose development during centuries was economically and politically different.

## **2 Material and methods**

The basic heuristic basis was acquired by secondary data processing. We used especially historical and logical and system-analytical methods. It took a few years to search archive sources and by analysing partial information which was followed by synthesis we got a picture concerning consequence of individual historical sources. Archiving and documentation of data related to tourism and researched period does not exist till now, so we were forced to research the problem as a part of total economic and political situation in consequence to subsystems of tourism. Among key secondary data which are not frequently used but are very numerous belong contemporary magazines including specialized publications. There are actual papers dealing with the organization, legislation and economic importance of tourism in Slovakia within the surveyed period.

Also our own results of the extensive archive survey in the fond of Slovak state central archive in Bratislava, regional archives (Levoča) and a few district archives are

used. Due to the absence of original scientific works related to the surveyed period it is processing of usually fragmentary records together with their confrontation with contemporary press as well as personal memories of the former employees in tourism (Ing. František Odložilík).

When the materials concerning tourism and hotel business in interwar period in the High Tatras were processed differences in terminology were found. The term tourism was used very rarely during this period. Our study of archive sources confirmed that the most frequently used term for the area of tourism was so called foreign tourism. The reason is simple: when travelling a visitor usually arrived to the places and destinations where he/she “is not at home”, so he is a foreigner. And also a citizen of Czechoslovakia, e.g. from Bratislava, but also somebody originally French from Paris could be a foreigner in the High Tatras. It was the term which originated by translation of German “Fremdenverkehr”, and in Czech and Slovak it started to be used in the end of the 19th century. In the second part of 1920s apart from the term foreign tourism, also a new term started to occur – tourist movement, which included domestic travelling, currently known as tourism. The term tourism as a unifying category for foreign tourism and tourist movement started to be used at the end of 1930s (Štemberk, 2009).

### ***2.1 Formation of organizational structure of tourism in Slovakia from 1918 to 1938 with emphasis on the High Tatras***

The main task of the organization of tourism as a part of its system is building and organizing of individual relations among the elements of supply aimed at satisfying requirements of tourism subject. There was a specific standard of tourism organization within Austro-Hungarian monarchy. Ugrian Carpathian organization started its operation in 1873 in Slovakia and it was based in Spišská Nová Ves and had 18 tourism sections in individual towns. In Slovakia apart from this organization we know the activities of Hungarian tourism association based in Budapest from 1918 to 1920.

Touristic movement did not stop to exist and the result of effort to establish a new organizational base was the generation of a new Carpathian association – Karpathenverein in Poprad in 1920, based on organization and experience of Ugrian Carpathian association. It also associated citizens of Slovakia of Gemran and Hungarian nationalities. A new political situation in Czechoslovakia did not support this new association and in the summer in 1921 the Ministry for Slovakia Administration banned the activities of Karpathenverein, in spite of its indisputable credits of development of tourism especially in the High Tatras. Only after long lasting negotiations and statutes approval of Karpathenverein in Slovakia which was based in Kežmarok its activities were allowed again. Credits of Karpathenverein whose chairman was Dr. Michal Guhr, can be seen especially in the support of skiing development and its organization, building material and technical base of skiing and tourism and organizing different sport events. During its existence by 1944 Karpathenverein made skiing and the High Tatras very popular. The aims and results of activities were published in the newspapers such as Karpathen Post, Turistasás és Alpinizmus, Turistik und Alpinizmus, Die Karpathen and other (Terezčák, 1998). Organizations which were established in Slovakia after 1918, were respectful of activities of Karpathenverein, and considered it as their competitor but finally it helped to the development of tourism in the High Tatras. On the other side there were some conflicts between the association and newly established ones related for example to bilingual signs of touristic paths.

Apart from activity of Karpathenvereiun, which continued in traditions existing before the year 1918, the organization of tourism in Slovakia started to be built from the scratch supported by initiatives and influenced by Czech professional base. In Czech countries the organizational base of tourism started its formation already in the second half of the 19th century. In 1888 the Club of Czech tourists was based and from 1889 it published its own magazine "Tourist's magazine". Club of Czech tourists was active especially in the area of domestic tourism. Its organization, promotion and support in comparison to situation in Slovakia by 1918 was on a much higher level. Ever since before 1900 they were looking for the ways how to support the domestic tourism and make it available to the crowds of inhabitants. The Tourist magazine in its issues by 1918 published articles about tourism in Slovakia only sporadically. Under the strong influence of Magyarization in Slovakia the visits of Czech tourists were strictly monitored and restricted.

Foreign tourism in Bohemia was organizationally managed by so called Central office of foreign associations based in Prague, which in 1918 associated 4 foreign associations particularly Provincial association ennobling visits of foreigners based in Prague, Provincial association ennobling visits of foreigners in Moravia and Silesia based in Brno, Landersverband fur Fremdenverkehr in Karlové Vary, and Deutcher Landesverband Fremdenverkehr in Mähren und Schlesien (Kolesár, 1929). After 1918 the organization of domestic and foreign tourism was developed in accordance with organizational structure already existing in Czech countries. We can summarize that conditions for executions of goals of Slovak enthusiasts and pioneers in tourism were much better in comparison to the situation before 1918. Domestic tourism was managed by Slovak unions of the Club of Czechoslovak tourists and foreign tourism by Slovak foreign association based in Bratislava.

The Club of Czechoslovak tourist was set up on the 13th November 1918 in Prague by renaming of the Club of Czech tourists. Its fundamental organizational parts were so called Unions. The Club of Czechoslovak tourists did start its activities in Slovakia as in a country without already existing basis of tourism, because as it had been already mentioned in the area of Slovakia Ugrian Carpathian and Hungarian touristic associations were functioning for more than four decades. After generation of the Czechoslovak republic Slovak tourists and fans of tourism used a favourable situation to activated their power and on the 19th January 1919 established the Tatra touristic association in Liptovský Sv. Mikuláš. This association grew very quickly and set up its branches in Ružomberok, Košice, Nitra, Bratislava, Žilina and Turčiansky Sv. Martin. Already after its short existence it had 985 members and achieved excellent results, for example they replaced signs of touristic ways and used Slovak language, they got materials to create Slovak terminology of some nature attractions and in 1920 they published a Tourist guide in Košice. The secretary of the Tatra touristic association was Miloš Janoška, originally a school inspector. There were negotiations among these two partners in February 1920 and during the annual general meeting of the Tatra touristic association on the 28th February 1920 its representatives agreed with the merger. In May 1921 the head office of the Club of Czechoslovak tourists (KČST) in Prague acknowledged the head office of the Tatra touristic association as a branch of KČST in Liptovský Sv. Mikuláš (Terezčák, 1998). By 1938 there were around 75 branches in Slovakia having approximately 30 thousand members, which presented about one third of the total number of members of KČST. The Club had steady economic base, took but also built and operated chalets, hostels, resthouses and other touristic objects. It regulated and signed a wide net of touristic ways not only in the

High Tatras and promoted Slovakia in its magazines *Beauties of Slovakia* and in an official body Magazine of the Club of Czechoslovak tourists.

The organization of the Club of Czechoslovak tourists was built in the principle of a county and the democratic process was emphasized by a direct connection of unions and counties to the head office. The most active counties were the Tatra and the Central Slovak ones. Especially development of tourism in the High Tatras was of nationwide importance thank to so called Tatras commission (Kropáček, 1935).

A dominant position in the development of tourism in the High Tatras due to the political situation in Europe and general conditions belonged to domestic tourism. Gradually, however, economic importance of foreign tourism was emphasized as well as a need of its support and promotion. But also from this point of view the High Tatras were the key destination. In the Czech countries so called Provincial associations ennobling visits of foreigners were active. The Ministry of Trade in Prague in 1919 authorized the Czech Provincial Foreigners' Association in Moravia and Silecia to set up such an association in Slovakia. This difficult task required a thorough preparation. Foreigners' Association in Moravia and Silecia addressed all Slovak counties, informed them about their task or role related to establishment Foreigners' Association in Slovakia and asked them to send a list of people, who were keen on tourism and willing to cooperate in its promotion and development. After about two years' preparation on the 16th January 1921 the Slovak foreigners' association based in Bratislava was established. Leading representatives of Slovak and Czech public were elected as members of its management. The most important representative from Slovakia was Kornel Stodola (1866 - 1946), Member of Parliament and the chairman of the Trade chamber in Bratislava. The basic task of the Slovak foreigners' association was to associate all functionaries, municipalities, joint stock companies and individuals with the aim to increase foreign visit rate in Slovakia. The High Tatras played the key role in this effort. Other tasks of the Slovak foreigners' association were promotion of Slovakia in its domestic country and abroad including publishing of promoting brochures, protection of folk architecture monuments, improvement of train and communication connection, increase of Slovak hotel business quality, modernization and promotion of spa towns, etc. (Piteková, 1999).

The development of Slovak tourism was based on voluntariness. Its most important organizations as already mentioned were Karpathenverein, the Club of Czechoslovak tourists and Slovak foreigners' association. Apart from these voluntary associations also a Union of workers' tourists, unions of Slovak and Tatra spa, Economic head office of Slovakia with its regional branches, trade chambers were engaged in the tourism organization. The Union of Slovak health resorts based in Trenčianske Teplice and the Union of Tatra health resorts based in Nový Smokovec worked in the area of health centres tourism. Both unions promoted especially interests and needs of their members but interfered the tourism as well by promotion of Slovak health centres in Slovakia and abroad. Organization of spa tourism did not correspond with at that time importance of spa in Slovakia and there wasn't legislative concerning health spa centres regularized until Czechoslovakia break-up.

### **3 Results**

Accommodation and catering services present the fundamental assumption for development of tourism and hotel business. After the generation of Czechoslovakia also legislation concerning accommodation and catering services provision had been changed. Doing business in hospitality and hotel services had to follow the law number

259/1924 of Collection of laws. Anybody who wanted to do business in these area had to get a licence. Within the frame of often promoted support of tourism the office which issued licenses were more willing to issue licenses allowing to “shelter” foreigners than hospitality licenses. A new category of so called touristic hotels established in mountain areas including the High Tatras was generated. Under the impact of the first World War the interest in travelling went down sharply and a lot of the hotels built before the war lost their clientele. Hotel business in the High Tatras was influenced by the fact that also the structure of clientele had changed considerably. By 1918 participation in tourism was the domain of Ugrian aristocracy, after 1918 under the influence of a changed political situation the most important were activities of the Club of Czechoslovak tourists and participation in tourism got a mass character.

Hotel business in the High Tatras could continue in development of tourism by 1918. It inherited built infrastructure and hotels of at that time meeting the requirements of world quality level. The most important hotels were the Grandhotel in Starý Smokovec, which was built in 1904 and the Grandhotel Praha in Tatranská Lomnica. Their construction was a response to a growing demand after tourism services of the highest possible level. The architect of Tatra grandhotels was Quido Hoepfner. Both hotels offered elegance and noblesse equal to Swiss competitors and the High Tatras by its satisfied customers built its awareness not only in Europe. After 1918 the Tatra hotels kept high quality of the services they offered. It is an interesting fact, that the hotels were not managed by their director, but this function belonged to the director of Starý Smokovec settlement. In Starý Smokovec in 1918 – 1938 there were two key hotels there – the Grandhotel and the Tatra hotel. In an out of season period they alternated each other, i.e. that if one was open there were repairs and maintenance carried out in the other one. It is a practical application of so called destination management, which is currently theoretically processed in tourism, but its realization in practice preceded the theory by a half century. Later the hotel Park – nowadays the hotel Atrium and Hoepfner’s house (former hotel Úderník, today the hotel Smokovec) were built. But these hotels did not offer such a high standard of services as the Grandhotel and Tatra hotels. Considering the increasing demand, the offer of the hotels was added by the offer of guest-houses. The best known were Vesna, Alfa and Dr. Opatrný. Also the Športhotel Hrebienok offered high quality services. It was a hotel of a medium category, but its restaurant for the guests who were not accommodated there was very good and for its accommodated guests were being served in a fantastic restaurant by waiters wearing dress-coats.

At that time the High Tatras were known as well-known climatic spa. Health function of tourism was conditioned by existence of tuberculosis and other lung diseases. That is the reason why the Palace hotel is an inseparable part of Smokovec, the hotel was also known under the name Penzák (its owner was Pensionary institution of private accountants, today’s Palace hotel was built later). Its architect was Milan Michal Harminc. During this period also important medical institutions in Tatranská Polianka and Vyšné Hágy were constructed.

The dominant hotel at Štrbské Pleso was the hotel Móry, built in 1905 by an architect Karol Móry. After his death the hotel was owned and ran by his nephew, a music composer Ján Móry together with his wife. Another jewels of Štrbské Pleso were the hotels Hviezdoslav and Kriváň.

The development of Tatranská Lomnica was similar to the development of Starý Smokovec. The highest quality services were offered to the spa guests in Grandhotel Praha and Lomnica hotel. Both hotels were managed from one centre and alternated each other in out of season periods. Based on the project of prof. Ing. arch. Bohuslav Fuchs

the hotel Morava was built in this period. It belonged to Moravian insurance company. In 1918 – 1938 in Tatranská Lomnica services of tourism were provided also by the guest houses, for example by Payer, Bureš and Bělín.

A general problem of tourism development after 1918 was insufficient capacity of accommodation facilities including the hotels. High demand and low supply naturally underlie prices increase. High prices presented the biggest obstacle of tourism development especially in Slovakia and in the High Tatras as well. The opinion of Slovaks was that the prices for accommodation are overpriced and do not correspond with the quality of offered services. Accommodation in Slovak hotels was more expensive, higher by 50% than in Czech countries, excluding the Czech spa towns. In the second half of the 20th century the Economic Office for Slovakia tried to enforce lower prices. From the historical point of view, the high prices especially in Tatra hotels were connected to the fact that the owners of majority of them were Jews, who by using various methods tried to keep as high prices as possible (Štemberk, 2009, p. 99). The second half of the twentieth brought development of hotel business also to the High Tatras. New hotels were built and the original ones were enlarged or reconstructed. This investment was felt especially in Slovakia, where in relation to the number of inhabitants the highest number of new capacities were created. Continuing upswing was expected and business subjects did not have a problem with credit indebtedness. But the impact of economic crisis in the first half of the 1930s concerning developing hotel business in the conditions of a new state was very bad. More impacted were large and luxurious hotels, especially the ones having mortgages. Smaller hotels managed the crisis better, they became adapted to demand and even able to make profit. The year 1933 was very critical for many hotels. In comparison to 1932 occupancy went down by 20%. But the crisis brought one positive effect, the prices of accommodation and catering services decreased. Also devaluation of Czechoslovak crown in 1934 positively influenced the development of foreign tourism. Notable turn for the better also in the Tatra hotel business happened from 1936. But the Second World War was bound to tumble.

#### **4 Discussion**

Organized tourism in Slovakia was developed from the second half of the 19th century. Absence of continuous recording of important data in the development of tourism was caused by long-term effort of Slovaks to get its independence. It is understandable that in the period when the nation fights for its survival, there was not enough time to monitor and record the development of “only” incident human activities, which presented privileges of the rich. Also tourism was one of them at the end of the 19th and in the first third of the 20th century. Apart from that in Slovakia two forms of co-existence with other nations existed – from Austro-Hungarian monarchy, through the Czechoslovak republic (1918 - 1938) to Slovak state (1939 - 1945). To summarize we can say that doing business in tourism within the monitored period had neither consistent concept nor coordinated development. The policy of tourism and establishment of legislative frame were seriously considered in the second half of the 1930s. Businessmen in tourism carried out their activities especially based on business licence law. This law started to be valid in Slovakia on the 1st June 1924.

For better idea related to growing importance of the High Tatras we provide a few statistic data. In 1918 – 1938 from the point of view of the visit rate the year 1936 was the most successful. While in 1880 the High Tatras were visited by 2,000 guests, 1900 it was cca 6,000 guests and in 1930 it was almost 30,000. Under the impact of the

economic crisis the number of visitors went down and it reached the level of 1930 only in 1935. In 1936 the visit rate increased dramatically – to 40,000 guests. The share of hotels, guest-houses and villas was cca 30 %, sanatoria, convalescent hospitals and therapeutical institutions dominated, due to so called social diseases especially tuberculosis. As to the structure of visit rate, the share of Slovak tourists was only 1%! 92 % of the visitors were Czech tourists and 7 % tourists from Poland. This proportion in favour of tourists from Slovakia was remarkably changed in 1939 – 1945 (Law about tourism) and in 1947 the share of Slovak tourists in visit rate in the High Tatras was about 50 %.

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## Changes in Tertiary Education in Tourism in Slovakia

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### Abstract

Implementing higher level of tourism education depends on its knowledge as a scientific phenomenon and its expansion as a social activity. In the 1920s tourism was studied and taught at various universities in Austria, Italy, Germany and Switzerland. In Slovakia, tourism began to be taught in the academic year 1946/47 and in the early 1960s. The Department of Tourism at the University of Economics in Bratislava was created in 1963/64. Currently, seven universities and educational institutions are offering a wide variety tourism programs in Slovakia. The aim of this article is to assess the introduction of tertiary education in tourism in Slovakia and its changes in the international context.

Keywords: tertiary education; research; tourism; university.

JEL Classification: A20, I23, L83

Article Classification: Research article

### Introduction

*What greater or better gift can we offer the republic  
than to teach and instruct our youth?  
Cicero*

The recognition and expansion of tourism as a socioeconomic phenomenon are preconditions for higher education in tourism. Systematic tourism research can be dated to the early 20th century, when the tourism has grown in importance as a form of population migration as well as its exploration not just geographically, but also economically and sociologically.

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## 1 The history of tourism education in Europe

Key phases in the development of education in tourism as a socioeconomic phenomenon were driven by tourism research. For that, it was necessary to institutionalize the scientific research. The Professor Robert Glüksmann initiated the establishment of the Research Institute of Tourism in Berlin in 1924. The Research Institute of Tourism published the results of tourism research in the journal *Archiv für den Fremdenverkehr*. Despite the short duration, the Institute of Tourism also provided education at the Berlin University of Business.

Angelo Mariotti was a pioneer of tourism education at the University of Rome. He lectured the tourism in 1920/21 but the department of tourism was established there in 1925. In the 1930s, tourism was taught as part of economic science at the University of World Trade in Vienna (now the University of Economics). A pioneer of tourism education in Austria was the professor Paul Bernecker. The Research Institute of Tourism has been established at the University of Berne in 1941 as well as the Tourism Seminar at the University of St. Gallen. In Switzerland, the pioneers of tourism research and education were Professors Walter Hunziker and Kurt Krapf (Gúčík, 2014).

The existence of these institutions has accelerated tourism research. During this period, scientific documents were set up which laid the foundations for systematic tourism research and influenced the focus of research and education in tourism in other countries.

## 2 Aim, material and methodology

The aim of this article is to assess the introduction of tertiary education in tourism in Slovakia and its changes in the international context. The study is based on the opinions of authors, namely B. V. Černý (1945), Z. A. Truska (1946), G. Sládek (1999), M. Gúčík (2014), M. Gúčík, M. Vetráková (2015) and Memorial of the University of Economics in Bratislava (1940 – 1990), in Banská Bystrica (1954 – 1994). Archival materials from the Department of Tourism and Hospitality were also used.

## 3 Integration of tourism into tertiary education in Slovakia

The scientific and publishing activities of authors are a precondition for higher education in tourism. In the first half of the 20th century, there were several authors, who focused on economic aspects of tourism in Slovakia. Most of their articles defended the importance of tourism for the economy, other provided tourism instruction or education.

To include tourism in higher education, it was necessary to prove the results of its study. In the post-war period, the Slovak High School of Business in Bratislava integrated tourism into the study process. In 1947/48, the economy of tourism and the spa industry was offered there as a study subject (Pamätnica VŠE, 1990). The research in tourism has intensified not only in Europe, including Czechoslovakia, but also in the rest of the world. As B. V. Černý (1945) stated: "The Study Institute for Tourism, whose establishment took serious steps in the liberated country." The need for tourism research was also emphasized by Z. A. Truska (1946): "We have a lot of promise from the work of the Institute for Tourism Research in Prague". He also stressed the need for the establishment of a department of tourism in Slovakia.

However, this situation did not last long. Systematic attention to tourism research began only in the second half of the 1950s. Tourism developed mainly in organized forms and with emphasised cultural and health effects. It was declared as a manifestation of the rising living standard.

The inclusion of tourism in higher education was established at the University of Economics in Bratislava (EUBA). Firstly, the economy of public catering was taught as part of the study in the academic year 1954/55. Later in 1957/58, the organization and technology of public catering as well (Sládek, 1999). The stimulus for the inclusion of tourism in education was the Concept of Tourism Development in Slovakia (1958). The seminar “Importance and role of tourism in the development of the national economy of the Czechoslovak Republic “(1959) was also beneficial. Tourism had become part of education and an educational plan for public catering and tourism was created for the 5th Year of Study. This was the starting point for the establishment of the Department of Tourism. There was a concern that the creation of a separate department of tourism would mean a weakening of the Department of Internal Trade (Sládek, 1999).

The Academic Council of the EUBA decided to establish a department in the academic year 1963/64. The head of the department was associate professor Gustav Sládek. The Department of tourism was also founded at the University of Economics in Prague (1964). The effort to introduce the tertiary education in tourism in Slovakia was accomplished. The study of tourism was based on the pattern of the Swiss School of Tourism.

To support the scientific exploration of tourism, the Research Department of Tourism was established at the Research Institute of Commerce in Prague in 1965-1967. Later it was relocated to Bratislava as a Tourism Institute and renamed to the Research Institute of Tourism with national competence. It was cancelled in 1991.

The study of tourism and hospitality was a part of international trade. The EUBA and the Committee for tourism have begun publishing the journal *Economic Review of Tourism* in 1968. The scientific research laboratory with its own research plan was also established (Sládek, 1999).

At the end of 1972, the EUBA decided to meet the demand of the Central Slovakia region and the city of Banská Bystrica to establish a faculty there. It should have been a contribution to the forthcoming establishment of the University of SNP (Univerzita slovenského národného povstania – SNP). The Faculty of Commerce at the EUBA established a detached department in Banská Bystrica. Its task was to prepare students for tourism. The Department of Tourism and Hospitality was transferred to Banská Bystrica (Pamätnica VŠE, 1990). It was the foundation of the future faculty. The studying program: Economics of Services and Tourism Department was established in 1975. After four years, the Faculty of Economics, Services and Tourism was created as a fifth faculty of EUBA.

The content of study changed and transformed into the conditions of a market economy after 1989. In 1992, the separate study programme in tourism and hospitality was created. The Department of Tourism and Hospitality has become a part of the new Faculty of Economics at the Matej Bel University in Banská Bystrica (MBU).

#### **4 Changes in tertiary education in tourism since 1990**

There were numerous departments of tourism established in Slovakia after 1990. The tertiary education has changed because of European education policy. Its aim was to increase the attractiveness and quality of education and to make the education better known. The employability of graduates in the domestic and European labour market

improved. The European Union required the Bologna Declaration, which the Slovak Republic has also accepted. With the Higher Education Act no. 131/2002 Coll. and its Amendment No. 455/2012 Coll., there was introduced functional internal quality system (Vetráková, 2014a).

In order to achieve a comparable level of education in the regional, national and European sphere, it was necessary to adopt education standards. Dublin descriptors were adopted for three levels of tertiary education. These standards defined basic abilities and expected graduate performance associated with the specific levels of education. They were the basis for the development of graduate profiles.

#### 4.1 Study of tourism in an international context

International Standard Classification of Education (ISCED) classifies tourism as Economic Studies and marks it with the code 10 – services. It regards the personal services (code 101). Tourism is included in two study specializations: 1013 - hotel, restaurants and catering and 1015 - travel, tourism and leisure.

In Slovakia, seven universities provide higher education in tourism (table 1). There are also study departments, which teach subjects from tourism. The question is whether the university study of tourism in Slovakia is compatible with the ISCED classification.

Table 1 Tourism study programs; own elaboration

University (Faculty)	Field of study: tourism
Matej Bel University in Banská Bystrica – Faculty of Economics (1964)	1. level: tourism 2. level: economy and management of tourism 3. level: tourism
University of Economics in Bratislava – Faculty of Commerce (1991)	1. level: businesses in tourism and services 2. level: management of tourism
University of Prešov – Faculty of Management (1994)	1. level: tourism, hotel, spa
University of Constantine the Philosopher – Faculty of Central European Studies (2013)	1. level: regional tourism
Other fields of study	
Technical University of Košice – Faculty of Mining, Ecology, Process Control and Geotechnologies (1994)	Field of study: Collection and processing of land resources 1. level: geotourism 2. level: geotourism
University of Constantine the Philosopher – Faculty of Arts (1998)	Field of study: Culturology 1. level: management of culture and tourism 2. level: management of culture and tourism
Slovak University of Agriculture – Faculty of European Studies and Regional Development (2004)	Field of study: Public Administration and Regional Development 1. level: rural development and rural tourism 2. level: rural development and rural tourism

Source: [www.portalvs.sk](http://www.portalvs.sk), in academic year 2017/18.

The study is offered in different fields (tourism, culturology, public administration and regional development, geotourism) (In the Czech Republic, there are 15 higher education institutions accredited for tourism, of which 10 are public and 5 are private (Indrová, 2014)). Three degrees of tertiary education in tourism are accredited at the Faculty of Economics MBU. The third degree (doctoral study) opened after a comprehensive accreditation in 2006. This also allowed habilitation procedure and professor appointment procedure. It was the recognition of tourism as an independent scientific section and the result of many years tourism research in Slovakia.

The aim of a university is not only to teach. With the hope that the economy will grow and new job opportunities will appear, university delays the entry of graduates into the labour market. Due to the size of the country and the employability, the study programs have a mainly economic-managerial profile. The number of graduates exceeds the need of practice. Some politicians consider it as good if students are in schools and not in the labour market as unemployed. Yet, several problems are associated with it.

Each study program must be accredited. Its content is modified according to the approved field of study (from 2002). Learning outcomes are formulated for teaching subjects (modules). The completed subjects contribute to the achievement of the learning outcomes. They are reflected in the graduate profile and the study program - the study plan with regard to the practice.

A graduate of a bachelor degree is not valuable in practice in Slovakia. Therefore, students want full university education and continue in the second degree (Master/Engineer). However, they do not possess the needed skills. In the context of the demographic decline, faculties are reducing their demands. They accept the number of students that corresponds to the existing number of teachers.

The existing funding system for higher education also contributes (In Slovakia, the high schools funding is two-part, based on the number of students and the results of scientific activity). This system does not meet the needs of the labour market. It simply reacts to the demand for higher education. Existing bachelor study programs in tourism are not adequately related to the demands of the practice. Nevertheless, the Higher Education Act enables the bachelor programs based on the so-called dual education.

The problem is also a change of study. Applicants from various schools come to the second degree (at the Faculty of Economics, it is about a fifth). During the admission procedure, the emphasis placed on their prior learning and preparation for the next study is not essential. The master level in tourism must have scientific synthesizing character. Students should get the necessary knowledge as well as the ability to creatively solve the problems of practice. This does not always correspond to the structure of the taught subjects. In some cases, the quantitative subjects are unacceptable for new students. The context and the connections between them are unclear. Many students that come from other schools have no contact with the practice. They want to get a diploma, not a quality education.

#### ***4.2 Education standards and competency of the graduates***

The National Qualifications Framework (corresponding to the European Qualifications Framework for Lifelong Learning) distinguishes for tertiary education three levels - 6th (bachelor), 7th (master/engineer) and 8th (doctoral). It also defines the required knowledge, skills and competencies.

The education standard is given by the content of the education and the required student performance. The content standard is part of the high school curriculum. It determines what and how students should learn and what skills they need to learn. The

performance standard defines at what level students have to master the course and what they should do. It contains a set of requirements for acquiring knowledge, skills and abilities.

The outcomes are formulated in the form of goals. The individual levels of achievement are expressed by competencies. Competence expressed the ability to use knowledge, skills to solve a particular problem. Competencies may be divided into different classifications. Usually, there are general (or key) and specific competencies. General (key) competencies are sets of knowledge, skills, attitudes, value orientation, and other personal characteristics. They are “transferable” and indispensable for engaging in society and work. Specific competencies (professional) are transferable only slightly, they increase employee productivity in a narrow range of employers. Specific competencies affect the graduate's ability to apply for a work.

Professional competencies are necessary for work in a specialized field or for a particular profession (Palenčíková, 2017). Their purpose is to connect the requirements of tertiary education and practice. Professional competencies contain personal and work competencies. Personal competences include basic skills and planning skills, etc. Work competencies refer to the specific requirements of tourism. Besides the basic work competencies (personal assumptions), they also contain functional competencies (leadership, management and technical skills). At the Faculty of Economics MBU, there is a project focused on the development of student cross-curricular competencies. It is a consortium of universities in four countries (Poland, Finland, Slovakia and Slovenia). The project leader is the Technical University of Poznan. The results of the empirical survey were published in the monograph *The Acceleration of Development of Transversal Competences*. The results are available on the project website: <http://atcerasmus.eu/>.

Didactic methods are tools for developing students' competences. These methods promote student independence and creativity, create prerequisites for acquiring skills and developing professional abilities. The combination of theory and practice as well as teaching problem solving is vital. Students solve the problem individually or in groups with the knowledge of various subjects.

Professional competencies are essential to develop through practical teaching and field work (excursions and internships in companies and organizations). During the internship, the student has the possibility to challenge the acquired theoretical knowledge. Dual education should contribute to this. While in Slovakia dual education is mainly competence of secondary schools, there are few positive experiences f. e. in the Czech Republic. None of the universities will be progressing without connecting the tertiary education with practice. This assumes closer university collaboration with employers.

### ***4.3 Quality of education***

The quality system of higher education should include all the factors that create the conditions for education. Therefore, the quality of education must be understood from the technical, organizational and personal point of view (Wiktor, 2014). In practice, the quality of education system is specialized to measure students' satisfaction with lectures, exercises and seminars. However, the quality of education system should also include the development of study plans and programs, the evaluation methodology of the learning process, the way in which the evaluation results are used.

At Matej Bel University, internal and external evaluation of the quality of education is performed. The external evaluation includes the selection process, the education process and the success rate of graduates in practice (Vetráková, 2014b). Students participate in quality evaluation. They can evaluate the subject and the teacher once every semester. Repeated negative teacher evaluation will be reviewed at the next selection process. At the end of the study, the student evaluates the quality of the study program. The results of these evaluations are part of the accreditation.

Most of all, the teachers create the quality of the educational process. People, not just teachers, tend to appreciate the quality of their own work. Part of the teacher's profession is self-improvement. Self-reflection means awareness of our own knowledge, skills and experiences. The purpose of studying our own work is to learn and to conclude further optimization. Practice confirms that self-reflection is not a strong part of teachers – high school researchers. In particular, teachers with the long-term practise fall into a routine when they already have a certain qualification status. They are becoming apathetic towards their profession. Therefore, it is necessary to evaluate their work by the faculty as well as by the students. The self-reflection should ensure the effective teacher work, avoid routine, contribute to informal and systematic education and avoid extinction.

## Conclusion

The aim of this article was to assess the introduction of tertiary education in tourism in Slovakia and its changes in the international context.

Each institution of tertiary education is responsible for the quality education of graduates for practice. It must be concerned not only with the international compatibility of the offered study programs but also with the requirements of the region and the employers' organizations. To gain professional knowledge, it is essential to focus on education, students' abilities and competencies. Thus, they would be able to apply and develop the knowledge and skills in practice.

The teacher (researcher) is the determinant of quality education of students for tourism practice. Based on his own research, he provides new insights and didactic methods. The teacher is also co-responsible for developing the creative potential of students.

A serious aspect of education is the student's co-responsibility for his studies. Not every student has sufficient motivation to improve and develop. However, it should be noted that the success in practice depends primarily on the student. The diploma of the prestigious school still does not mean success in practice. Everything depends not only on education but also on personal prerequisites and abilities.

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**Competitiveness of the Slovak Republic within V4 countries  
in consideration of development of business environment  
and innovation strategy of business entities**

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**Abstract**

Foreign trade represents the import of those commodities which in the country fail to grow because of the climate or cannot be produced for various different reasons. On the other hand, imported foreign commodities are competition in domestic market. The effort of each country is to achieve a positive trade balance. In this respect, it is very essential to follow the export and import of foreign trade. The aim of the submitted paper is competitiveness of the Slovak Republic within V4 countries in consideration of development of business environment and innovation strategy of business entities. Reaching this aim is supported by following partial aims: Slovak Republic as part of the V4, Global index of competitiveness of V4, Agrarian Trade of V4, Agrarian Trade of the Slovak Republic and the Czech Republic, Agrarian Trade of the Slovak Republic and Hungary, Agrarian Trade of the Slovak Republic and Poland. Concerning the foreign trade, based on the long term development, the major trade partners of the Slovak Republic are the EU member states including V4, the Russian Federation, China and USA. The Czech Republic has the largest share in Slovak export and import of all V4 countries. The estimated volume of foreign trade in 2020 will reach 184% value in comparison with year 2012, in real terms, 225 billion EUR in prices of year 2012- from which exports will take 124 billion EUR and imports 101 billion EUR. This corresponds to an average annual growth of export by 8.8% and import by 6.9%. The positive balance of foreign trade will increase from 3.6 billion EUR in 2012 to 23 billion EUR in 2020. When expected level of GDP is 90 billion EUR, the openness of the Slovak economy will grow at 250%.

Keywords: foreign trade; competitiveness; export; import; V4.

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## **1 Introduction**

Integrating factor of the world economy is globalization, which also creates an increasing specifics of local business environment. Nowadays almost every region, every company in any part of the world has access to the Internet, mobile network or the ability to raise funds under the same conditions in the global financial markets and the companies from the so-called peripheral regions of the world can become global players and also can be systematically involved in international division of labor (Lipková et al. 2011).

Globalization of today's world brings different tools by which it is possible to mobilize international trade and Slovakia as a member state of European Union use different gains deriving from the Common commercial policy, in particular to strengthen the position of a foreign trade relations, which focus mainly on the EU Member States especially to neighbouring countries which are Poland, Czech Republic and Hungary that create the Visegrad Group, also called the Visegrad Four (V4).

Paper points at competitiveness of the Slovak Republic within V4 countries in consideration of development of business environment and innovation strategy of business entities, the main aim of submitted paper is to evaluate the position of the Slovak Republic as a part of the V4 as well as to estimate V4 countries based on the global index of competitiveness and quantify trends in economy and trade of the most important trade partners of Slovakia.

## **2 Theoretical and methodological approaches, achieved results**

### ***2.1 Aim, Data and Methods***

Paper points at competitiveness of the Slovak Republic within V4 countries in consideration of development of business environment and innovation strategy of business entities, the main aim of submitted paper is to evaluate the position of the Slovak Republic as a part of the V4 as well as to estimate V4 countries based on the global index of competitiveness and quantify trends in economy and trade of the most important trade partners of Slovakia.

Estimated status of foreign trade in 2020 is based on the use of statistical - mathematical methods using the database of UNCTAD, OECD, World Bank, WTO. The data are based on estimate of growth of global GDP and GDP of the SR World Bank (2013-2015) and OECD (2016 to 2020). Estimate of global growth of GDP of the Slovak Republic in 2013 – based on data by Ministry of Finance SR. Trade elasticity is based on the methodology of WTO.

### ***2.2 Assessing the Position of the Slovak Republic as the Part of V4***

The Slovak Republic is a landlocked country in Central Europe. It is bordered by the Czech Republic and Austria to the west, Poland to the north, Ukraine to the east and Hungary to the south. Slovakia's territory spans about 49,036 square kilometres and is mostly mountainous. The population is 5.4 million and comprises mostly ethnic

Slovaks. Population density (people per sq. km) in Slovakia was last measured at 110.69 in 2016. The capital and largest city is Bratislava. Slovakia is a parliamentary democracy with president as the head of the government. The official language is Slovak (Ružeková et al. 2013).

Slovakia became an independent state on 1 January 1993 after the peaceful dissolution of Czechoslovakia. Slovakia is a high-income advanced economy (Baláž, et al. 2010). The country maintains a combination of market economy with universal health care and a comprehensive social security system. The country joined the European Union on 1st May 2004, the Schengen Area on 21st December 2007 and the Eurozone on 1st January 2009 by adopting Euro and so became officially the 16th country of eurozone. This is the economic part of the EU, which includes a free trade area, a customs union between the EU member states, free movement of persons, goods, services and capital within the EU member states, economic policy coordination between EU member states and the common euro currency. The eurozone is a monetary union of those European Union member states which have adopted the Euro (€) as their common currency and sole legal tender. The monetary authority of the eurozone is the Eurosystem (Kalínsk et al. 2010). These countries have representation in the European Central Bank (ECB) or in the Eurogroup. The basic macroeconomic indicators include GDP, annual change in GDP, unemployment rate, trade balance and inflation. Table 1 shows the most important trade partners of the Slovak Republic in 2015.

Table 1 Top 10 - the Most Important Trade Partners of the Slovak Republic in 2016 (in billion EUR); own elaboration by database of UNCTAD, OECD, World Bank, WTO

Order	Country	Import	Export	Balance	Turnover
	SR (total)	66 386,3	70 032,2	3 645,9	136 418,5
1.	Germany	11 288,8	15 323,5	4 034,8	26 612,3
2.	Czech Republic	7 157,5	8 275,9	1 118,4	15 433,4
3.	Poland	3 526,2	5 320,5	1 794,3	8 846,7
4.	Hungary	3 172,6	3 923,4	750,8	7 096,0
5.	China	5 616,4	1 140,8	-4 475,6	6 757,2
6.	France	2 064,7	4 318,7	2 254,0	6 383,4
7.	Austria	1 982,5	3 986,8	2 004,4	5 969,3
8.	Italy	2 216,1	3 387,0	1 170,9	5 603,1
9.	United Kingdom	1 239,2	4 143,8	2 904,7	5 383,0
10.	Republic of Korea	3 946,9	134,0	-3 812,9	4 080,9

### 2.3 Evaluation of Individual V4 Countries Based on the Global Competitiveness

#### Index

Global Competitiveness Index (GCI) has been regularly publishes by Global economic forum since 2004 (Kašťáková, 2012). This index ranks countries according to their level of competitiveness and takes into account the macroeconomic and

microeconomic bases of national competitiveness. GCI captures the openness of criteria that are in the cross-correlation while not contradictory. Evaluation is taking a weighted average of many different components, each reflects the aspect of a complex reality and it is called competitiveness (Kubicová, 2011). All the components are grouped into 12 pillars of competitiveness. These criteria are in the cross-correlation and each one influences another one. The pillars divided into the following categories: quality of public institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, the effectiveness of the type of goods, labor market efficiency, financial market, technological readiness, market size, business sophistication and innovation.

Table 2 Global Competitiveness Index of top 10 countries (positions); own elaboration by WEF

Country	GCI 2017 position	GCI 2016 position	Change
Switzerland	1	1	0
USA	2	3	+
Singapore	3	2	-
Netherlands	4	4	0
Germany	5	5	0
Hong Kong	6	9	+
Sweden	7	6	-
United Kingdom	8	7	-
Japan	9	8	-
Finland	10	10	0

The Slovak Republic has moved again in competitiveness rankings, which is publishes by World Economic Forum in Switzerland (WEF) based on a survey among entrepreneurs (Jeníček, 2009). This year is Slovakia placed at 59.th position (Table 3). Compared to the year 2016- 2017 it is a shift up of six positions – as it was announced in the Global Competitiveness Report for 2016 - 2017. In this aspect, the most noticeable improvement of Slovakia started in 2014, when shifted by 13 points from the historical worst 78.th position. Anyway, it is still far away from 37.th position where it was in times of economic reforms in 2006.

Table 3 Global Competitiveness Index of the V4 countries (positions); own elaboration by database of WEF

Country	GCI 2017 position	GCI 2016 position	Change
Czech Republic	31	31	0
Poland	39	36	-
Slovak Republic	59	65	+
Hungary	60	69	+

WEF ranks 138 countries from all continents, list of Top ten countries (Table 2) has not changed that much. Still prevail the European economies, the first place took Switzerland - already nine years in a row. United States are on the second place and the Singapore fell down on the third place. The largest improvement in the top ten noticed the Hong Kong, Holland, Germany, Finland kept their positions. Sweden (7th), United Kingdom (8th), Japan (9th) dropped by one places. The Czech Republic is again on the 31st place after jump in 2015 year. Rapid progress upward was observed in Hungary (60th). Conversely, Poland recognised a change for the worse. Competitiveness Index terminate the perspective of achieving sustainable economic growth in the medium term, annually assessing the quality of public institutions, government policies and other factors which determine the level of productivity and prosperity in 138 countries.

In the Slovak Republic, the issue of competitiveness had been opened during the transformation of the Slovak economy and during its preparation for EU accession. For Slovakia as well as for another new EU member states, the entry into the EU started to adopt the benefits associated with the liberalization of mutual trade exchange and establishment of systems for the support provided by the Common Agricultural Policy. Slovak Republic as well as the newly adopted countries try to stabilize their position in the agri-food market of the EU, which is reflected increased competitive pressure, leading to diversification of farming activities within the EU. (Hambáľková et al. 2011).

Since 2004, the agri-food market of the Slovak Republic took over all rights and obligations of the Common Agricultural Policy. The agri-food commodities are governed by the rules that streamline and organize the market. The main objectives of the Common Agricultural Policy are to improve agricultural productivity, to stabilize markets, to ensure adequate living standards of farmers, to guarantee the regular supply to the consumers while keeping the adequate market equilibrium of the country. (Holota et al. 2016). In the long term it is more appropriate to focus on the export of products with higher added value, i.e. food products and direct the agricultural production to ensure the basic raw materials for the food industry.

### **3 Development trends of economies and agreement of main trade partners of**

#### **Slovakia**

Based on the long term development of the territorial structure of the foreign trade, the major trade partners of the Slovak Republic are the EU member states including V4, the Russian Federation, China and USA (Table 4).

Based on long-term projections of trade of the main global players can be concluded that the most important involved countries are USA, EU and China. There will be no significant change in export specialization of these countries and trade groups. China will become a net exporter of machines and will remain a major exporter of electrical devices. As for import. There will dominate the primary commodities, gradually should even increase the share of agri-food products. In the USA and in the EU countries will increase services export, whereby the USA should become an exporter of natural gas.

Table 4: Expected Development of Real GDP Growth of the Major Trade Partners of Slovak Republic (Annual Average in %); own elaboration by database of OECD

No.	Country	2014-2017	2018-2020
1.	Germany	1.6	1.1
2.	Czech Republic	2.4	2.9
3.	Poland	3.3	2.2
4.	Hungary	1.8	2.9
5.	Austria	1.7	1.4
6.	France	1.8	2.1
7.	Italy	0.6	1.6
8.	Russian Federation	3.6	2.7
9.	United Kingdom	1.5	2.1
10.	Netherlands	1.6	1.9
11.	China	8.9	5.5
12.	USA	2.1	2.4
13.	Spain	1.5	2.3

Table 5 Five Scenarios of the Foreign Trade Development of the Slovak Republic in 2020; own elaboration by database of UNCTAD, OECD, World Bank, WTO

	Type of Scenario	Average Annual Increase in GDP in Slovakia	Average Annual Growth of World Trade	Expected Volume of Foreign Trade of Slovakia in 2020
Scenario 1	Global crisis	1 %	0 %	123 billion EUR
Scenario 2	Local crisis of SR	1 %	9 %	194 billion EUR
Scenario 3	Middle scenario	2.9 %	4.8 %	225 billion EUR
Scenario 4	Local boom of SR	6 %	0 %	310 billion EUR
Scenario 5	Global boom	6 %	9 %	463 billion EUR

Estimated status of foreign trade in 2020 is based on the use of statistical - mathematical methods using the database of UNCTAD, OECD, World Bank, WTO. There were developed five scenarios of the foreign trade development of the Slovak Republic in 2020, from which the most appropriate is middle one (Table 5 and Table 6).

Table 6 Expected Development of GDP and For-foreign Trade of the Slovak Republic - Middle Scenario; own elaboration by database of UNCTAD, OECD, World Bank, WTO

	2013	2014	2015	2016	2017	2018	2019	2020
HDP	71.82	74.07	76.58	79.10	81.71	84.41	87.20	90.07
Export	64.31	69.53	76.49	84.21	92.72	102.10	112.41	123.78
Import	59.03	62.80	67.97	73.60	79.69	86.29	93.42	101.15

The data for the middle scenario are based on estimate of growth of global GDP and GDP of the SR World Bank (2013-2015) and OECD (2016 to 2020). Estimate of global growth of GDP of the Slovak Republic in 2013 - Ministry of Finance SR. Trade elasticity is based on the methodology of WTO.

According the middle scenario, the estimated volume of foreign trade in 2020 will reach 184% value in comparison with year 2012, in real terms, 225 billion EUR in prices of year 2012- from which exports will take 124 billion EUR and imports 101 billion EUR. This corresponds to an average annual growth of export by 8.8% and import by 6.9%. The positive balance of foreign trade will increase from 3.6 billion EUR in 2012 to 23 billion EUR in 2020. When expected level of GDP is 90 billion EUR, the openness of the Slovak economy will grow at 250%.

Above scenario seems to be slightly optimistic. View of past development between 2004 and 2012 shows that in observed period the volume of foreign trade in real terms increased by 47%, corresponding to annual growth of 4.9%. Development in the given period was highly volatile and was strongly influenced by the economic crisis, in particular the slump of world trade in the year 2009. If it were not for this slump, the growth of the volume of foreign trade of Slovakia would be approximately doubled.

Expectations in 2020 (Table 7) are that within V4 Slovak export will be 11.27% to the Czech Republic import from the Czech Republic to Slovakia will be 6.09%. Export to Poland will be represented by 8.2% and import from Poland 4.40%. To Hungary will route the exports of 4.35% and from Hungary to Slovakia will be import 3.27%. Dominant trading partner remains Germany, who will participate in the Slovak export 24.78% and 21.93% in Slovak import.

Further diversification of the structure of Slovak export in favor of products with the highest added value is considered essential also in accordance with the structure of Slovak industry. On the other hand, should increase the share of Section XVIII: Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; clocks and watches; musical instruments; parts and accessories, mainly Chapter 90 instruments and apparatus. Another section which should be Slovak export focused on is Section VI. Products of the chemical or allied industries, mainly due to developments in the demographic structure of the world's population and development of individual business partners, suggesting growth in demand for products of this class. Due to the expected growth in demand for basic foodstuffs can be considered the increase of the share of Sections I. Live animals and animal products and II. Plant products, also given to the expected development in the territorial structure of Slovak export, which foresees a decline in the share of EU countries and increase the share of Asian economies. The main imported items should only be products necessary for manufacturing of finishing products in Slovakia.

Table 7 Top 10 - the Largest Import and Export Markets of the Slovak Republic in 2020; own elaboration by database of UNCTAD, OECD, World Bank

Export of the Slovak Republic			Import of the Slovak Republic		
No.	Country	Share	No.	Country	Share
1.	Germany	24.78 %	1.	Germany	21.93 %
2.	Czech Republic	11.27 %	2.	Republic of Korea	11.16 %
3.	Poland	8.02 %	3.	Russian Federation	11.14 %
4.	Austria	6.84 %	4.	China	10.33 %
5.	France	6.34 %	5.	Czech Republic	9.16 %
6.	Russian Federation	4.35 %	6.	Poland	4.40 %
7.	Hungary	4.35 %	7.	France	3.59 %
8.	United Kingdom	4.09 %	8.	Hungary	3.27 %
9.	China	3.37 %	9.	Austria	2.73 %
10.	USA	2.65 %	10.	Taiwan	1.99 %

#### 4 Conclusions

Slovak Republic as a country in the heart of Europe belongs to the smaller countries but nevertheless seeks to achieve a level of economies of neighboring countries. The Slovak Republic has moved again in competitiveness rankings, which is publishes by World Economic Forum in Switzerland (WEF) based on a survey among entrepreneurs. This year is Slovakia placed at 59.th position. In the Slovak Republic, the issue of competitiveness had been opened during the transformation of the Slovak economy and during its preparation for EU accession. For Slovakia as well as for another new EU member states, the entry into the EU started to adopt the benefits associated with the liberalization of mutual trade exchange and establishment of systems for the support provided by the Common Agricultural Policy. Slovak Republic as well as the newly adopted countries try to stabilize their position in the agri-food market of the EU, which is reflected increased competitive pressure, leading to diversification of farming activities within the EU.

Since 2004, the agri-food market of the Slovak Republic took over all rights and obligations of the Common Agricultural Policy. The agri-food commodities are governed by the rules that streamline and organize the market. The main objectives of the Common Agricultural Policy are to improve agricultural productivity, to stabilize markets, to ensure adequate living standards of farmers, to guarantee the regular supply to the consumers while keeping the adequate market equilibrium of the country.

As for the foreign trade, based on the long term development, the major trade partners of the Slovak Republic are the EU member states including V4, the Russian Federation, China and USA.

Slovakia should seek all possible financial resources and use them to benefit domestic producers and exporters to achieve better competitiveness in foreign markets. The Czech Republic has the largest share in Slovak export and import of among all V4 countries.

The estimated volume of foreign trade in 2020 will reach 184% value in comparison with year 2012, in real terms, 225 billion EUR in prices of year 2012- from which exports will take 124 billion EUR and imports 101 billion EUR. This corresponds to an average annual growth of export by 8.8% and import by 6.9%. The positive balance of foreign trade will increase from 3.6 billion EUR in 2012 to 23 billion EUR in 2020. When expected level of GDP is 90 billion EUR, the openness of the Slovak economy will grow at 250%.

Expectations in 2020 are that within V4 Slovak export will be 11.27% to the Czech Republic import from the Czech Republic to Slovakia will be 6.09%. Export to Poland will be represented by 8.2% and import from Poland 4.40%. To Hungary will route the exports of 4.35% and from Hungary to Slovakia will be import 3.27%. Dominant trading partner remains Germany, who will participate in the Slovak export 24.78% and 21.93% in Slovak import. Further diversification of the structure of Slovak export in favor of products with the highest added value is considered essential also in accordance with the structure of Slovak industry.

Overall it is apparent that the Slovak Republic is an independent and competitive country.

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