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Multi-criteria decision analysis of supply chain practices and firms performance in Nigeria

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- Olamilekan Gbenga Oyenuga³

Abstract

Companies are facing numerous pressures and challenges in order to be competitive in the market and meet the requirements of their customers which require an improvement in the supply chain practices of the firms to be more effective and efficient for sustainable competitive advantage. This study examines the use of a multi-criteria decision making method using analytic network process (ANP) to estimate the how supply chain activities of the selected manufacturing firms' influences its firm performance in other to enhance the satisfaction of customers. The population of the study is the manufacturing firms quoted in the Nigeria stock exchange. An ANP-based questionnaire was administered to Managers of selected manufacturing firms for pairwise comparison of supply chain factors relative influences and dependencies on their customers. A nonlinear network model was built to capture all the factors of supply chain practices and firms performance into clusters, nodes and dependences for the purpose of estimating various influences supply chain practices on the performance of the various companies studied.. Data collected were analysed using software of Super decision 3.0version. The results revealed factors of supply chain practices that have a great connection with one another and strong relationship indicating that without the implementing the key factors of supply chain there would not be a significant improvement in the performance of the organisation which will also affects the desire of the customers. The ANP model has helped to show the interdependencies and feedback among the various factors of practices of supply chain to augment the level of .performance of the firms.

Key words

Analytical Network Process, Supply chain, strategic supplier partnership, supply chain integration, outsourcing, customer relationship management.

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Introduction

The supply chain management practices are essential concepts that help numerous companies to integrate and provide quality products and services to their various customers due to the fact that the needs of the customers changes rapidly. But, the abilities

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of the companies to cope with the various challenges encountered in terms of their cost, providing quality products and services to their customers depends solely on the strengths and opportunities the companies have over their competitors' [1].

The main stakeholders of the manufacturing firms are the end users (customers) in which the companies/firms tries to meet the requirement and demands of their customers ensuring that they provide quality products and rendered quality services to them.

The concept of supply chain management denotes a systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole [2].

Furthermore, numerous scholars have been able to identify various supply chain management practices used in various organisations / firms for instance, [3] identified six supply chain management practices which are outsourcing, supplier partnership, information sharing, cycle time, compression and continuous process flow; [4] recognized three supply chain management practices to be quality, purchasing and customer relationship later [5] came up with supply chain integration, information sharing, customer service management, geographical proximity and Just in Time capabilities has their supply chain management practices. Also [6] acknowledged the supply chain management practices to be five which comprise of outsourcing, strategic supplier partnership, customer relationship information sharing and modularity. The supply chain management practices were categorized into two categories quantitative and qualitative measures. Quantitative measures are cost and resource utilization and qualitative measures are quality, flexibility, visibility, trust and innovativeness [7].

In spite of all these identified supply chain management practices, this study set out to explore the use of one of the multi- criteria decision making method (Analytic Network Process) to model the network relationship among the supply chain managements practices explored by the manufacturing firms in Nigeria and provide alternative strategies how those practices can be used to improve their performances so as to enhance customers satisfaction.

2 Literature Review

2.1 Theoretical framework

There are several theories associated with supply chain management and firms performance. In view of this research we are focusing on few of the theories like system theory, theory of constraints.

System Thinking Theory

The theory underpinning the study is system thinking theory, in the early 50's the theory was used to elevate the operations of manufacturing and it further employed the system approaches to build and restructure the internal procedures of business [8]. The theory is the trans-disciplinary study of the abstract organisation of phenomena, independent of their substance, type, or spatial or temporal scale of existence. It investigates both the principles common to all complex entities, and the (usually mathematical) models, which can be used to describe them. It is an approach to problem solving that looks at problems not as isolated challenges but rather in the context of the larger system in which a particular function or process operates. While working with an organizational structure, like a supply chain, the system is the combination of the people, structures, processes and environment that work together to create a desired outcome. Moreover, the theory provides a model of decision-making that helps organizations to adapt to change effectively. Adapting to change helps the organisation to facilitate learning and the theory has a rational used in analyzing the relationship between the parts of a system in order to make a meaningful decision when the situation arises. This theory related to the supply chain management has to do with planning and coordination the production flow from acquiring raw materials and production through distribution to the final customer.

Theory of Constraints

This theory is a management philosophy that supports organisation to constantly accomplish their aims. This theory is based on three key assumption in which organisation can be measured which are operational expense, through put and inventory. These three concepts are the critical requirement for making a sound financial decision in an organisation [9].

Theory of constraints is based on the premise that the rate of goal achievement by a goal-oriented system that is the system's throughput is limited by at least one constraint. These theory is relevant to supply chain in order to establish a competitive advantage based on extra ordinarily availability by reducing the damaged caused when the flow of goods is interrupted by shortages and surpluses.

2.2 Concepts of Supply Chain Practices

2.2.1 Supply Chain Integration

Supply chain integration is defined as a process of interaction and collaboration in which companies in a supply chain work together in a cooperative manner to achieve mutually acceptable outcomes [10]. However, according to [11] they viewed supply chain integration concept as the degree to which an organisation strategically collaborates with its partners and manages intra- and inter-organisational processes in order to achieve efficient and effective flows of products, services, information, money and decisions. In this study supply chain integration is being classified into six which are customer

integration, technology integration, internal operations, material/service supplier integration, relationship integration and measurement integration.

2.2.2 Strategic supplier partnership

The strategic supplier partnership identifies optimum practices that can facilitate supply chain process alignment and integration. In order to further expedite collaboration, it is necessary to implement the latest collaborative information systems that drive efficiencies, performance, and quality throughout a supply chain [12]. Supply chain partnership is defined as a strategic coalition of two or more firms in a supply chain to facilitate joint effort and collaboration in one or more core value creating activities such as research, product development, manufacturing, marketing, sales, and distribution [13] ; [14] The strategic influence and operational capabilities of individual participating helps to achieve significant benefits for the organisation is major existence of strategic partnership [15].

However, [16] considered strategic partnership as the ability to coordinate inter-organizational relationships effectively as one of the important resources of the firms. In the course of this study the strategic supply partnership is being measured looking at quality of selecting supplier, solving the problems of suppliers, involving the supplier in new development process and also including the suppliers in the planning and setting of goals and objectives of the organisation.

2.2.3 Information sharing

In the view of [17], information sharing is vital concept to successful partnership, without complete information about the firms business, trade partners cannot work effectively towards achieving the goals of the companies. Also Information sharing is viewed as an access to private data between business partners thus enabling them to monitor the progress of products and orders as they pass through various processes [18]. The concept information sharing is essential when considering the supply chain management practices. In the course of this study information sharing is being measured by having advance notice to trade partners on any changes that arises, keeping each other informed about what affects their partners, exchanging information on establishing a business unit and sharing of business unit proprietary information with trade policy.

2.2.4 Customer relationship

According to [19], the success of a firm or company solely depends on the strength of its relationship with supply chain partners which could reduce or increase revenue. According to [5], maintaining a long term and good relationship with customers the organisation needs to strategize on how to manage the complaints of their customers and provide adequate solutions to their problems. This study set to measure customer

relationship in terms of good communication, conformity, having trust in their customers, commitment and how complaints of customers are being handled.

2.2.5 Outsourcing

Literally, outsourcing means buying materials for external supplier or making strategic use of outside resources to perform activities traditionally handled by internal staff and resources [20]. Outsourcing is an effective cost-saving strategy when used appropriately in a situation where it is more affordable to purchase a good from companies with comparative advantages than it is to produce the good internally. In this study outsourcing is being measured using this concepts operations reduction cost, service level improvement, core competence prioritization, capital cost reduction, employee based reduction.

2.3 Empirical review of supply chain management practices and firms performance

There is debate of literature on the various articles on supply chain management practices and firms performance.

[21] empirically investigated the indicators and constructs of supply chain management practices of some Brazillain companies, the study was able to achieve four constructs which are supplier chain integration for production planning and control support, information sharing about the products and targeting strategies, strategic relationship with customer and supplier and support customer order compared with previous studies that had six dimensions of supply chain management practices.

[22] investigated supply chain management practices in manufacturing companies in Jordian, how these supply chain practices influences the strategic flexibility of the selected companies listed in the Amman Stock exchange. He was able to identify four supply chain practices which are Strategic partnership with supplier, relationship with customer, information sharing level and quality of information sharing while the strategic flexibility was broken down into three production flexibility, market flexibility, and competitive flexibility. He found that the identified practices have a positive impact on the flexibility with highest relationship with customers and lowest impact on quality of information sharing. The information sharing level, strategic partnership with supplier relationship with customers has the greatest influence on market flexibility, production flexibility and competitive flexibility respectively. In adopting these strategies it enables the companies to have a sustainable competitive advantage.

[23] conducted a study in Kenya by assessing the level of implementation of supply chain practices in Haco Industries. However, they identified four key dimension of supply chain practices as strategic supplier partnership, Information sharing , customer relationship and training practices in which these factors were used to investigate the level of influence on the performance of the industries. The findings revealed that there is a high level of practical implementation of supply chain practices in Haco industries and these factors have a positive influence on the performance of the organisation in terms

of reducing the lead time lowering the operational cost ,expanding its market share and sales.

According to [24] reviewed the various factors that determine the supply chain management practices that organisations adopt. They identified six factors which include the size of organisation, capital, the organisation structure, government policy; its position in the supply chain, the industry firms operates in.

The study conducted in textile and apparel industry in Kenya investigating the supply chain practices adopted in the industry on lead time, they identified four supply chain practices as modularity based manufacturing, supply chain integration, supplier chain relationship management and supply chain responsiveness. From their findings it revealed that modularity based manufacturing, supply chain relationship management and supply chain responsiveness ha]s an adverse effect on the lead time while supply chain integration has a positive effect on lead time [25].

In view of the researches done in supply chain management practices, this study sets out to use a multi-criteria decision making method named Analytic Network Process to prioritize the supply chain management practices of manufacturing firms in Nigeria and provide alternative strategies for the practices to improve their performance and also enhances customer satisfaction

2.4 Analytic Network Process

Analytical network process (ANP) is one of the multi-criteria decision making methods used to measure intangible factors which allow for complex interrelationships among decision levels and attributes [26]. ANP is a simplification of the Analytic Hierarchy Process that deals with decision problems that cannot be structured hierarchically because of the dependency and interaction between higher and lower level elements[27].

ANP is a comprehensive decision-making method that elucidates the interdependencies; reflects the dependencies as quantitative outcome; and simultaneously provides feedback within and between the clusters of elements [28]. ANP is an essential model used to analyse a decision problem through the use of a control hierarchy or network. This network is structured into clusters, elements. For each control criterion, the clusters of the system with their elements are determined. All interactions and feedbacks within the clusters are called inner dependencies whereas interactions and feedbacks between the clusters are called outer dependencies [29]. Inner and outer dependencies are the best way decision-makers can capture and represent the concepts of influencing or being influenced, between clusters and between elements with respect to a specific element. Then pairwise comparisons are made systematically including all the combinations of element/cluster relationships. ANP uses the same fundamental comparison scale (1-9) as the AHP. This comparison scale enables the decision-maker to incorporate experience and knowledge intuitively [30] and indicate how many times an element dominates another with respect to the criterion

3 Methodology

Research Design

This study is a cross sectional descriptive survey design. The population of the study is the manufacturing firms quoted in the Nigerian stock exchange. There are 12 sectors in which the firms were classified in the Nigerian Stock Exchange. One hundred and seventy eight companies were listed across the various sectors. Stratified random sampling technique was used to select the number of manufacturing considered in this study. [31] stated that since the population of the various manufacturing firms is not of the same group. This type of sampling technique is used to obtain a sample representative while according to [32] stated that where the population of the study are heterogeneous, a minimum target of 10% is required to represent the sample size of such population. Copies of questionnaire were distributed to the managers of the selected manufacturing firms. The data collected were analysed using the Super decision 3.0 version software.

ANP methodology

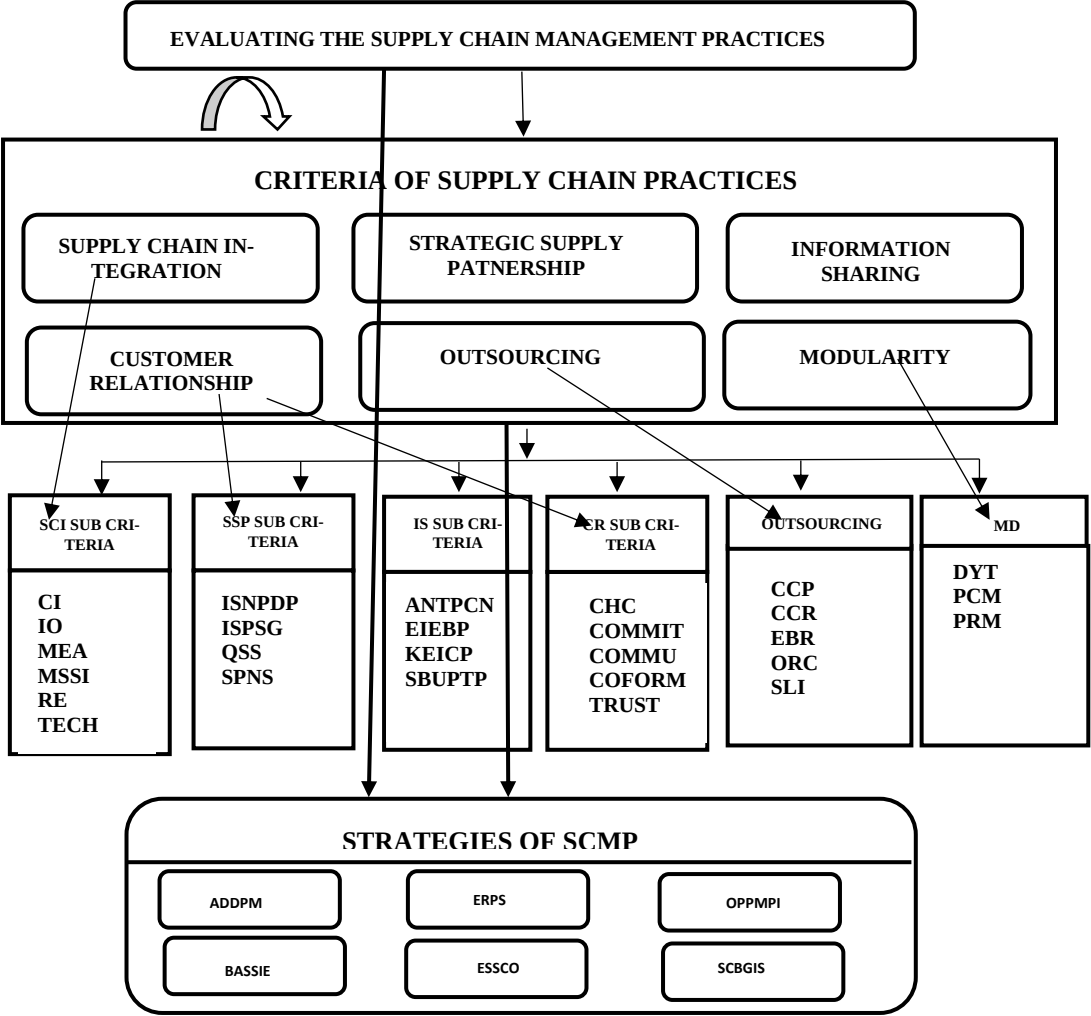
According to [33] the ANP is a connection of two parts, in which the first aspect comprises of a control hierarchy or network of criteria and sub criteria that control the feedback networks while the second aspect consist of the networks of influence that contains the factor s of the problem by grouping them into clusters. Each criterion has a feedback network. A super matrix table was constructed showing the priorities of the factors for each of the network.

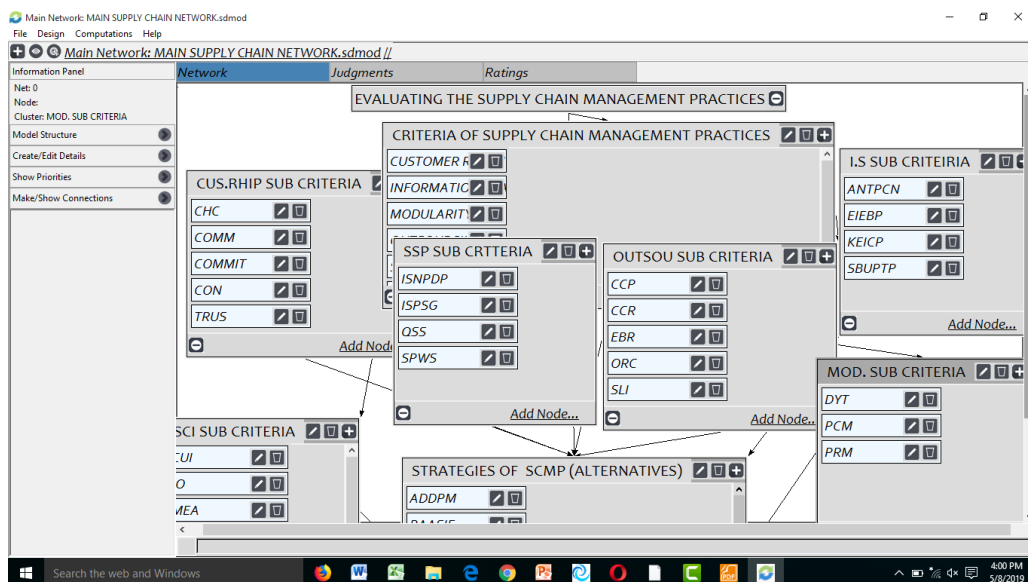
The analytic network process has the following procedure

- a) Model construction: Determine the network of each control criterion. Determine all the criteria which affect decision. Determine the clusters for each network, one cluster is the alternative and combine all relevant criteria into same cluster.
- b) Formulating the interdependencies and performing pairwise comparison between the cluster/elements
- c) Constructing the super matrix: this super matrix is categorized into two: the unweighted and weighted. The unweighted super matrix is derived from the local priority vectors of pairwise comparison matrix obtained from the elements in the super matrix, and then weighted the blocks of the super matrix by the corresponding priorities derived from the clusters to translate it into a column stochastic matrix (weighted super matrix).
- d) iv. Select the best alternative: The final phase is to multiply the weighed super matrix by itself
- e) until the row values coverage to the same values for each column of the matrix, and then yielded the limiting super matrix provided the priorities ranking for the cluster of alternatives. Therefore, alternatives with the highest value should be chosen.

The structure of the ANP proposed model

The aim of ANP model is to choose an appropriate supply chain management practices of the manufacturing firms selected in which the main goal is evaluating supply chain management practices criteria. It consist of six factors classified under criteria cluster, while 27 sub- criteria and six(6) alternatives strategies of supply chain management practices. The diagram is shown below.





Tab. 1 Supply Chain Management Practices

SUPPLY CHAIN INTEGRATION CRITERIA(SCI)	
CUI- customer integration	IO- Internal Operations
M.S.S.I- Material/ Service Supplier Integration	RE- Relationship integration
MEA- measurement integration	TECH- Technology
STRATEGIC SUPPLY PARTNERSHIP CRITERIA (SSP)	
QSS- Quality of Selecting Suppliers	SPWS- Solving Problems with supplier
ISNPDP- Involvement of key supplier in the new development process	ISPSG- Inclusion of supplier in planning and setting
INFORMATION SHARING CRITERIA (IS)	
ANTPCN- advance notice to trade partners on changing needs	KEICP- Keeping each other informed about the changes that affect partners
EIEBP- Exchanging information on establishing of business plan	SBUPTP- Sharing of Business unit proprietary information with trade policy
CUSTOMER RELATIONSHIP CRITERIA (CUS. RHIP)	
COMM- Communication	CON- Conformity
TRUS- Trust	COMMIT- Commitment
CHC- Customer handling Complain	
OUTSOURCING CRITERIA (OUT)	
ORC- Operations reduction cost	SLI- Service level improvement
CCP- Core competence prioritization	EBR- Employee based reduction
CCR- Capital cost reduction	
MODULARITY CRITERIA (MOD)	
PRM – Product modularity	PCM- process modularity
DYT- Dynamic teaming	

STRATEGIES OF SCMP	
ADDPM - Adopt a demand driven planning and business model	SCBGIS - Aligning supply chain with business goals by integrating sales and operations planning with corporate business planning
BAASIE - Build an adaptive and agile supply chain with planning and integrated execution	ESSCO - Embedded sustainability into supply chain operations
OPPM - Optimize product design and management for supply, manufacturing and sustainability to accelerate profitable innovation.	ERPS - Ensuring a reliable and predictable supply

4 Results

This study explored the use of super decision software to analyse the data derived from the selected manufacturing firms. The geometric mean of the data obtained from the questionnaire distributed into the software to obtain a stable limiting super matrix, weighted matrix and unweighted matrix.

Table 4.1 shows the pairwise comparison of the six main criteria with respect to the main goal in evaluating the supply chain management practices of manufacturing firms. Strategic supply partnership (SSP) was given the greatest priority among the six criteria while the modularity criteria was given the least priority. The inconsistency is 0.04 which is less than 0.1 as stated by Saaty

Tab. 4.1 Comparison Matrix of criteria with respect to the goal: supply chain management practices

GOAL	CUS RE	INFO SH	MOD	OUT	SCI	SSP	Normalised	idealized
CUS RE	1.0000	0.5167	1.7188	1.8384	0.8586	0.7505	0.1542	0.5836
INFO SH	1.9354	1.000	1.7188	2.5759	1.4507	0.4911	0.2119	0.8022
MOD	0.5818	0.5818	1.000	0.5164	0.3165	0.5188	0.0879	0.3326
OUT	0.5440	0.3882	1.9365	1.000	0.9029	0.3505	0.1110	0.4203
SCI	1.1647	0.6893	3.1596	1.1075	1.000	0.6466	0.1708	0.6466
SSP	1.3324	2.0362	1.9275	2.8531	1.5466	1.0000	0.2642	1.0000
Inconsistency = 0.0402								

Tab. 4.2 Pairwise comparison of customer relationship sub criteria with respect to customer relationship

CUSTOMER RELATIONSHIP	CHC	COMMIT	COMMU	CONFORM	TRUS	Normalized	Idealized
CHC	1.0000	1.3797	0.6776	0.6118	0.8900	0.1765	0.7240
COMMIT	0.7248	1.0000	1.2458	1.1441	0.7137	0.1870	0.7670
COMMU	1.4758	0.8027	1.0000	1.3797	0.7137	0.2045	0.8388
CONFORM	1.6345	0.8740	0.7248	1.0000	0.7248	0.1882	0.7719
TRUS	1.1236	1.4011	1.4011	1.3797	1.0000	0.2438	1
Inconsistency = 0.02865							

The table 4.2 displayed the comparison of the sub criteria of customer relationship factor. The criteria named trust was given highest preferences with priority 0.2438 compared with other criteria in the table followed by communication, commitment and conformity has the same level of preference and customer handling complain was given the least.

The table 4.3 presented the evaluation of the sub criteria for information sharing factor, it was stated that sharing the proprietary information with trade policy among business units has the greatest priority of 0.3664 while keeping each other informed about changes that affect others has the least priority of 0.0941 which indicate that among the information sharing criteria sharing proprietary information of trade policy is approximately four times preferred to keeping each informed about changes that affect the partners .

Tab. 4.3 Comparison Matrix of information sharing sub criteria

INFORMATION SHARING	ANTPCN	EIEBP	KEICP	SBUPTP	Normalized	Idealized
ANTPCN	1.0000	0.5253	5.1563	0.5818	0.2585	0.7057
EIEBP	1.9037	1.0000	1.7187	0.7247	0.2810	0.7671
KEICP	0.1939	0.5818	1.0000	0.2567	0.0941	0.2567
SBUPTP	1.7188	1.3799	3.8951	1.0000	0.3664	1
Inconsistency	0.1016					

The table 4.4 shows the comparison of the factors used in measuring modularity, it is seen in the table that product modularity was given the highest priority with 0.4494 compared with Dynamic teaming factor with priority of approximately 0.1187 which is approximately four times preferable than others with consistency ratio 0.007 less than 0.10 percent as prescribed by Saaty.

Tab. 4.4 Comparison matrix of modularity sub criteria

MODULARITY	DYT	PCM	PRM	Normali- zed	Idealized
DYT	1	3.3226	1.0515	0.431827	0.9609
PCM	0.300969	1	0.2415	0.118767	0.2643
PRM	0.951022	4.140787	1	0.449406	1
Inconsistency	0.00781				

The table 4.5 illustrated the comparison of outsourcing sub criteria, the factor that has the greatest priority was prioritization of core competency with 0.3138 followed by employee based reduction with 0.2311 and operations reduction cost was considered to be given the least priority of 0.1157 indicating that core competency prioritization is four times desirable than operations reduction cost factor.

Tab. 4.5 Comparison matrix of Outsourcing criteria

OUTSOURCING	CCP	CCR	EBR	ORC	SLI	Normali- zed	Ideali- zed
CCP	1.0000	0.8027	2.7131	3.3227	1.7188	0.3138	1
CCR	1.2458	1.0000	0.4911	2.6673	1	0.2108	0.6718
EBR	0.3686	2.0362	1.0000	1.2457	2.6673	0.2311	0.7363
ORC	0.3010	0.3749	0.8028	1.0000	1.2267	0.1157	0.3687
SLI	0.5818	1	0.3749	0.8152	1	0.1286	0.4098
Inconsistency	0.1041						

The table 4.6 showed the comparison of the various factors of supply chain integration. The relationship integration has the highest preference with priority of 0.2783, followed customer integration with 0.1967, while internal operations integration has the least preference of priority 0.0805.

Tab. 4.6 Comparison matrix of supply chain integration criteria

SUPPLY CHAIN INTEG- RATION	CI	IO	MEA	MSSI	RE	TECH	Norma- lized	Ideali- zed
CI	1.0000	2.8529	2.1084	1.1076	0.7892	1.1076	0.1967	0.7067
IO	0.3505	1.0000	0.3807	0.4597	0.6444	0.3942	0.0805	0.2894
MEA	0.4743	2.6267	1.0000	0.6128	0.3749	0.5253	0.1114	0.4002
MSSI	0.9029	2.1753	1.6319	1.0000	0.2294	0.8027	0.1406	0.5052
RE	1.2671	1.5518	2.6674	4.3592	1.000	1.0696	0.2784	1
TECH	0.9029	2.5368	1.9037	1.2458	0.9349	1.0000	0.1923	0.6908
Inconsis- tency	0.0565							

The table 4.7 displayed the comparison of sub criteria of strategic supply partnership. From the table, it is observed that solving problems with suppliers (SPWS) has the greatest preference compared with other factors and the given priority was 0.2905 while the least given preference was quality of selecting suppliers with priority 0.2076.

Tab. 4.7 Comparison matrix of strategic supply partnership criteria

Strategic Supply Partnership	ISNPDP	ISPSG	QSS	SPWS	Normalized	Idealized
ISNPDP	1.0000	0.6776	2.4085	0.8027	0.2727	0.9388
SPSG	1.4758	1.0000	0.6444	0.7247	0.2292	0.7890
QSS	0.4152	1.551831	1.0000	0.7148	0.2076	0.7148
SPWS	1.2458	1.379881	1.399	1.0000	0.2905	1
Inconsistency	0.0967					

The table 4.8 showed the inner dependency among the supply chain management practices factors with respect to each other using a pairwise comparison

Tab. 4.8 The inner dependency among the supply chain management practices factors with respect to each other using a pairwise comparison

1. Inner dependency of criteria with respect to Customer Relationship						
CUS	IS	MOD	OUT	SSP	SCI	Weight
IS	1.0000	7.9050	0.5301	1.3371	0.5276	0.1922
MOD	0.1265	1.0000	0.3330	0.2000	0.1100	0.0419
OUT	1.8866	3.0030	1.0000	3.0000	1.0000	0.2803
SSP	0.7479	5.0000	0.3333	1.0000	0.2183	0.1213
SCI	1.8952	9.0909	1.0000	4.5812	1.0000	0.3643
Inconsistency	0.0760					
2. Inner dependency of criteria with respect to information sharing						
IS	CUS	MOD	OUT	SSP	SCI	Weight
CUS	1.000	5.000	7.000	1.000	3.000	0.3879
MOD	0.200	1.000	3.000	0.954	0.954	0.1392
OUT	0.143	0.333	1.000	0.200	0.143	0.0409
SSP	1.000	1.048	5.000	1.000	3.559	0.2860
SCI	0.333	1.049	7.003	0.281	1.000	0.1460
Inconsistency	0.0889					
3. Inner dependency of criteria with respect to modularity						
MOD	CUS	IS	OUT	SSP	SCI	weight
CUS	1.0000	1.0000	0.3333	0.3355	0.2604	0.0888
IS	1.0000	1.0000	2.0229	0.6354	0.2954	0.1509
OUT	3.0000	0.4943	1.0000	0.4472	0.3864	0.1400
SSP	2.9802	1.5738	2.2363	1.0000	0.7837	0.2580
SCI	3.8407	3.3852	2.5878	1.2760	1.0000	0.3623
Inconsistency	0.0582					
4. Inner dependency of criteria with respect to outsourcing						
OUTSOURCING	CUS	IS	MOD	SSP	SCI	weight
CUS	1.0000	0.5252	0.7816	0.1110	0.1111	0.0582
IS	1.9039	1.0000	3.0000	1.0000	1.0000	0.2276
MOD	1.2794	0.3333	1.0000	0.2000	0.3330	0.0744
SSP	9.0090	1.0000	5.0000	1.0000	1.0835	0.3389
SCI	9.0009	1.0000	3.0030	0.9229	1.0000	0.3009
Inconsistency	0.0620					
5. Inner dependency of criteria with respect to strategic supply partnership						
Strategic supply part- nership	CUS	IS	MOD	OUT	SCI	Weight
CUS	1.0000	1.0000	7.0000	7.0028	1.0000	0.3028
IS	1.0000	1.0000	5.0000	3.0000	0.2000	0.1796
MOD	0.1429	0.2000	1.0000	1.0000	0.1111	0.0427
OUT	0.1428	0.3333	1.0000	1.0000	0.2797	0.0603
SCI	1.0000	5.0000	9.0000	3.5750	1.0000	0.4146
Inconsistency	0.0767					
6. Inner dependency of criteria with respect to supply chain integration						
Supply chain Integration	CUS	IS	MOD	OUT	SSP	weight
CUS	1.0000	3.0000	5.0000	1.0000	1.0000	0.2601

IS	0.3333	1.0000	4.0028	0.7427	0.1428	0.1013
MOD	0.2000	0.2498	1.0000	0.4453	0.1428	0.0468
OUT	1.0000	1.3464	2.2457	1.0000	0.2003	0.1364
SSP	1.0000	7.0028	7.0028	4.9919	1.0000	0.4554
Inconsistency	0.0768					

So the priority weight of the inner dependency for the criteria of supply chain practices is shown in the table 9

Tab. 9 Inner dependency matrix of the supply chain management practices (factors)

CRITERIA	CUS	IS	MOD	OUT	SSP	SCI
Customer relationship	0.0000	0.3897	0.0888	0.0582	0.3028	0.2601
Information sharing	0.1922	0.0000	0.1509	0.2276	0.1796	0.1013
Modularity	0.0419	0.1392	0.0000	0.0744	0.0427	0.0468
Outsourcing	0.2803	0.0409	0.1400	0.0000	0.0603	0.1364
Strategic supply partnership	0.1213	0.2860	0.2580	0.3389	0.0000	0.4554
Supply chain integration	0.3643	0.1460	0.3623	0.3009	0.4146	0.0000

The supply chain management practices (factors) priorities is being computed considering the inner dependency of each of the criterion as shown in table 10 below. After the computation of the inner dependency of each of the criterion of supply chain management practices with the initial priority vector derived, it can be seen that the priority vector of the each of the criterion has changed. For instance, the Customer relationship priority vector has changed from 0.1542 to 0.2211, information sharing priority vector reduced from 0.2119 to 0.1330, modularity changes from 0.0879 to 0.0630, outsourcing criteria changed from 0.1110 to 0.1033; strategic supply chain partnership changed from 0.2642 to 0.2174 and supply chain integration increased from 0.1708 to 0.2603. Comparing these priority vectors it is seen that supply chain integration has the greatest preference with 0.2603 while the modularity factor has the least preference with the priority weight of 0.0630.

Tab. 11 Interdependency matrix of the criteria of Supply chain management practices

	CUS	IS	MOD	OUT	SSP	SCI		Priority vector	New priority vector
CUS	0.0000	0.3897	0.0888	0.0582	0.3028	0.2601	*	0.1542	0.2211
IS	0.1922	0.0000	0.1509	0.2276	0.1796	0.1013		0.2119	0.1330
MOD	0.0419	0.1392	0.0000	0.0744	0.0427	0.0468		0.0879	0.0630
OUT	0.2803	0.0409	0.1400	0.0000	0.0603	0.1364		0.1110	0.1033
SSP	0.1213	0.2860	0.2580	0.3389	0.0000	0.4554		0.2642	0.2174
SCI	0.3643	0.1460	0.3623	0.3009	0.4146	0.0000		0.1708	0.2603

The table 11 shows the synthesis priorities of the alternatives strategies for supply chain management practices of manufacturing firms. It is shown in the table that adopting a demand driven planning and business operating based model on real time demand insight and shaping (ADDPM) has the greatest preferences with priority of 0.2479 followed by optimizing the product design and management for supply, manufacturing and sustainability to accelerate profitable innovation (OPPMPI) for various companies with priority of 0.2055, followed by building an adaptive and agile supply chain with rapid

planning and integrated execution with priority of 0.1706, followed by ensuring a reliable and predictable supply with priority 0.1640 , embedded sustainability into the operation of supply chain operation of priority 0.1224 followed by and the least preference was given to aligning the supply chain with business goals and integrating sales and operations planning with corporate business planning(SCBGIS) with priority 0.0897. Based on the analysis, it is advisable to all the manufacturing firms to make use of the suggested best alternative strategy of supply chain management practices in order to improve their organisation performance and as well enhances the customer satisfaction.

Tab. 11 Overall Synthesized Priorities for the Supply Chain Management Practices Alternatives Strategies

SCMP (alternatives)	Ideals	Normalised	Raw
ADDPM**	1.0000	0.2479	0.0503
BAASIE	0.6879	0.1706	0.0346
ERPS	0.6614	0.1640	0.0333
ESSCO	0.4935	0.1224	0.0248
OPPMPI	0.8287	0.2055	0.0417
SCBGIS	0.3617	0.0897	0.0182

Conclusion and Recommendations

The managers of the manufacturing firms has been able to prioritize the criteria of the supply chain management practices in order of importance for stakeholders of manufacturing firms to abide by in order to improve their performance effectively and efficiently to better enhance the satisfaction of their customers. The result of multi criteria decision making method used in this study ANP showed the inner dependency among the criteria and priority vector were derived. It is shown that among six criteria of supply management practices identified, the supply chain integration criteria has the greatest preference indicating that managers of the various companies have a social relationship that guides their interaction in order to have an effective overall of system approach in their supply chain management followed by customer relationship criteria specifying that having a good relationship and putting trust in your customers can enhances their performance, the third criteria of supply chain management practices that was given preference to was strategic supply partnership demonstrating to managers that solving the problems of their suppliers at the right time is very vital followed information sharing criteria indicating that managers are of the opinion that it essential to share proprietary information of business unit with trade policy followed by outsourcing criteria which showed that managers believed that prioritization of the core competence of their suppliers needs to considered. The sixth criteria that has the least preference was Modularity criteria which showed that managers believed that designing a product based on well interface may fosters the organizations of complex process design operation more efficiently by decomposing the complex system to simpler subsystem. the ranking of the alternatives strategies of supply chain management practices it is shown that adopting a demand driven planning and business operating based model on

real time demand insight and shaping (ADDPM) has the greatest preferences with priority of 0.2479 followed by optimizing the product design and management for supply, manufacturing and sustainability to accelerate profitable innovation (OPPMPI) for various companies with priority of 0.2055, followed by building an adaptive and agile supply chain with rapid planning and integrated execution with priority of 0.1706, followed by ensuring a reliable and predictable supply with priority 0.1640, embedded sustainability into the operation of supply chain operation of priority 0.1224 followed by and the least preference was given to aligning the supply chain with business goals and integrating sales and operations planning with corporate business planning (SCBGIS) with priority 0.0897. Based on the analysis, it is advisable to all the manufacturing firms to make use of the suggested best alternative strategy of supply chain management practices in order to improve their organisation performance and as well enhances the customer satisfaction.

References

- [1] Lei, Li., Zabinsky, Z. B.. Incorporating uncertainty into a supplier selection problem, *International Journal of Production Economics*, 134, 2011, 344-356.
- [2] Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., Defining supply chain management. *Journal of Business Logistics*, 22(2), 2001 1–25.
- [3] Donlon, J. P., Maximizing value in the supply chain. *Chief Executive*, 117, 1996, 54–63.
- [4] Tan, K. C., Kannan, V. R., Handfield, R. B., "Supply chain management: supplier performance and firm performance. *International Journal of Purchasing and materials management*, 34(3), 1998, 2-9.
- [5] Tan, K.C., Lyman, S. B., Wisner, J. D., Supply Chain Management: A Strategic Perspective, *International Journal of Operations and Production Management*, 22(6), 2002, 614-631.
- [6] Lee, H. L., The Triple- A Supply Chain, *Harvard Business Review*, 82(10), 2004, 102-112.
- [7] Chan F.T.S., Performance Measurement in a Supply Chain. *International Journal of Advanced Manufacturing Technology* 21(7), 2003, 534-548.
- [8] Rigby, C., Day, R.C., M., Forrester, P., Burnett, J., Agile supply: rethinking systems thinking, systems practice. *International Journal of Agile Management Systems*, 2(3), 2000, 78-186.
- [9] Goldratt, E. M., *Essays on the Theory of Constraints*. [Great Barrington, MA]: North River Press. 1998.
- [10] Pagell, M., Understanding the factors that enable and inhibit the integration of operations, purchasing and logistics. *Journal of Operations Management* 22(5), 2004, 459–487.
- [11] Zhao, X., Huo, B., Flynn, B.B., Yeung, J.H.Y., The impact of power and relationship commitment on the integration between manufacturers and customers in a supply chain. *Journal of Operations Management*, 26(3), 2008, 368–388.

- [12] Robinson, C. , Malhotra, M.K., Defining the concept of supply chain quality management and its relevance to academic and industrial practice. *International Journal of Production Economics*, 96(1), 2005, 315-337.
- [13] Maheswari, B., Kumar, V. , Kumar, U., Optimizing success in supply chain partnerships. *Journal of Enterprise Information Management*, 9(3), 2006, 277-291.
- [14] Li, S., Ragu-Nathan, B., Ragu-Nathan, T.S., Rao, S.S., The impact of supply chain management practices on competitive advantage and organizational performance. *Omega*, 34(2), 2006, 107-124.
- [15] Stuart, F.I., Supply chain strategy: organizational influence through supplier alliances. *British Journal of management*, 8(3), 1997, 223-236.
- [16] Griffith, D. A., Harvey, M. G. , An intercultural communication model for use in global Inter- organizational networks. *Journal of International Marketing*, 9(3), 2001, 87-103.
- [17] Agarwal, A., Shankar, R. On-line trust building in e-enabled supplies chain", *Supply Chain Management: An International Journal*, 8 (4), 2003, 324-334.
- [18] Simatupang, T. M. & Sridharan, R. An Integrative Framework for Supply Chain Collaboration. *International Journal of Logistics Management*, 16(2), 2005, 257- 274.
- [19] Spekman, R., Kamauff, J., Myhr, N., An empirical investigation into Supply Chain Management: A perspective on partnerships. *Supply Chain Management: An International Journal*, 3(2), 1998, 53-67.
- [20] Baily, P., Farmer, D., Crocker, B., Jessop, D. , Jones, D., Procurement principles and management, 10th edition: Prentice Hall, 2008.
- [21] Lopes de Sousa Jabbour, A. B., Gomes Alves Filho, A., Backx Noronha Viana, A., & José Chiappetta Jabbour, C. (2011). Measuring supply chain management practices. *Measuring Business Excellence*, 15(2), 18-31.
- [22] Abuzaid, A. N. The Effect of Supply Chain Management Practices on Strategic Flexibility: Applied Study on the Jordanian Manufacturing Companies. *European Journal of Business and Management*, 6(5), 2014, 167-176.
- [23] Mutuerandu, M. N., Iravo, M. Impact of Supply Chain Management Practices on Organizational Performance: A Case Study of Haco Industries Limited (Kenya).IOSR Journal of Business and Management, 16(4), 2014, 62-64.
- [24] Afande, F. O., Ratemo, B. M., Nyaribo, F. N., Adoption of supply chain management practices: review of determining factors. *Innovative System Design and Engineering*, 6(5), 2015, 72-77.
- [25] Omai, K. M., Ngugu, P.K. , Kiare, M. D., Effect of Supply Chain Practices on Lead Time in Textile and Apparel Industry in Kenya. *International Journal of Science and Research*, 7(7), 2018, 996-1002.
- [26] Yüksel, İ. , Dağdeviren, M., Using the analytic network process (ANP) in a SWOT analysis- A case study for a textile firm. *Information Sciences*, 177(16), 2007, 3364-3382.
- [27]. Saaty, T. L., Özdemir, M. S. . The Encyclion: A Dictionary of Decisions with Dependence and Feedback based on the Analytic Network Process, RWS Publications, USA 2005.

- [28] Ravi, V., R. Shankar, M. K. Tiwari Analyzing Alternatives in Reverse Logistics for End-of-Life Computers: ANP and Balanced Scorecard Approach. *Computers and Industrial Engineering*, 48 (2), 2005, 327–356.
- [29] Saaty, T. L. (1999). Fundamentals of the analytical network process. Proceedings of ISAHP, Kobe, Japan, 48-63.
- [30] Harker, P.T., Vargas, L.G., Reply to remarks on the analytic hierarchy process. *Management Science*, 36, 1990, 269-273.
- [31] Kothari, C.R. , Research Methodology: Methods and Techniques. 2nd Edition, New Age International Publishers, New Delhi., 2004.
- [32] Mugenda, O. M. & Mugenda, A. G Research Methods: Quantitative and Qualitative Approaches, Acts Press, Nairobi-Kenya., 2003.
- [33] Saaty, T. L., Decision making with the ANP and the national missile defense example. Proceedings of the Sixth International Symposium on the AHP, Bern, Switzerland, 2001, 365–382.

Shared Service Centers and motives for entering the Central European market

Dagmar Grachová¹

Abstract

Foreign direct investments (FDI) have a great importance for the development and progress of smaller countries. Foreign investors are motivated by individual properties that result from the basic characteristics of the country. The article is focused on defining shared service centres (SSCs) and motives that lead to companies to build centres in the central Europe and determining the dependence between selected factors and FDI inflows in the services sector in examined countries. In the first part of the article, SSCs are defined, and we also mention basic factors that lead to the building the SSCs in Central Europe. In the next part of the article, the dependence between selected factors and FDI is examined. The subject of this article is the examination of three factors, including the amount of workforce in countries, level of education and last but not least, the cost of the labor force in the countries under consideration. At the end are confirmed / refutable hypotheses on mutual dependence and defined facts that could affect research results.

Key words

Shared service centres, motives, central Europe, dependance

JEL Classification: C 13, F 49, L 80

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Introduction

The benefits of using Shared Service Centers (next 'SSCs') have been implemented in their strategy by a number of transnational corporations around the world. There are several factors that motivate companies to use them. These motives have evolved over time. The factors in the countries have changed in quantitative or qualitative terms, and corporations have also changed the interests they have pursued by placing SSCs in those countries. Today, corporations are looking for target countries that provide the most benefits for the placement of SSCs while being efficient in terms of the company's operations.

The countries of Central Europe, which have several characteristics, play an important role in this regard. These characteristics can be considered as incentives for foreign investors. The amount of foreign direct investment (FDI) is directed to regions in various areas, with the service sector, of which SSCs are a part, playing an important role. Many world-famous companies such as DELL, IBM, COVESTRO, Deutsche Telekom, AT&T, KPMG, and many others have their SSCs in the region. The aim of the article is to identify the dependencies between FDI flowing into the service sector and selected factors, defined as the motives for building SSCs in Central Europe. To meet this goal, it is first

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necessary to define SSCs and the motives for implementing SSCs in the business strategy of transnational corporations.

1 Methodology

The article focuses on defining the basic factors that motivate foreign investors to build SSCs in the region of Central Europe and examines their impact on the amount of FDI that flows into the service sector in the countries. From the theoretical definition of SSCs according to several authors in terms of time, through the introduction of basic motives leading transnational corporations to implement SSCs in their business strategy and identification of motives for building SSCs in a given region, we move to the practical part in which we examine the dependence between FDI in the service sector and several selected factors.

The article uses several scientific research methods. Collection, processing, and compilation of theoretical sources of literature is the basis for processing the first part of the article, in which SSCs are defined by various authors from a chronological point of view. Using the method of meta-analysis of available literature sources and comparisons, it was possible to compare the statements of selected authors on SSCs and factors that are typical for the region.

The clarity of the data is ensured by the use of tables, where the results of the statistical survey are systematically displayed. Using graphs, we demonstrate the findings and illustrate the findings on development or dependence.

The mathematical-statistical method is the basis for processing the empirical part of the article. Using a quantitative method and using the gretl system, we examined the relationship between FDI flowing into the service sector in the countries studied and selected factors. In order to ensure a higher informative value of the research, we have extended the countries of Central Europe (Slovakia, Hungary, Poland, the Czech Republic), which form the basis of our research, to other countries of the European Union. Thus, our survey was based on a statistical sample of 22 countries (several EU countries do not provide any of the necessary indicators in the publicly available OECD database and are therefore not part of our research). The length of the time series was a minimum of 3 years and a maximum of 6 years (depending on data available in the OECD database). We worked with 81 observations.

The dependent variable was the amount of FDI flowing into the service sector in each country and the independent variable was represented by three selected factors: labor costs, the number of university-educated population and the amount of labor in each country. A detailed description of the investigated factors is given in the next part of the article. We always examined the impact of individual independent variables on FDI with the annual difference between the indicators. We expect investors to take some time to respond to changing conditions in individual countries.

Using the logarithm function, we provided well-structured data for our research. The dependent variable as well as the individual independent variables were expressed in different units and reached different values. We determined the dependence between the dependent variable and the independent variables by means of a correlation matrix

and subsequently by means of a model with fixed effects. Our sample of countries does not represent randomly selected statistical units, we assume that the estimated coefficients will not change across statistical units and at the same time the constants will be specific to each statistical unit. Mathematically, this model can be expressed as follows:

$$y_{it} = \alpha_i + \beta_1 x_{it1} + \beta_2 x_{it2} + \dots + \beta_k x_{itk} + u_{it}$$

Last but not least, the analytical-synthetic method was used. We first examined the individual dependencies using the method of analysis and then, using the method of synthesis, we presented and justified the individual results of research and predictions towards the future.

2 Results and discussion

In this part of the article, we will focus on defining the SSCs themselves, or the motives that lead companies to use SSCs, with special attention to the factors that are typical of Central European countries. We will then examine the relationship between FDI flowing into the service sector in the countries surveyed and the factors we have selected.

2.1 Theoretical background of SSCs and motives for entering the markets

Many authors from all over the world deal with the issue of SSCs. Their statements and opinions on the researched issue can be divided from several points of view (according to the regions and countries in which SSCs research, according to the functional areas of the company and their focus, in terms of time and others). In Table 1, we list several of our selected authors who defined SSCs, ranking the definitions chronologically.

Tab. 1 Theoretical definition of SSCs from a chronological point of view

	Author	Definition of SSCs
90s	Ulrich 1995	`...are government units providing support services (human resources, information and communication technologies, accommodation, facilities, communications, finance, audit and procurement) to more than one ministry, agency or general government sub-sector'.
	Moller 1997	`...are an independent organizational entity that provides well-defined services to more than one entity (which can be a division or business unit) within an organization. SSC is responsible for managing its costs and the quality and timeliness of the services it provides to its internal customers. It has its own specialized resources and will usually have informal or formal contractual arrangements, often called service level agreements, with its customers'.

		Forst 1997	`...they become an essential part of the global and regional strategy of multinational companies'.
		Ulbrich 2003	`...they differ from centralized models and outsourcing models'.
2000 2010	-	Schuppan 2009	`...are an independent organizational units that bring cross-border services to several internal customers, leading to the provision of network services'.
		Gospel, Sako 2010	`...are organizational units that combine company resources (eg human capital, organizational structure and IT systems) to perform support tasks and provide services to internal customers'.
		Brenner, Schultz 2010	„...is a partially autonomous business unit that operates consolidated support activities such as accounting and human resources and provides services to internal clients”.
2011 2021	-	Froud et al. 2016	„...service functions - previously dispersed within the organization - were centralized into one department, which subsequently became an internal service provider”.
		Richter, Bruhl 2019	„...are a new paradigm of companies to increase the efficiency and effectiveness of business support activities”.
		Schuppan 2019	„...they are a special form of centralization of sub-functions in which the roles of different bodies merge or merge. In particular, positive economies of scale are expected, which should (should) result from a favorable division of labor”.

Source: processed by the author

Based on the above definitions, it can be stated that the sharing of services and SSCs can be implemented in both the private and public sectors, while the main goal of their implementation is to streamline the activities of the company. Based on the above definitions, SSCs can be characterized as organizational units that provide selected services to companies (national companies as well as multinational corporations) around the world in order to reduce costs, increase quality, ensure added value, or increase competitiveness. They provide services more efficiently than they would if the companies provided these services on their own.

In addition to cost savings, the company's leading motives for using SSCs include several others. These are mainly (Paagman et al., 2015):

- access to external resources,
- increasing efficiency,
- increasing the quality of services,
- the possibility of concentrating on core activities,
- increasing control,
- the possibility of increasing innovation,
- increasing customer orientation,
- eliminating risk.

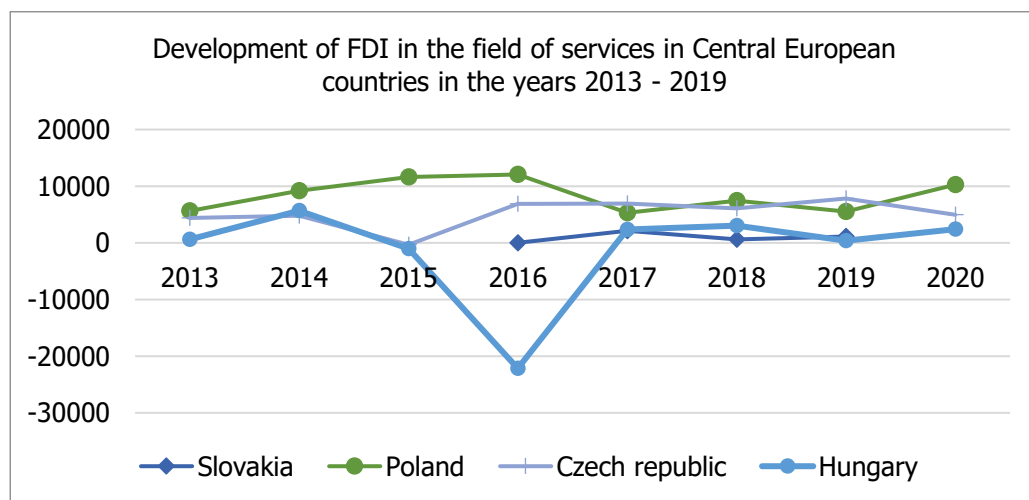
Countries and regions in the world have various factors that represent the motives for building foreign SSCs for foreign investors. The authors, as well as the organizations that operate in the countries of Central Europe, have defined several facts that have a positive effect on foreign investors when deciding on the allocation of FDI. They can therefore be considered as motives for entering the given markets.

One of the basic factors is cheap and skilled labor. The region has a sufficient workforce, which is trained and highly skilled. It can provide quality services in several languages. SSCs are thus able to adapt to the requirements of customers from all over the world. The most widely used foreign languages are English, German, French, Russian and Spanish (SARIO, 2020).

However, the workforce is more expensive than India, which is a global leader in this field. Labor costs in India account for a quarter of labor costs in Western Europe and half of labor costs in Central and Eastern Europe (Marciniak, 2014).

Another important factor that motivates foreign investors to build SSCs in this region is the geographical location, which represents proximity to the countries of Western Europe. The geographical location of the region is also advantageous in terms of time zones. The centers can provide US services in the afternoon and evening, or Asian countries in the early morning. They are therefore able to meet the requirements and respond promptly to the requirements of clients from all over the world, even in hours when this would be possible in a given country only in a limited form. Culture in the countries of middle and east Europe is basically not different from the one in western Europe together with India the culture of this region is more similar to USA (Slusarczyk, 2013).

Graph 1 FDI inflow into services in 2013 - 2019 (in mil. of USD)



Source: processed by the author on the basis of OECD data (2021)

Last but not least, the countries in the region have a well-developed information technology infrastructure. All countries in the region create attractive offers and incentives for foreign investors. Strategies for industry and the framework are designed to help attract and retain investment in the region (Marciniak, 2014).

The building of SSCs is reflected in the total amount of FDI that flows to individual countries in the field of services. The development of the amount of FDI flowing into services to Central European countries is shown in the following chart.

Based on data available in the OECD database, 2021 we can observe the development of FDI in the field of services in the years 2013 - 2019 to three countries: Hungary, Poland, and the Czech Republic. In the case of Slovakia, these data were available only for the period 2016 - 2018. In the years 2016 - 2018, FDI flowing into the area of services in the monitored countries ranged differently. Hungary has invested more in other countries in services than it has accepted. In the case of the other three countries of the region, a higher FDI income in services can be observed than their investment in the given area in other countries. In 2017 and 2018, the least FDI went to the area in Slovakia. On the other hand, most FDI in services flowed alternately to the Czech Republic and Poland in the mentioned years, while the Czech Republic was the largest recipient of FDI in services also in 2019. In the following years 2020 and 2021, the COVID-19 pandemic came to the fore, which affected all areas of society. There have also been some changes in the SSCs, but these have been mainly changes in the organization of the work of the SSCs and therefore we do not anticipate major changes in this area due to the nature of the work of the SSCs. The impact of the FDI pandemic on the services sector in the countries under review will be examined in the following article.

2.2 Interdependence between FDI in the services sector and selected market entry motives

In the empirical part of the article, we focus on examining the dependence between FDI flowing into the services sector and selected factors, which several authors cite as motives for building SSCs in countries.

'FDI is defined as an investment reflecting a lasting interest and control by a foreign direct investor, resident in one economy, in an enterprise resident in another economy (foreign affiliate)' (UNCTAD, 2019).

From the OECD data, the amount of FDI can be defined according to individual sectors of the national economy. They record the value of cross-border investments received by the reporting economy during the reference period (OECD, 2021). From the point of view of the researched issue, it is important to distinguish the individual areas to which FDI is directed. In practice, we distinguish several: industrial production, construction, wholesale, retail, transport, services and more. It is the latter area that is the subject of this article.

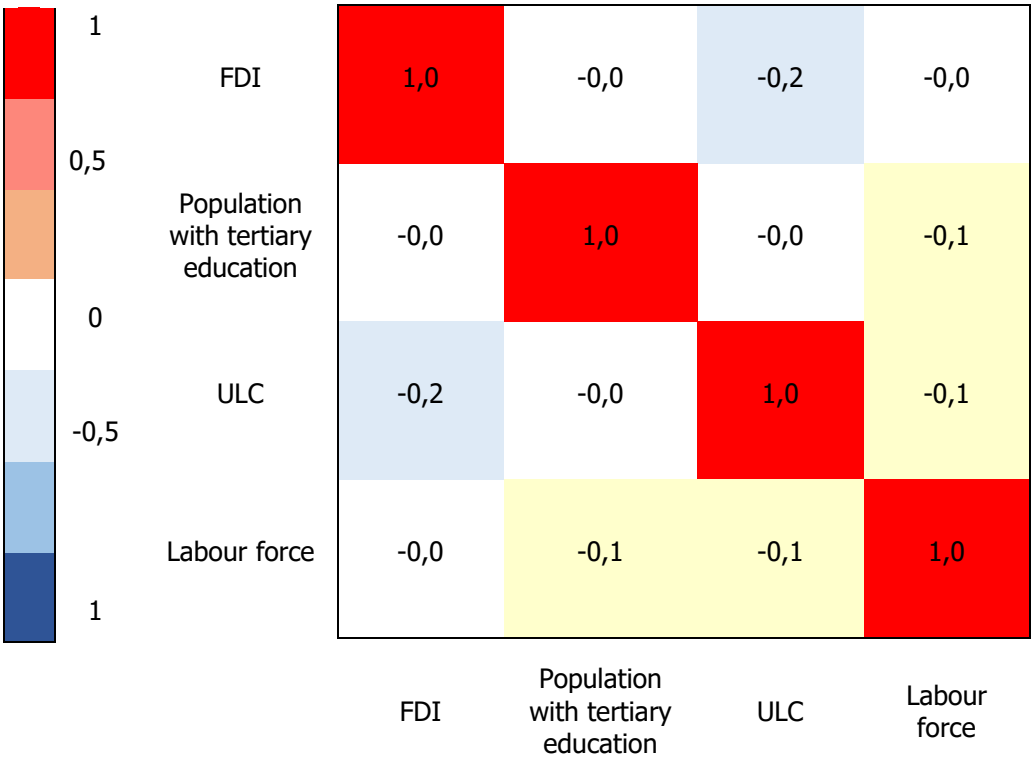
The first step was to use a correlation matrix to determine the dependence between individual factors and FDI flowing into the service sector in the given countries. We specified and examined the dependence between FDI flowing into the services sector and the 3 factors related to the following text.

Educational level of the population was defined on the basis of the percentage of university-educated inhabitants in individual countries, aged 25-34 years, in the total population in a given age category. The university-educated population is defined as the

population with the highest level of education. This education includes theoretical programs leading to further research or highly qualified professions, e. g. medicine, etc. The given indicator is measured by the percentage of the population of the same age. As a result of globalization and scientific and technological progress, the need for markets around the world is transforming, resulting in a growing demand for employees with a broader knowledge base but also specialized skills (OECD, 2021). SSCs are characterized by a workforce ranging in age from 25-35 years, and these employees have completed at least a first degree of higher education (Marciniak, 2014).

Labour costs were defined by the unit labour costs (ULC). `ULCs are considered a broad measure of the country's international price competitiveness. They can be defined as the average labor cost per unit of output produced. They can be expressed as the ratio of total labour compensation per hour worked to output per hour worked—which is the labour productivity. The indicator is expressed as a percentage change in the reference years' (OECD, 2021).

Graph 2 Correlation Matrix



Source:processed by the author, based on OECD data (2021) in the years 2013 – 2019

Labour force, which includes the employed as well as the unemployed, who are actively looking for a job. We consider the working population to be a working popula-

tion, resp. all persons who meet the requirements for being classified as employed (including civilian and armed forces) or unemployed. Employees include those parts of the population who work for a salary or profit of at least one hour a week, or who do not work temporarily due to illness, vacation, or protest. The unemployed are considered to be those who are currently unemployed but are actively seeking employment and able to work (OECD, 2021).

Based on the correlation analysis, it can be stated that there is a dependence between FDI flowing into the service sector in the monitored countries and selected factors. In the case of independent variables - the university-educated population and the workforce in the country, a positive dependence can be observed in relation to FDI flowing into the services sector. On the contrary, in the case of rising labor costs, a negative development in FDI flowing into the services sector can be expected. The table also shows that there is a dependence between some independent variables and each other. In this article, we focus on the dependence of FDI flowing into the services sector and selected factors, and thus the dependence that arose from the correlation matrix between the independent variables is not the subject of this article.

The specific values defining the dependence between the dependent variable and the independent variables are given in Table 2.

Tab. 2 Correlation dependence

FDI (in mil. USD)	Population with tertiary education (24-35 years old) (in %)	ULC (yearly change in %)	Labour force (in thousands of population)	
1,0000	-0,0129	-0,1607	-0,0117	FDI (in mil. USD)
	1,0000	-0,0261	-0,0517	Population with tertiary education (24-35 years old) (in %)
		1,0000	-0,1244	ULC
			1,0000	Labour force

Source: processed by the author, based on OECD data (2021) in the years 2013 – 2019

Due to the fact that the subjects of our research are several factors and their impact on the dependent variable in selected countries, over several time periods, we will examine the dependence between selected factors and FDI in services in the following text through panel regression. In the case of proving the dependence (based on the p-value) between the dependent variable FDI and the given independent variable, we will further determine the specific influence of the given indicator on the dependent variable.

We set these following hypotheses for the solution of this subject using panel analyses based on the theory defined in the first part of this article:

H1: The amount of FDI flowing into countries in the services sector is growing depending on the growth of the population aged 25-34 with a university degree.

H2: As labor costs rise year on year, the amount of FDI flowing into the services sector decreases.

H3: As the working age population increases, so does the amount of FDI flowing into the service sector in individual countries.

Tab. 3 Fixed effects model (FEM)

	coefficient	Standard error	T-statistics	p-value
const	-34,8350	22,4987	2,021	0,1272
Population with tertiary education in 25-34 years	7,1016	2,5366	-2,241	0,0070**
ULC	-0,0061	0,1380	-2,012	0,9646
Labour force	2,0394	2,5193	-0,05563	0,4216

Source: processed by the author based on OECD data (2021)

In the given model, it is statistically significant at the 95% significance level to determine the dependence between the dependent variable represented by FDI in the field of services in individual countries and the independent variable defined as the number of inhabitants with a university degree aged 25-35. Here, the positive relationship defined by the correlation matrix was confirmed, and thus, as the population with a university degree in the country grows, so does the amount of FDI flowing into the service sector.

We accept the first hypotheses. With the increase in population (aged 24 -25 years) with university education (in %) by one percentage point we expect the increase in foreign direct investments to service sector in the followed countries by 7,10 %.

We cannot accept or disconfirm the second and third hypotheses. Even though in the correlation matrix the dependancy of foreign direct investments and to the service sector in the followed countries and independent variables – change in the costs of the labor and the quantity of workforce in the given countries was proven, in the model with fixed effects the interdependancy is not statistically significant.

Conclusion

SSCs represent an opportunity for larger but also smaller corporations to conduct their business more efficiently, thus with lower costs and more qualified. In order to implement the benefits of using SSCs in their business strategy, they must consider

where to build the center. The authors define several reasons that may influence their decision. In this article, we examined the dependence between three selected motives: the educational level of the population in the country, labor costs, the amount of labor and their impact on FDI flowing into the service sector. When examining the dependence through the correlation matrix, the dependence of FDI flowing into the service sector on selected factors was confirmed. Through a panel regression, using the FEM model, only the dependence between FDI flowing into the services sector and the number of the population aged 25-34 with a university degree was subsequently confirmed.

The growth of the educational level of the population has a positive effect on FDI flowing into the country in the service sector. SSCs operating in the Central European region focus primarily on the provision of services in the areas of finance, accounting, information and communication technologies, human resources, digitization, research and development and many other areas. According to a survey by the SARIO agency, SSCs are mainly young people, whose age is around 30 years. Thus, the FEM model can confirm the positive dependence between FDI flowing into the service sector and the number of people with a university degree at a given age level. However, our claim does not apply to the number of people with a different level of completed education and its impact on FDI in the service sector in a given country. A skilled workforce is therefore one of the basic factors that investors examine when deciding on the location of their SSCs.

Another factor that was defined in theory as the entry motive and market of Central Europe was the low labor costs. When examining the dependence between the amount of FDI flowing into the service sector in the countries surveyed and the labor costs in the country, the dependence between them did not prove to be statistically significant. However, a number of multinational corporations state this factor as one of the key ones in deciding on the allocation of their funds in the form of FDI, resp. building SSCs. As labor costs rise, the country loses its competitive advantage of cheap labor. Foreign investors are not interested in investing in this country. In this context, however, it must be borne in mind that circumstances such as the growing educational or economic level may distort this competitive advantage in the future.

It is also not statistically significant to monitor the relationship between the amount of labor in a given country and FDI flowing into the service sector in that country. In our opinion, the decision to allocate funds in the country is influenced by several other factors at the same time. As we stated in the article, in addition to the factors we examined, there are several others that motivate investors to inflow FDI into the country. Such factors include, for example, a favorable tax environment, the political situation or the currency used in the country. Some of them cannot be quantified statistically, so we cannot determine the clear dependence of FDI in the services sector on these factors. We believe that, although there has been evidence of dependence between some selected factors and FDI flowing into the services sector in the countries concerned, these factors need to be looked at comprehensively. Thus, a particular country must be considered as a whole that offers several advantages but also disadvantages, all of which simultaneously influence the decision of large transnational corporations to invest their funds in the form of FDI and build SSCs in different countries.

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Sources

- ABSL. (2021). *Czech republic as a desired business location*. Retrieved December 03, 2021, from <https://www.absl.cz/report2021-location-assessment/>
- European Commission (2021). *The organization of shared service centres (SSCS) in public administration*. Retrieved December 12, 2021, from https://ec.europa.eu/info/sites/default/files/ht0921296enn.en_.pdf
- Forst, (1997) in Davis, T. R. V. (2005). Integrating shared services with the strategy and operations of MNEs. *Journal of General Management*. 31(2), 1-17.
- Froud et al. (2016) in Richardson, Howcroft (2010). The back office goes global: exploring connections and contradictions in shared service centres. *Work Employment and Society*. 26(1), 111-127.
- Gospel, H., Sako, M. (2010). The unbundling of corporate functions: The evolution of shared services and outsourcing in human resource management. *Industrial and Corporate Change*, 19(5), 1367 – 1396.
- IGI Global, Information Resources Management Association. (2012). *Human resources management: Concepts, methodologies, tools, and applications*. Hershey, Pa: IGI Global
- Marciniak, R. (2014). Global Shared Service Trends in the Central and Eastern European Markets. *Entrepreneurial Business and Economics review*, 2(3), 1-17.
- OECD. (2021). *Inward FDI flows by industry*. Retrieved December 07, 2021, from <https://data.oecd.org/fdi/inward-fdi-flows-by-industry.htm#indicator-chart>
- OECD. (2021). *Labour force*. Dostupné Retrieved December 07, 2021, from <https://data.oecd.org/emp/labour-force.htm>
- OECD. (2021). *Population with tertiary education*. Retrieved December 07, 2021, from <https://data.oecd.org/eduatt/population-with-tertiary-education.htm>
- OECD. (2021). *Unit labour force*. Retrieved December 05, 2021, from <https://data.oecd.org/lprdy/unit-labour-costs.htm>
- Paagman, A., Tate, M., Furtmueller, E., de Bloom, J. (2015). An integrative literature review and empirical validation of motives for introducing shared services in government organizations. *International Journal of Information Management*, 35(1), 110-123.
- Richter, P., C., Bruhl, R. (2016). Shared service center research: A review of past, present and future. *European Management Journal*. 35(1), 26-38.
- SARIO. (2020). Shared service centers. Retrieved December 02, 2021 from https://sario.sk/sites/default/files/content/files/Shared%20Service%20Centres_0.pdf

- Schultz, V., & Brenner, W. (2010). Characteristics of shared service centers. *Transforming Government: People, Process and Policy*, 4(1), 210-219.
- Ślusarczyk, B. (2017). Prospects for the shared services centers development in Poland in the context of human resources availability. *Polish Journal of Management Studies*, 15(1), 218-231.
- Ślusarczyk, B. (2017). Shared services centers in central and eastern Europe: the examples of Poland and Slovakia. *Economics and Sociology*, 10(3), 46-58.
- Ulbrich (2003) in Janssen, M., Joha, A. (2006) Motives for establishing shared service centers in public administrations. *International Journal of Information Management*. 26(2) 102-115.
- UNCTAD. (2007). *World Investment Report 2007. Transnational Corporations, Extractive Industries and Development*. Retrieved December 10, 2021, from https://unctad.org/system/files/official-document/wir2007p4_en.pdf
- UNCTAD. (2019). *Handbook of Statistics 2019 – Economic trends. Fact sheet 9: Foreign direct investments*. Retrieved February 14, 2022, from https://unctad.org/system/files/official-document/tdstat44_FS09_en.pdf
- Veit, S., Reichard, Ch., Wewer G. (2019). *Handbuch zur Verwaltungsreform*. Wiesbaden: Springer VS.

Komparácia exportu služieb krajín V4 so zameraním na cestovný ruch

Ing. Lenka Zemanová¹ - Ing. Jakub Harman²

Comparison of export of services of V4 countries with a focus on tourism

Abstract

International trade and related export services are currently becoming more challenging and a driving force for countries' economic growth. The aim of the scientific paper is to evaluate the export of tourism services, compare their situation and to quantify the economic importance of tourism in the Visegrad region. To achieve this, we examined the development of exports of services and the trade balance of these countries. To determine the link and relevance of the link between the international tourism receipts, GDP and export, an econometric analysis was conducted using the correlation and regression analysis. The paper continues by identifying international tourism receipts generated from the export of services and dividing them into same-day visitors and overnight visitors. Lastly, paper presents an overview of achieved results.

Key words

export, tourism industry, V4 countries

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Úvod

V 21. storočí sú služby hnacím motorom ekonomického rastu vo všetkých sférach obchodnej činnosti, pričom zohrávajú kľúčovú úlohu pri zabezpečovaní udržateľného hospodárskeho rastu krajín a určovaní medzinárodnej konkurencieschopnosti.

Medzinárodný obchod a s ním spojený export služieb je v súčasnosti dôležitým determinantom pre vznik nových pracovných miest a zabezpečovanie ekonomického blahobytu. V dôsledku svetovej globalizácie a technologického vývoja sa tento sektor neustále rozvíja. Rastúci medzinárodný obchod so službami možno zaradiť medzi znaky zvyšujúceho sa blahobytu svetového hospodárstva. Význam exportu a importu služieb sa stáva čoraz viac dôležitejším z medzinárodného hľadiska.

Služby majú nezastupiteľný význam v regióne krajín V4. Služby cestovného ruchu sú špecifické tým, že kým väčšina iných odvetví sa zaoberá relatívne úzkym segmentom pôsobnosti, cestovný ruch má interdisciplinárny charakter, čo v praxi znamená, že spája rôzne odvetvia a tiež zahŕňa viaceré problémy, ktoré možno riešiť spoluprácou. Príklad regionálnej spolupráce krajín V4 možno nájsť v spoločnej marketingovej propagácii pod

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značkou 'Discover Central Europe'. Ide o vyjadrenie snahy o rozvoj regiónu strednej Európy v širšom rámci celoeurópskej integrácie. Krajiny V4 sa prezentujú ako jeden marketingový celok. Cieľom spolupráce je rozvoj príjazdového cestovného ruchu, najmä z geograficky vzdialených destinácií, akými sú USA, Rusko, Japonsko, Čína, India, juhovýchodná Ázia, Južná Kórea či Latinská Amerika (Novacká, 2016).

Predkladaný príspevok ma za úlohu zhodnotiť export služieb so zreteľom na služby cestovného ruchu. Predmet skúmania sú krajiny Vyšehradskej štvorky, ktoré sú si blízke z hľadiska kultúrneho a historického vývoja, ale aj geografickým postavením v rámci Európy. Vyznačujú sa relatívne vysokými príjmami a vysokým indexom ľudského rozvoja. Ak by sme tieto krajiny považovali za jednu ekonomiku, predstavovali by piatu najväčšiu ekonomickú mocnosť v Európe (Sopková, 2017).

Dopad, aký môže mať odvetvie cestovného ruchu na ekonomiku krajiny je rôzny a vo väčšine prípadov ho je pomerne ťažké odhadnúť. Spôsobuje to rozmanitosť vnútroštátnych politík, právny rámec, ale aj stupeň rozvoja odvetvia cestovného ruchu. Možnosť generovať príjmy z tohto odvetvia nezávisí len od geografickej polohy, ale aj od národných politík jednotlivých krajín, ktoré rozhodujú o potenciálnych investíciách do jeho infraštruktúry k zvýšeniu atraktivity krajiny (Loungani, 2017).

1 Prehľad literatúry

Výsledky predchádzajúcich prieskumov naznačujú, že v súčasnosti existuje makroekonomický posun smerom k službám. Sektor služieb patrí medzi najrýchlejšie rastúce odvetvia svetového hospodárstva. Vývoz služieb sa stáva čoraz dôležitejšou štruktúrou exportného portfólia krajiny. Rastúci objem obchodovania so službami je nevyhnutný pre diverzifikáciu konkurencieschopnosti krajín s rôznymi úrovňami rozvoja (Uppenberg, 2010).

Loungani (2017) prostredníctvom analýzy údajov o exportnej štruktúre 192 krajín zistil, že podiel služieb v roku 2014 tvoril viac ako 20% celkového vývozu, zatiaľ čo v roku 1970 to bolo len 9%. Na základe viacerých výskumov sa vedci zhodujú v tom, že export služieb rastie rýchlejšie ako vývoz tovaru. Ďalšie výskumy ukazujú, že podiel služieb na HDP má tendenciu významne stúpať s rastom úrovne príjmu krajiny. V priemere dosahuje približne 77% v krajinách s vysokým príjmom v porovnaní s úrovňou 47% - 54% krajín so stredným a nižším príjmom. Súčasný význam sektoru služieb sa odráža aj na zamestnanosti, kedy možno za posledné dve desaťročia pozorovať značný posun od priemyselnej výroby smerom k službám (Wirtz a Ehret, 2015).

Zistenia globálneho výskumu uskutočneného Konferenciou Spojených národov pre obchod a rozvoj (UNCTAD, 2004) indikujú, že v poslednom desaťročí začal vývoz služieb pre rozvinuté krajiny vykazovať čoraz väčší vplyv na raste HDP. Mishra a kol. (2018) vo svojom výskume založenom na analýze údajov zo 125 krajín odhalili štatisticky významné vzťahy medzi vývozom služieb a HDP na obyvateľa. Vedci sa zhodujú v tom, že HDP na obyvateľa je jedným z faktorov stimulujúcim rozvoj služieb. Zároveň tvrdia, že vývoz obchodu so službami je menej citlivý na hospodárske krízy ako vývoz tovarov.

Prohorovs (2018) preskúmal zmeny, ktoré nastali v exporte služieb európskych krajín v rokoch 2005-2016, počas ktorých sa vývoz služieb zvýšil o 60,1%. Zistil, že existuje

silná pozitívna korelácia medzi mierou rastu vývozu služieb a mierou rastu HDP. Na základe výsledkov dospel k záveru, že najvyššia miera rastu vývozu služieb je charakteristická pre krajiny s nižšou úrovňou ekonomického rozvoja.

Z geografického hľadiska štatistiky ukazujú, že Európa je lídrom v oblasti exportu služieb. V desiatke najväčších svetových exportérov služieb patria dlhodobo krajiny ako Veľká Británia, Nemecko, Francúzsko, Írsko a Holandsko (Knoema, 2020). V súvislosti s exportom služieb je dôležité poznamenať, že vývoz služieb danej krajiny závisí nielen od úrovne jej rozvoja a výšky príjmov, ale aj od jej geografického umiestnenia.

Napriek obrovskému množstvu dostupnej vedeckej literatúry, vedeckých publikácií a prípadových štúdií zaoberajúcimi sa exportom služieb, ktorý slúži ako motor ekonomického rastu krajín môžeme skonštatovať, že neexistuje dostatok empirických výskumov zaoberajúcich sa odvetvím cestovného ruchu ako determinantom ekonomického rastu krajín.

Odhliadnuc od pandémie koronavírusu sa odvetvie cestovného ruchu stalo jednou z najrýchlejšie rastúcich ekonomických aktivít. Tento fakt verifikujú dáta Svetovej organizácie cestovného ruchu a Medzinárodného menového fondu, ktoré ukazujú, že cestovný ruch je jednou z piatich vedúcich ekonomických aktivít v 83% krajín sveta (Vujo-
vic, 2015).

Cieľ deklarujúci zvýšenie podielu exportu týchto služieb má medzi obchodno-politickými cieľmi krajín opodstatnenie. Cestovný ruch je významným zdrojom zamestnanosti v regiónoch. Vzhľadom na svoj prierezový charakter podporuje rozvoj komplementárnych odvetví akými sú maloobchod, poľnohospodárstvo, rybolov atď. Má tiež potenciál napomôcť k zlepšeniu medziročného salda bilancie služieb. Vyšší počet zahraničných návštevníkov v konečnom dôsledku vyvolá nárast príjmov bilancie služieb cestovného ruchu.

Export služieb sa v kontexte cestovného ruchu rozumie ako príjazdový (zahraničný) cestovný ruch. Má rovnaký účinok ako vývoz tovaru, kedy tovar a služby neprekračujú hranicu štátu, ale zahraniční návštevníci prichádzajú na územie daného štátu, aby uspokojili svoje potreby za finančné prostriedky, ktoré si so sebou priniesli (Gúčik, 2011). Export služieb v cestovnom ruchu možno preto kvantifikovať aj na základe vygenerovaných príjmov zahraničných návštevníkov prichádzajúcich do krajín V4. Milenkovski a kol. (2016) sa zaoberajú skúmaním príjmov z medzinárodného cestovného ruchu na HDP Macedónska, pričom využívajú komparatívnu analýzu medzi balkánskymi krajinami v oblasti príjmov z medzinárodného cestovného ruchu. Prostredníctvom korelačnej analýzy dospeli k záveru, že existuje závislosť medzi výdavkami prichádzajúcich zahraničných návštevníkov a HDP v skúmanej krajine.

Gúčik (2011) uvádza, že kvantifikovať ekonomický význam cestovného ruchu v krajine je možné prostredníctvom bilancie cestovného ruchu. Pri skúmaní priamych vplyvov cestovného ruchu na platobnú bilanciu, národný dôchodok krajiny či HDP majú osobitný význam príjmy plynúce z výdavkov zahraničných turistov, tzv. neviditeľný export. Neviditeľný export tak napomáha k vytváraniu aktívneho salda platobnej bilancie. Naopak, neviditeľný dovoz, teda výdavky turistov danej krajiny v zahraničí spôsobujú pokles platobnej bilancie. Z uvedeného vyplýva, že platobnej bilancii napomáha cestovný ruch predovšetkým príjmami plynúcimi z výdavkov zahraničných turistov.

Šambronská a Šenková (2015) skúmali výkonnosť cestovného ruchu Slovenska z pohľadu vývoja devízových príjmov a salda. Aj napriek aktívnemu saldu ju hodnotia ako slabú v porovnaní s ostatnými krajinami ako Nemecko, Česko, Poľsko, Veľká Británia či Španielsko. Zároveň dodávajú, že je komplikované kvantifikovať celkový ekonomický prínos cestovného ruchu vzhľadom na fakt, že zasahuje do mnohých odvetví národného hospodárstva. Práve za týmto účelom bol zriadený harmonizovaný systém satelitných účtov cestovného ruchu ako medzinárodne uznávaný rámec pre meranie aktivít a významu cestovného ruchu pre národné ekonomiky.

V súvislosti s exportom služieb cestovného ruchu je dôležité podotknúť, že mnohé krajiny majú zavedené vo svojich politických rámcoch a strategických dokumentoch plány na posilnenie infraštruktúrne, regulačnej a inštitucionálnej úrovni, avšak len málo krajín rieši cestovný ruch ako odvetvie vývozu. Národnú stratégiu exportu cestovného ruchu, ktorá špecifikuje plán rozvoja a konkurencieschopnosti cestovného ruchu ako exportného sektoru poskytuje ako návod pre implementáciu Svetová organizácia pre cestovný ruch (ITC-UNWTO Strategies, 2017).

2 Metodika práce

Cieľom predkladaného príspevku je zhodnotiť a porovnať export služieb cestovného ruchu krajín V4. Vykonaním analýzy poskytneme prehľad o vývoji medzinárodného obchodu so službami v skúmanom regióne. Z makroekonomického hľadiska budeme prostredníctvom dostupných dát identifikovať význam medzinárodného cestovného ruchu na základe vzťahu medzi HDP, exportom služieb a príjmov cestovného ruchu. Kvantifikovať ekonomický význam cestovného ruchu budeme prostredníctvom platobnej bilancie cestovného ruchu.

Na dosiahnutie stanoveného cieľa sme pre empirický výskum využili sekundárne zdroje informácií dostupné z databáz Medzinárodného obchodného centra UNCTAD, Eurostatu či Svetovej banky. Pre spracovanie predkladanej práce boli pre nás užitočné slovenské a zahraničné vedecké publikácie a štúdie.

Pri spracovaní danej problematiky sme použili viacero metód vedeckého bádania. Prostredníctvom komparácie sme porovnali vývoj medzinárodného cestovného ruchu krajín V4 v skúmanom období. Vďaka metóde kvantitatívneho výskumu sme zozbierali dáta z dostupných databáz a pri kvantifikácii získaných údajov sme využili matematicko-štatistické metódy. Získané výsledky sme následne graficky. Dáta boli zozbierané v štatistickom programe Excel, v ktorom sme realizovali korelačné a regresné analýzy.

Z komparatívneho hľadiska sme export služieb v cestovnom ruchu kvantifikovali na základe vývojových grafov obchodnej a platobnej bilancie v krajinách V4 v časovom období od roku 2008 po rok 2018. V tejto súvislosti sme skúmali aj kauzalitu vývoju týchto služieb a vzájomne sme dynamicky porovnali tieto zistenia v rámci krajín.

Pre bližšie skúmanie problematiky exportu služieb z makroekonomického hľadiska sme vykonali koreláciu medziročnej miery tempa rastu HDP a medziročnej miery vývozu služieb. Využili sme párovú korelačnú analýzu, prostredníctvom ktorej sme vyjadrili korelačný koeficient a určili tak intenzitu závislosti vzťahu medzi dvomi veličinami. Rovnako sme skúmali aj závislosť HDP od príjmov zo zahraničného aktívneho cestovného ruchu.

Inšpiráciou pre vykonané korelačné a regresné analýzy boli už zrealizované vedecké štúdié, ktoré sa tejto problematike venovali.

V neposlednom rade sme sa v predkladanej práci zaoberali hodnotovým vyjadrením exportu služieb cestovného ruchu, pričom sme kvantifikovali príjmy zo zahraničného aktívneho cestovného ruchu v skúmanom regióne. Pre dosiahnutie porovnateľných údajov sme tiež prepočítali príjmy a výdavky pripadajúce na jedného obyvateľa danej krajiny. Na základe dostupných údajov z harmonizovaného systému turistických satelitných účtov na európskej úrovni sme diverzifikovali výšku príjmov zahraničných jednoduchých a viacdňových návštevníkov.

3 Výsledky a diskusia

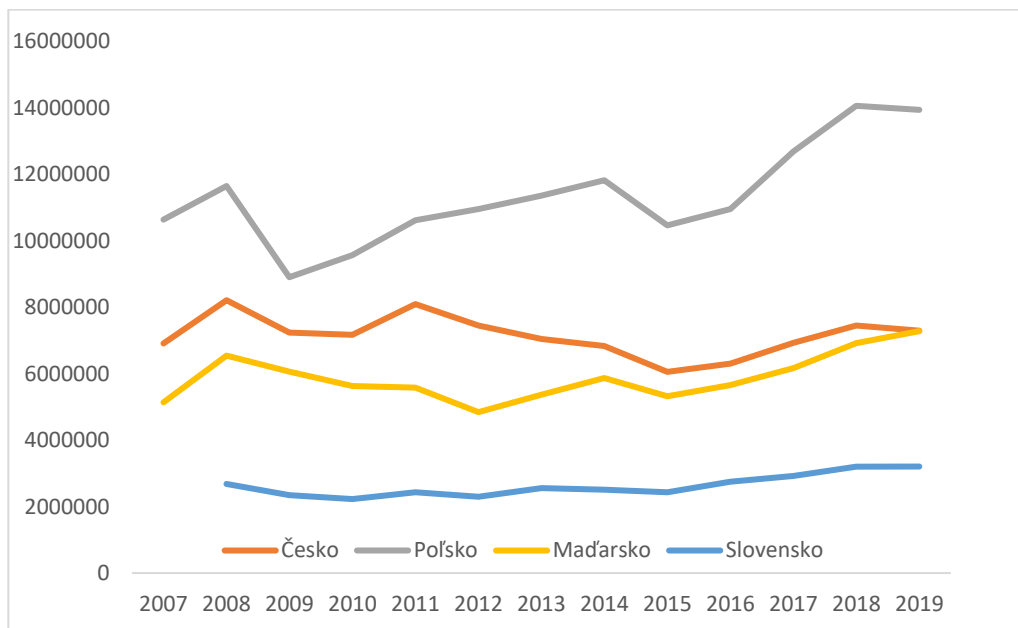
Pre získanie čo najkomplexnejšieho pohľadu na skúmanú problematiku sme skúmali export služieb cestovného ruchu a ich hodnotové vyjadrenie prostredníctvom výdavkov zahraničných turistov krajín Vyšehradskej štvorky, pričom sme sa pokúsili vysvetliť príčinné súvislosti empirického výskumu. Pre získanie dát sme využili databázu Trademap. Pod pojmom služby cestovného ruchu databáza rozlišuje ubytovacie, stravovacie, dopravné a ďalšie služby.

Nasledujúci graf zobrazuje vývoj exportu služieb cestovného ruchu počas jedenásť rokov. Ukazuje zvyšujúci sa význam cestovného ruchu, čo malo za následok medziročný nárast turistov a prenocovaní v skúmanom regióne. Cestovný ruch je odvetvie citlivé na medzinárodné výkyvy, čoho príkladom je finančná kríza v rokoch 2008-2009, ktorá výrazne ovplyvnila objem vývozu a dovozu služieb cestovného ruchu a stlmila ich rastúce tempo. Jej účinky sa zreteľne prejavili v roku 2009, kedy obchod so službami zaznamenal výrazný pokles. V priebehu nasledujúcich rokov pozorujeme prvé známky oživenia obchodu so službami po hospodárskej kríze. Až v roku 2012 s výnimkou Česka boli dosiahnuté hodnoty z obdobia pred jej začiatkom.

Najvyššie hodnoty dosahuje dlhodobá Poľsko, čo znamená, že najviac finančných prostriedkov minuli zahraniční návštevníci práve v tejto krajine. Vývoj cestovného ruchu Slovenska na exporte služieb cestovného ruchu je spomedzi krajín V4 najnižší, čo poukazuje na nedostatočné využitie potenciálu cestovného ruchu v národnom hospodárstve. Z Grafu možno pozorovať, že miera tempa rastu exportu sa najdynamickejšie menila v Poľsku, kedy v skúmanom období vzrástla o 17,18%. Nasleduje Slovensko (16,23%) a Maďarsko (5,43%). Česko ako jediná krajina dosiahla prepád vývozu, a to o 10,24 %.

Cestovný ruch je dôležitou hnacou silou medzinárodného obchodu so službami. Dôkazom toho je obchodná bilancia, ktorá odzrkadľuje rozdiel medzi hodnotou vývozu a dovozu služieb cestovného ruchu. Jej vývoj z komparatívneho hľadiska krajín V4 zobrazuje Graf 2. Pre dosiahnutie porovnateľných údajov je obchodná bilancia krajín vyjadrená relatívne, a to na základe podielu salda obchodnej bilancie jednotlivých krajín a obratu zahraničného obchodu služieb cestovného ruchu, teda súčtu importu a exportu služieb v cestovnom ruchu.

Graf 1 Vývoj exportu služieb cestovného ruchu v krajinách V4 v rokoch 2008-2019 (v USD)

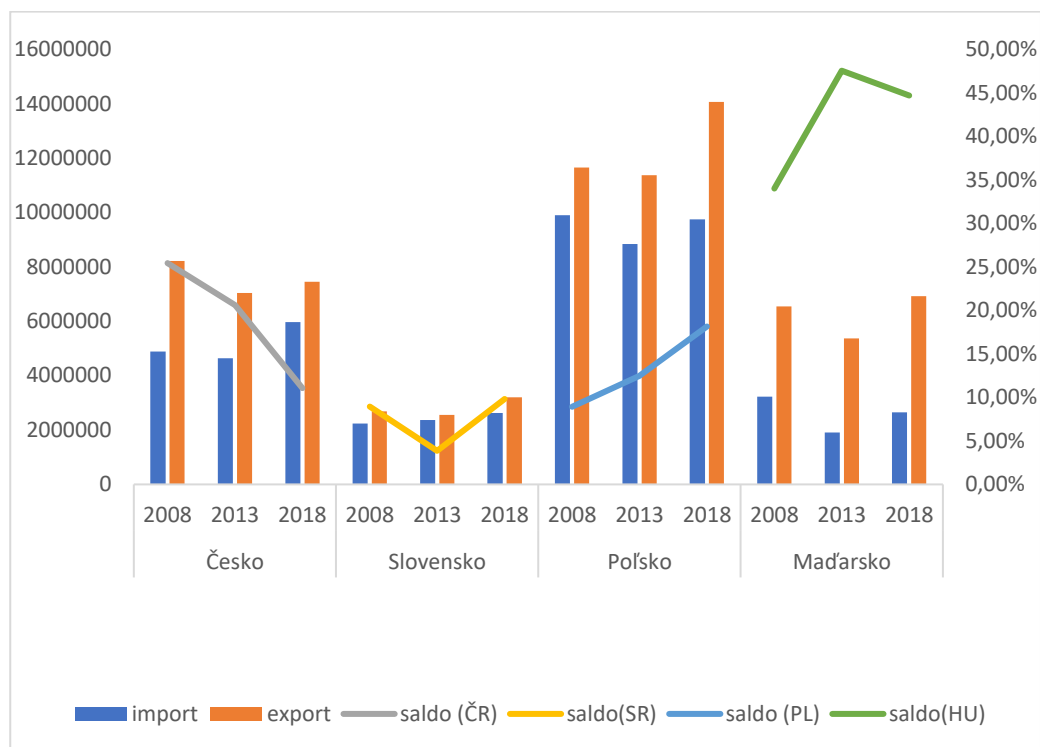


Zdroj: Trademap, 2020

Objemy vývozu a dovozu služieb cestovného ruchu sa v krajinách rozvíjali rozdielne. Graf 2 ukazuje, že v skúmanom období bolo saldo obchodnej bilancie v krajinách V4 kladné. Napriek skutočnosti, že import a export služieb dosahoval najvyššie hodnoty v Poľsku, kde saldo obchodnej bilancie rástlo najdynamickejšie, najvyššiu úroveň salda obchodnej bilancie na celkovom obrate zahraničného obchodu dosahuje Maďarsko. Je to spôsobené samotným relatívnym vyjadrením v tom zmysle, že Maďarsko má najvyššie hodnoty v aktívnom salde platobnej bilancie, zatiaľ čo obrat zahraničného obratu dosahuje dvojnásobne nižšie hodnoty v porovnaní s Poľskom, čo sa odzrkadľuje na konečnom výsledku. Aj keď je hodnota salda obchodnej bilancie v Poľsku a Maďarsku približne rovnaká, Maďarsko tieto hodnoty dosahuje pri oveľa nižšej hodnote obratu. Zjednodušene povedané, aktívne saldo bilancie obchodu služieb cestovného ruchu v Maďarsku spôsobila nižšia dynamika rastu vývozu oproti dynamike rastu dovozu.

Dôvod klesajúcej krivky Česka sú zvýšené výdavky na zahraničný cestovný ruch v sledovanom období, čo sa prejavilo na zvyšovaní importu a poklese hodnôt v exporte služieb cestovného ruchu. Rok 2018 predstavoval historické maximum, kedy výdavky na medzinárodný cestovný ruch dosiahli rekordných vyše 6 miliárd amerických dolárov.

Graf 2 Vývoj obchodnej bilancie krajín V4 v službách cestovného ruchu
(v tis. dolároch)

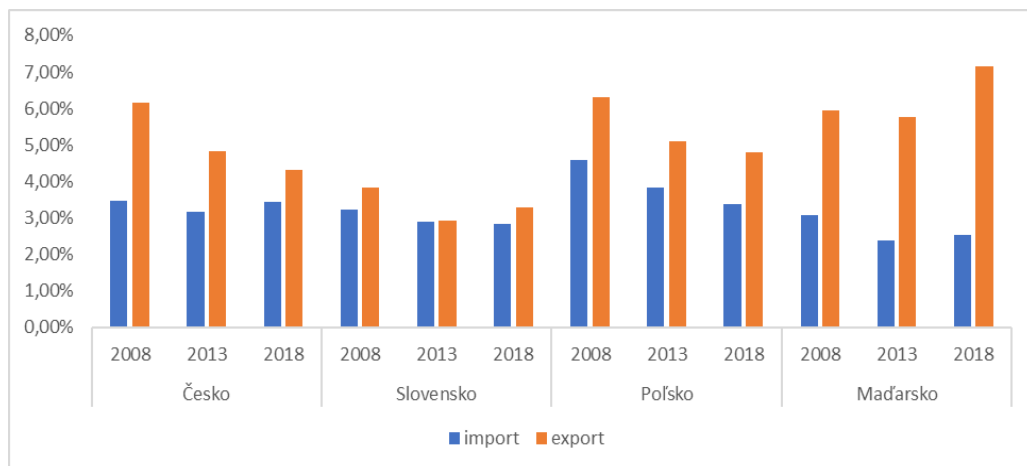


Zdroj: Trademap, 2020

Bližšie vysvetlenie predchádzajúceho grafu zobrazuje Graf 3 na základe ukazovateľov svetového rozvoja. Uvádza percentuálny podiel príjmov z medzinárodného cestovného ruchu na celkovom exporte tovarov a služieb a výdavkov z medzinárodného cestovného ruchu na celkovom importe tovarov a služieb.

Na základe grafu môžeme skonštatovať, že najvyšší podiel exportu v službách cestovného ruchu dosahuje Maďarsko, ktoré zároveň dosahuje aj najnižšie hodnoty pri importe. Dôvodom tohto stavu je silný význam domáceho cestovného ruchu v krajine, ktorý v posledných rokoch dosahuje vysoké hodnoty, čo sa následne prejavuje na nízkych hodnotách importu služieb cestovného ruchu. V praxi to znamená, že približne 14,4 milióna Maďarov sa rozhodne stráviť dovolenku vo svojej krajine, čo sa odzrkadľuje na nízkych hodnotách výdavkov na zahraničný cestovný ruch (OECD, 2020). Napriek značnému prepadu v rokoch 2009-2010 sa odvetvie cestovného ruchu krajín V4 postupne rozvíjalo. Napriek postupnému medziročnému zvyšovaniu salda obchodnej bilancie export služieb na Slovensku výrazne zaostáva za ostatnými krajinami. Pod túto skutočnosť sa podpisuje najmä nedostatočne vyvinutý produkt cestovného ruchu, ale aj výrazne nižšia intenzita a investovanie do propagácie v zahraničí v porovnaní s ostatnými krajinami ako aj zaostávajúca kvalita poskytovaných služieb (Ministerstvo hospodárstva SR, 2018).

Graf 3 Percentuálny podiel príjmov a výdavkov z medzinárodného cestovného ruchu na celkovom importe a exporte tovarov a služieb v krajinách V4



Zdroj: Knoema, 2021

Pre získanie komplexnejšieho pohľadu na export služieb cestovného ruchu sme kvantifikovali indikátory, ktoré slúžili na určenie rastových trendov vývozu služieb. Konkrétne išlo o mieru rastu exportu služieb a mieru rastu HDP. Indikátory boli vypočítané medziročne v časovom horizonte 2008-2019 a tieto výpočty boli podkladom pre vykonanie korelačnej analýzy.

V súvislosti so skúmaním vývoja exportu služieb cestovného ruchu bolo našim účelom zistiť, či existuje vzťah medzi medziročnou mierou rastu exportu služieb cestovného ruchu a úrovňou ekonomického rozvoja, čo v našom prípade predstavuje miera rastu HDP na obyvateľa. Aby sme zistili, či existuje korelácia medzi uvedenými veličinami, vytvorili sme bodový graf rastu HDP a vývozu služieb. Pre odhad korelácie medzi mierami rastu HDP a rastom exportu služieb v časovom rozmedzí od 2008 do 2019 bola vykonaná korelačná analýza.

Výsledky analýzy ukazujú, že korelačný koeficient $R=0,31$ je štatisticky významný (úroveň $p<0,001$). To dokazuje prítomnosť slabšej pozitívnej korelácie medzi rastom exportu služieb a rastom HDP. Graf 3 predstavuje korelačný rozptylový graf, ktorý jasne ukazuje, že existuje určitý súlad medzi rastom HDP na obyvateľa a rastom vývozu služieb. Výsledkom regresnej analýzy je lineárna závislosť rastu vývozu služieb od HDP na obyvateľa. Na základe vykonanej regresnej analýzy bola zistená lineárna závislosť exportu služieb cestovného ruchu na HDP na obyvateľa. Výsledky regresnej analýzy rastu vývozu služieb a rastu HDP v rokoch 2008-2018 vyústili do nasledovnej regresnej rovnice:

$$y = 1,2717x + 0,1218$$

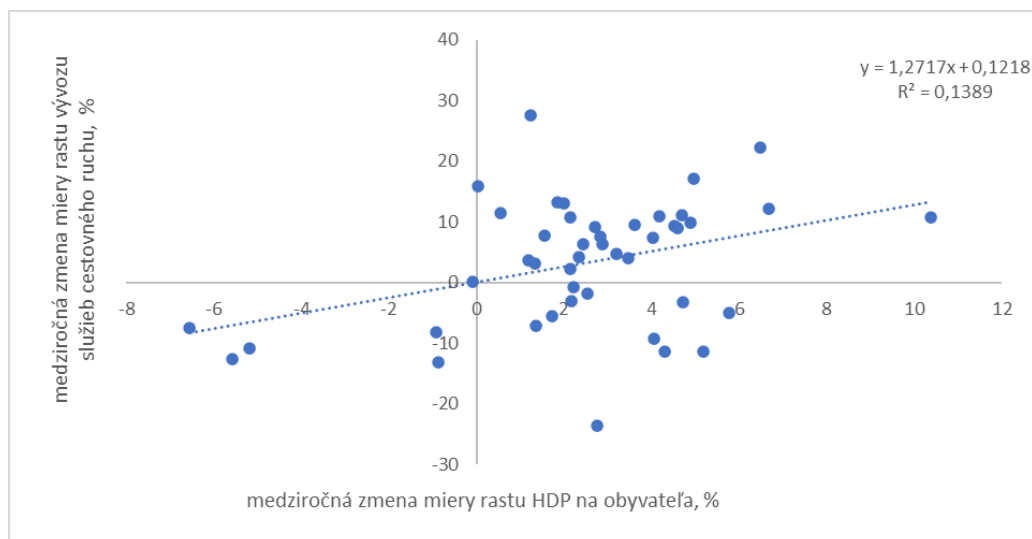
kde,

premenná x - medziročná miera rastu HDP na obyvateľa

Z regresnej rovnice vyplýva, že zvýšenie tempa rastu HDP na obyvateľa o 1% zodpovedá priemernému rastu exportu služieb cestovného ruchu o 1,27%. Vzhľadom na

výsledky regresnej analýzy je tento model štatisticky významný ($F=6,93$). Výsledky analýzy ukazujú, že 13,9% rastu vývozu služieb cestovného ruchu v krajinách V4 je určovaných rastom HDP na obyvateľa ($R^2=0,139$) a na zvyšných 86,1% vplyvajú ďalšie faktory. Toto zistenie korešponduje so zisteniami Prohovorsa (2018), ktorý vo svojej štúdii preskúmal vzťah medzi mierou tempa rastu HDP na obyvateľa a exportu služieb, pričom zistil, že medzi dvomi uvedenými veličinami existuje silná korelácia. V našom prípade sme skúmali výlučne služby cestovného ruchu, pričom výsledkom je slabšia miera závislosti HDP od exportu služieb.

Graf 4 Graf závislosti miery rastu HDP na obyvateľa a miery rastu vývozu služieb cestovného ruchu v krajinách V4 v rokoch 2008-2018



Zdroj: vlastné spracovanie

3.1 Ekonomický význam cestovného ruchu krajín V4

Nasledujúca kapitola skúma vplyv cestovného ruchu na platobnú bilanciu krajín V4. V súvislosti s platobnou bilanciou cestovného ruchu je dôležité poznamenať, že bilancia zachytáva len niektoré platby. Absentujú napr. výdavky na medzinárodnú osobnú dopravu, cestovné poistenie, ktoré sú zahrnuté v iných bilanciách služieb (Gúčík, 2013). Za účelom diskusie o priaznivom vplyve cestovného ruchu na platobnú bilanciu musí výška devízových príjmov krajiny presahovať sumu devízových výdavkov (Celik, 2013).

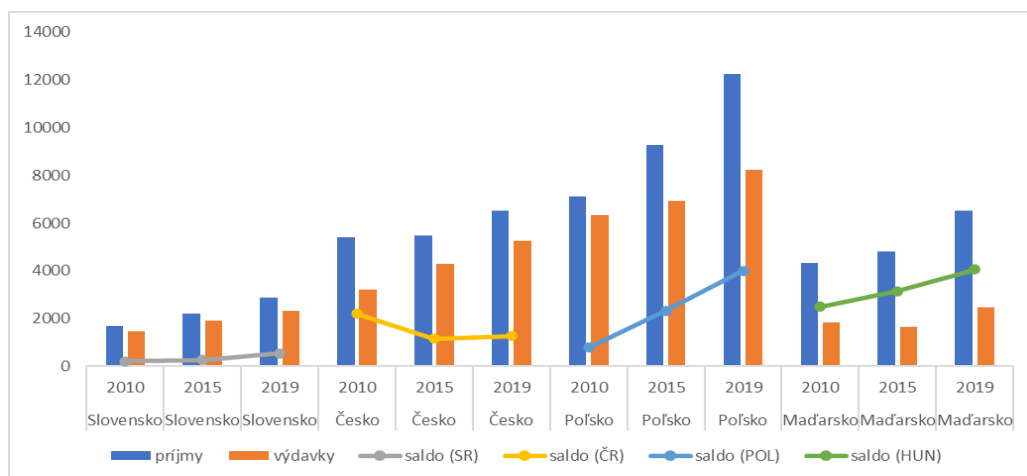
Graf 5 zobrazuje postavenie cestovného ruchu v platobnej bilancii jednotlivých krajín. Naším cieľom bolo preskúmať vývoj salda platobných bilancií. Empirické zistenia ukazujú, že najvyššie príjmy z aktívneho zahraničného cestovného ruchu dosahuje dlhodobo Poľsko. Za ním nasleduje Česká republika, Maďarsko a napokon Slovensko. Napriek zaostávajúcej pozícii v porovnaní s ostatnými krajinami V4 sa význam cestovného ruchu Slovenska prejavil na zlepšení medziročného salda bilancie služieb.

Bilancie cestovného ruchu v krajinách V4 sú dlhodobo aktívne. Aktívne saldo bilancie cestovného ruchu zlepšuje platobnú bilanciu štátu, prispieva k znižovaniu deficitu bežného účtu a tvorbe devízových rezerv.

Hodnota salda na Slovensku vykazuje z komparatívneho hľadiska opäť najnižšie hodnoty. V praxi to môžeme interpretovať tak, že slovenská ekonomika má na jednej strane príjmy od zahraničných turistov (tzv. vývoz služieb), ale na druhej strane má takmer v rovnakej hodnote výdavky, ktoré sú súhrnom slovenských dovolenkárov v zahraničí za tovary a služby (tzv. dovoz služieb). Zjednodušene povedané, veľkú časť finančných prostriedkov, ktoré zaplatili zahraniční dovolenkári na Slovensku za tovary a služby sú následne vyvezené do zahraničia. S výnimkou Česka možno vo všetkých krajinách pozorovať pozitívny vývoj salda platobnej bilancie.

Najdynamickejší rast zaznamenáva Poľsko, ktoré ako jediná krajina v Európe neupadla do recesie počas hospodárskej krízy (Šambronská, 2014). Príčinu priaznivejšieho vývoja poľskej ekonomiky možno hľadať v raste produktivity práce, ktorá bola pozitívne ovplyvnená rastúcou mierou zahraničných investícií. Dopad globálnej krízy na poľskú ekonomiku bol najslabší spomedzi krajín V4 aj kvôli skutočnosti, že ide o relatívne veľkú ekonomiku, ktorá nie je tak závislá od zahraničného dopytu v porovnaní s menšími ekonomikami zvyšných krajín (Matoušková, 2020).

Graf 5 Ekonomický význam cestovného ruchu v krajinách V4 (v mil. €)



Zdroj: Eurostat, 2020

3.2 Kvantifikácia medzinárodného významu služieb cestovného ruchu krajín V4

Pre porovnávanie významu exportu služieb cestovného ruchu v peňažnom vyjadrení z dlhodobého hľadiska sa medzi štátni používa aj prepočet devízových príjmov a výdavkov na jedného obyvateľa dosadením vzťahu:

$$P = \frac{P_{azcr}}{o}, \text{ resp. } \frac{V_{pzcrr}}{o}, \text{ kde}$$

Pazcr – príjmy z aktívneho zahraničného cestovného ruchu

Vpzcr – výdavky na pasívny zahraničný cestovný ruch

O-počet obyvateľov štátu

Príjmy a výdavky zahraničného cestovného ruchu na obyvateľa v krajinách V4 zobrazuje Tabuľka 2. Najvyššie príjmy zo zahraničného cestovného ruchu na obyvateľa dosiahlo Maďarsko. Naopak, najvyššie výdavky na zahraničný cestovný ruch zaznamenáva Česko. V konečnom dôsledku môžeme zhodnotiť, že neexistuje závislosť medzi príjmami a výdavkami na zahraničný cestovný ruch, ale výdavky na zahraničný cestovný ruch na obyvateľa ovplyvňuje najmä HDP daného štátu (Gúčík, 2013).

Tab. 2 Príjmy a výdavky zahraničného cestovného ruchu na obyvateľa krajín V4 v roku 2019

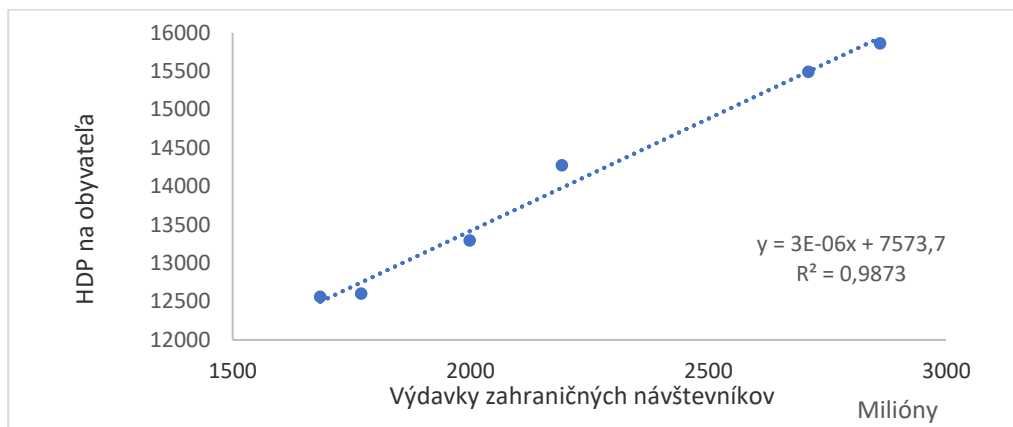
Krajina	Výdavky (v €)	Príjmy (v €)
Slovensko	424,4	524,95
Česko	493,9	612,58
Poľsko	217,4	322,65
Maďarsko	250,9	666,83

Vlastné spracovanie na základe Eurostat, 2020

3.3 Skúmanie vzťahu HDP a medzinárodného cestovného ruchu

Služby cestovného ruchu sú známe tým, že prispievajú k ekonomickému rastu HDP, generovaním nových pracovných miest či stimulovaním podnikateľského prostredia a investícií. Ekonomické impakty cestovného ruchu na hospodársky sektor delíme na priame, nepriame a vyvolané. Predmetom nasledujúcej analýzy bude preskúmať priame účinky a ich vplyv na HDP vyvolaný príjmami z exportu služieb cestovného ruchu. Priame impakty cestovného ruchu na ekonomiku krajiny tvoria príjmy plynúce z ubytovacích, stravovacích, dopravných, zábavných, zdravotných, kultúrnych, športových služieb a služieb cestovných kancelárií (Novacká, 2014). V prípade ekonometrickej analýzy berieme do úvahy HDP na obyvateľa ako závislú premennú a prostredníctvom korelačnej a regresnej analýzy analyzujeme vplyv príjmov z medzinárodného cestovného ruchu, t.j. výdavkov zahraničných prichádzajúcich návštevníkov do krajín V4. Analýza bola vykonaná za 6 pozorovacích rokov v časovom rozmedzí 2008-2019. Aj keď sa zdá byť pozorované časové obdobie krátke, stále poskytuje prehľad o väzbe medzi príjmami z medzinárodného cestovného ruchu a HDP na obyvateľa v jednotlivých krajinách.

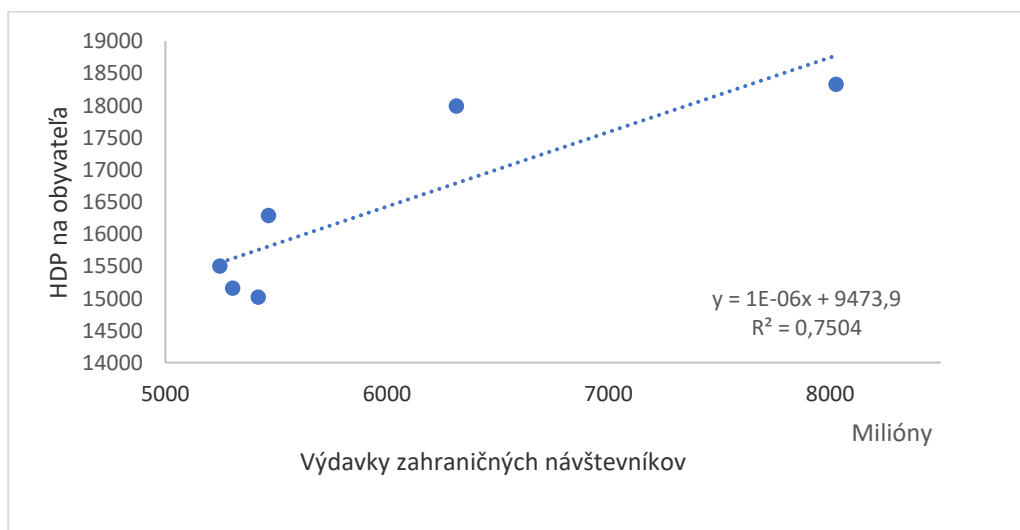
Graf 5 Graf závislosti HDP od príjmov zahraničných turistov na Slovensku



Zdroj: Eurostat, 2020

Z uvedeného pre Slovensko vyplýva, že ide o pozitívnu koreláciu, pretože medzi skúmanými premennými existuje silná väzba. Potvrďuje to aj korelačný koeficient, ktorého hodnota je 0,91.

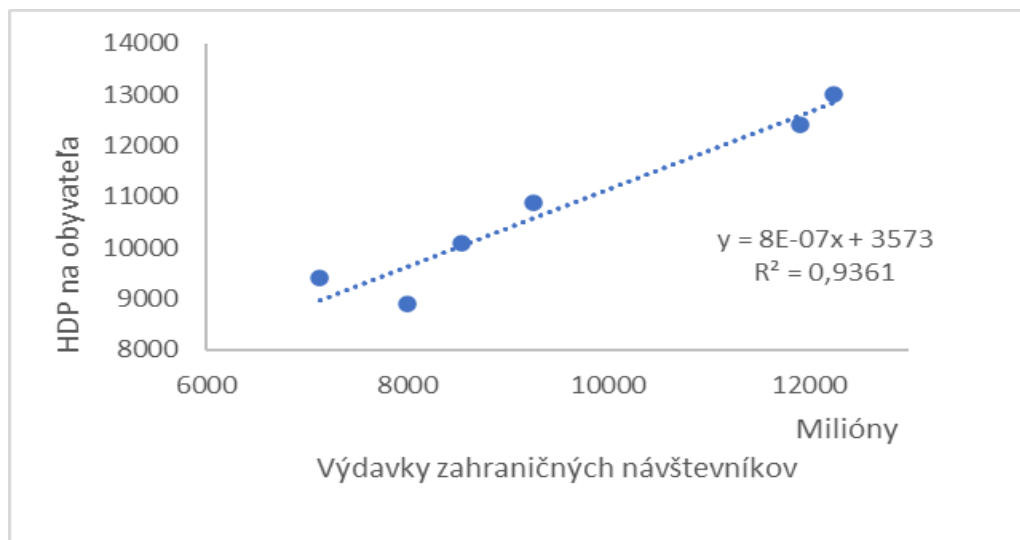
Graf 6 Graf závislosti HDP od príjmov zahraničných turistov v Českej republike



Zdroj: Eurostat, 2020

Graf 6 podobne ako v predchádzajúcom prípade vykazuje pozitívnu väzbu medzi premennými, pričom korelačný koeficient je 0,87.

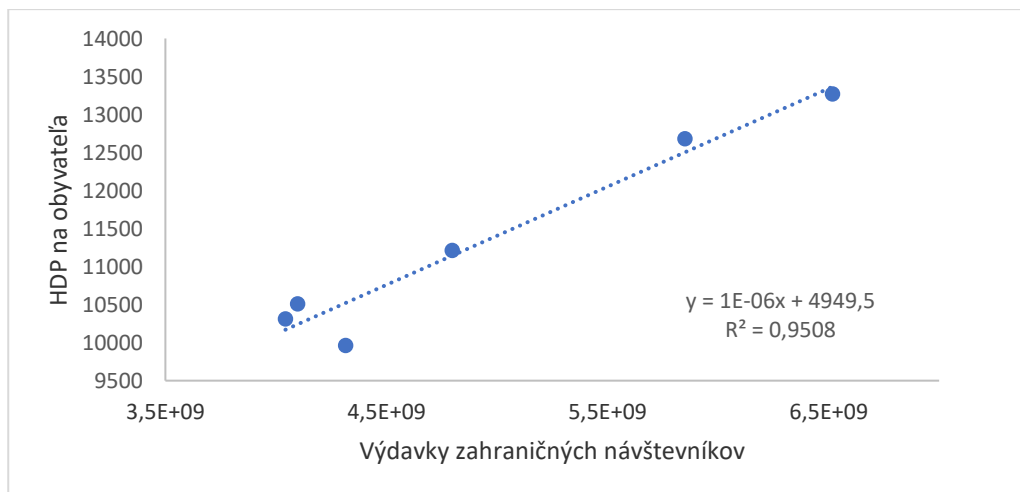
Graf 7 Graf závislosti HDP od príjmov zahraničných turistov v Poľsku



Zdroj: Eurostat, 2020

Z Grafu 7 možno na základe korelačného koeficientu ktorého hodnota v prípade Poľska je 0,97 skonštatovať silnú väzbu medzi skúmanými premennými.

Graf 8 Graf závislosti HDP od príjmov zahraničných turistov v Maďarsku



Zdroj: Eurostat, 2020

Korelačný koeficient Maďarska skúmaných premenných má rovnako ako v prípade Poľska hodnotu 0,97.

Regresná analýza ukazuje, že medzi skúmanými premennými (príjmy medzinárodného cestovného ruchu a HDP na obyvateľa) v krajinách V4 existuje silná väzba. Regresiu sme stanovili na lineárnu funkciu predstavovanú rovnicou y (HDP krajiny), ktorá je zaznačená v jednotlivých grafoch. Všetky korelačné koeficienty potvrdzujú fakt, že v krajinách V4 existuje súvislosť medzi HDP a príjmami z medzinárodného cestovného ruchu. Korelačná analýza ukazuje, že medzi skúmanými premennými existuje silná proporciálna závislosť, čo znamená, že čím vyššie budú výdavky zahraničných prichádzajúcich návštevníkov, tým väčší dopad to bude mať na HDP tej-ktorej krajiny.

Regresné analýzy tiež prešli p testom na hladine $p < 5\%$, takže môžeme odvodiť, že v spojitosti medzi týmito dvomi premennými neexistuje žiaden stupeň randomizácie, a že väzby medzi nimi sú konzistentné. Regresná analýza ukázala, že existuje významná súvislosť medzi medzinárodnými príjmami z cestovného ruchu a HDP v jednotlivých krajinách V4. Na základe zrealizovanej analýzy môžeme zhodnotiť, že príjmy z cestovného ruchu priamo ovplyvňujú rast alebo pokles HDP.

3.4 Analýza ekonomických impaktov cestovného ruchu krajín V4

Predmetom skúmania nasledujúcej časti sú ekonomické impakty krajín V4. Jedným z indikátorov pre toto meranie je práve export návštevníkov prostredníctvom výdavkov zahraničných turistov v týchto krajinách (Novacká, 2014). Tieto výdavky zároveň predstavujú pre krajiny V4 medzinárodné príjmy z cestovného ruchu.

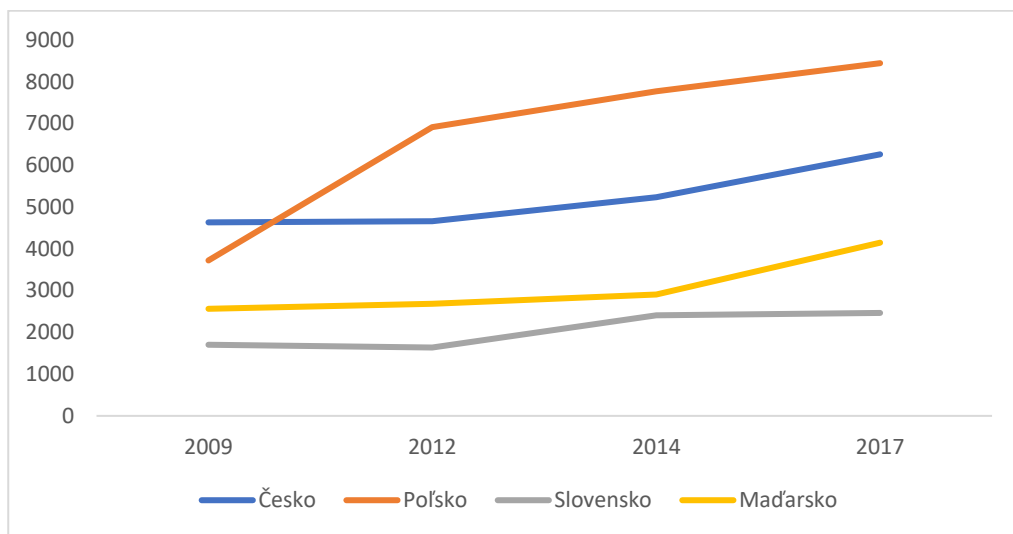
Najrelevantnejším zdrojom informácií v tejto súvislosti je preto satelitný účet cestovného ruchu, ktorý patrí medzi najsystematickejšie nástroje merania ekonomického významu a prínosu cestovného ruchu na národnej úrovni. Z medzinárodného hľadiska je porovnateľným zdrojom informácií harmonizovaný systém satelitných účtov na európskej úrovni. Satelitný účet cestovného ruchu predstavuje špecifický nástroj na meranie makroekonomického vplyvu odvetví. Unikátnosť údajov v satelitnom účte spočíva v tom, že abstrahuje od údajov domáceho cestovného ruchu, ktoré by štatistiku exportu služieb skresľovali, nakoľko domáci cestovný ruch sa do exportu služieb nezaratáva.

Nasledujúce grafy zobrazujú vývoj výdavkov zahraničných návštevníkov, pričom segmentácia spočíva v kvantifikovaní výdavkov jednodňových návštevníkov a viacdňových turistov. Výdavky zahraničných turistov tvoria v modeli platobnej bilancie cestovného ruchu zložku na strane aktív v kategórii príjmy z aktívneho zahraničného cestovného ruchu. Príjmy zahraničného cestovného ruchu sú jednou z najvýznamnejších súčastí neviditeľného exportu (tvoria približne 40% zo služieb).

V porovnaní s ostatnými krajinami EÚ možno označiť výdavky krajín V4 ako priemerné. Z dlhodobého hľadiska prúdi najviac finančných prostriedkov zo služieb cestovného ruchu pri viacdňových turistoch do Španielska, Francúzska, Talianska, Nemecka a Holandska, ktoré spolu tvoria približne 70% celkových výdavkov v EÚ (TSA, 2019). Proces spotrebiteľského správania a mienania peňazí ovplyvňuje veľa determinantov, pričom rozdiely vo výške výdavkov závisia aj od zdrojových trhov daných krajín (Novacká, 2014). Z grafov možno pozorovať, že výška výdavkov sa odlišuje v závislosti od dĺžky pobytu zahraničných návštevníkov. Vo všetkých grafoch zaznamenáva najvyššie hodnoty výdavkov Poľsko v prípade jednodňových a viacdňových turistov.

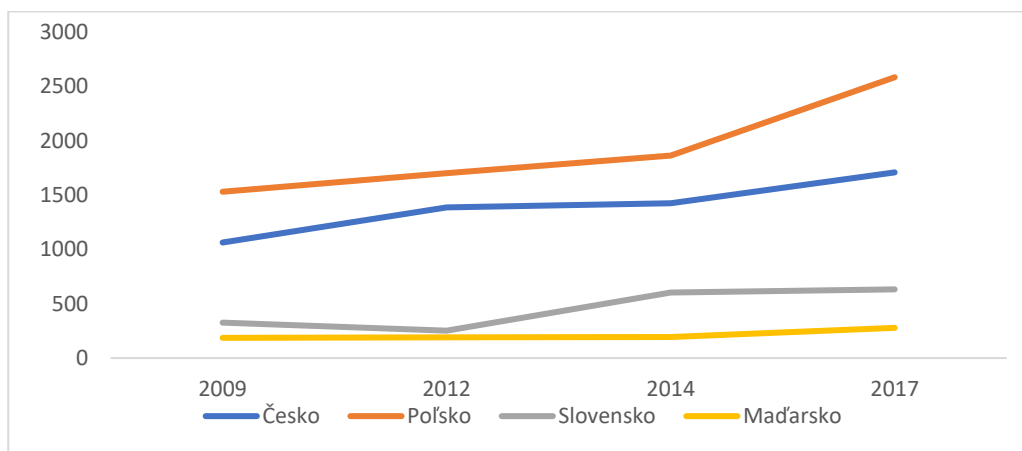
Z hľadiska štruktúry služieb sú najdôležitejšími kategóriami ubytovacie, stravovacie služby a dopravné služby, ktorých podiel na importe a exporte služieb býva najvyšší. Na úrovni členských krajín Európskej únie tvorí export dopravných služieb na celkovom exporte služieb v priemere 17% a export ubytovacích a stravovacích služieb približne 18% (Gáll, Krošláková, 2018).

Graf 9 Vývoj výdavkov jednodňových a viacdňových turistov v krajinách V4 (v mil. €)



Zdroj: Eurostat (2020)

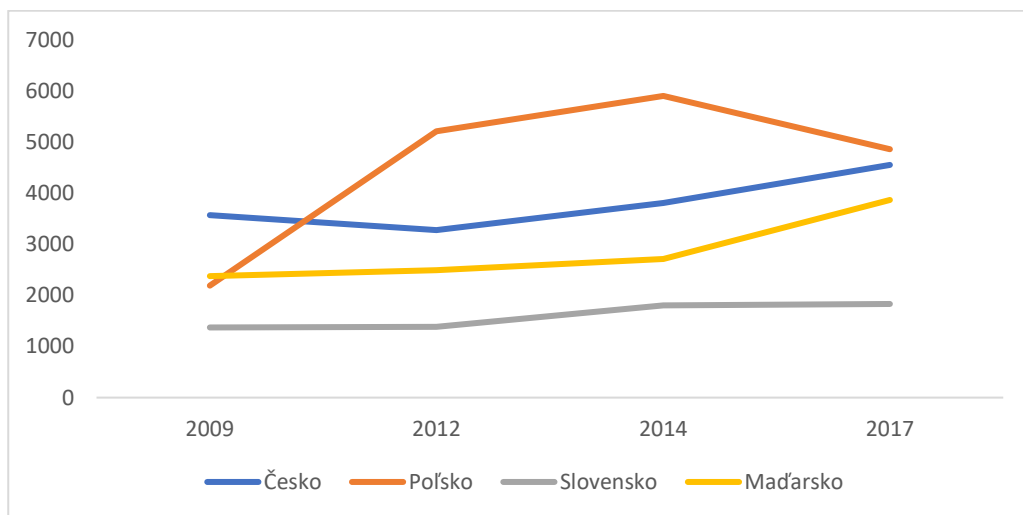
Graf 10 Vývoj výdavkov jednodňových návštevníkov v krajinách V4 (v mil. €)



Zdroj: Eurostat, 2020

Najvyššie počty prenocovaní v ubytovacích zariadeniach zaznamenáva spomedzi krajín V4 dlhodobo Poľsko. Nasleduje Česko, Maďarsko a napokon Slovensko (Eurostat, 2021). V počte prenocovaní možno pozorovať trend medziročného rastu počtu prenocovaní v každej krajine skúmaného obdobia. V roku 2017 bol počet turistov v Poľsku vyšší (67 175 700) ako celkový počet prenocovaní zvyšných krajín dohromady (52 980 312).

Graf 11 Vývoj výdavkov viacdňových návštevníkov v krajinách V4 (v mil. €)



Zdroj: Eurostat, 2020

Najnižšie hodnoty výdavkov zahraničných návštevníkov zaznamenáva Slovensko. V tejto súvislosti je dôležité podotknúť, že kontinuálne zvyšovanie výkonov v cestovnom ruchu oslovením nových trhov a starostlivosťou už o existujúce trhy závisí vo veľkej miere od primeranosti rozpočtu na propagáciu krajiny ako destinácie. V roku 2016 došlo k zrušeniu štátnej agentúry pre cestovný ruch, a tak bolo financovanie marketingových aktivít výrazným spôsobom finančne obmedzené. V Grafe 10 možno pozorovať zmenu v prípade Slovenska, ktoré výnimočne nezastáva posledné umiestnenie spomedzi krajín V4 z aspektu vývoja výdavkov viacdňových návštevníkov. Dôvodom je fakt, že Slovensko spomedzi krajín V4 dlhodobo zaznamenáva najvyšší počet jednodňových návštevníkov. Podiel jednodňových návštev na výdavkoch na cestovný ruch tvorí približne 19% na Slovensku, ale aj v Maďarsku (Eurostat, 2019). Postupné zvyšovanie výdavkov možno pozorovať pre všetky skúmané krajiny po uplynutí finančnej krízy v každej krajine skúmaného regiónu. Na základe výsledkov môžeme zhodnotiť, že napriek tomu, že význam medzinárodného cestovného ruchu skúmaného regiónu je značný, krajiny V4 nepredstavujú turistickú veľmoc Európy. Z dlhodobého hľadiska je úroveň medzinárodných príjmov cestovného ruchu najvyššia v Španielsku, Francúzsku, Taliansku, pričom ide o najobľúbenejšie dovolenkové destinácie pre rezidentov v Európe. Úroveň výdavkov zahraničných turistov dosahuje viac ako 50% medzinárodného obchodu so službami v Chorvátsku (72 %), Španielsku (56 %) a Portugalsku (54 %) (Eurostat, 2018).

Faktom zostáva, že napriek všetkým štatistickým hodnotám, hotelovým a turistickým záznamom a analýzam je nemožné dosiahnuť úplnosť záznamov o účinkoch exportu služieb cestovného ruchu, nakoľko väčšina dostupných databáz abstrahuje od segmentácie návštevníkov na domácich a zahraničných.

Záver

V zrealizovanom výskume sme na základe stanoveného cieľa prišli k viacerým záverom plynúcich s exportom služieb cestovného ruchu.

Jedným z prvých zistení zrealizovanej analýzy je, že zahraničný obchod so službami cestovného ruchu zaznamenal počas uplynulých rokov obrovský vývoj. Tento hospodársky úspech predstavujúci zvyšujúce sa aktívne saldo obchodnej aj platobnej bilancie služieb cestovného ruchu nastalo aj vďaka rastúcej liberalizácii zahraničného obchodu. Ďalší vývoj stredoeurópskeho obchodu so službami cestovného ruchu vrátane exportu závisí predovšetkým od iniciatívy príslušných krajín a silnej konkurencieschopnosti v prostredí cestovného ruchu. Vyžaduje sa zlepšenie kvality poskytovaných služieb, orientácie na medzinárodné trhy a vyššej odbornej kvalifikácie v tomto sektore. V prípade Slovenska je potrebné zvýšiť jeho konkurencieschopnosť a zlepšiť jeho postavenie v rámci krajín V4.

Z pohľadu vývoja obchodnej bilancie, vývozu služieb cestovného ruchu či salda platobnej bilancie a výdavkov zahraničných návštevníkov v krajine dosahuje najnižšie hodnoty Slovensko. Aj keď význam cestovného ruchu medziročne stúpa, čo sa prejavuje v postupnom náraste počtu turistov (s výnimkou roka pandémie), musíme skonštatovať, že potenciál cestovného ruchu Slovenska je nedostatočne využitý. Ekonomika krajiny je známa svojou proexportne orientovanou politikou pre automobilový priemysel. V porovnaní s ostatnými krajinami V4 sú poddimenzované a podfinancované aj marketingové aktivity v tomto odvetví. Pomôcť Slovensku má novozriadená štátna agentúra Slovakia Travel.

Na základe predchádzajúcich štúdií sme sa z makroekonomického hľadiska zaoberali skúmaním korelácie vzťahov viacerých premenných. V prvom rade sme preskúmali vzťah medziročnej miery rastu HDP a medziročného exportu služieb za krajiny V4 ako celku v časovom horizonte desiatich rokov. Zistili sme, že medzi týmito premennými je určitá väzba, ale na slabej úrovni, nakoľko hodnota korelačného koeficientu je 0,3. Príčinou tejto skutočnosti je fakt, že krajiny V4 nie sú európskou veľmocou v cestovnom ruchu. Export služieb cestovného ruchu sa v tomto koncepte rozumie ako zahraničný príjazdový cestovný ruch.

V súvislosti s exportom služieb cestovného ruchu sme skúmali hodnotu príjmov v platobnej bilancii. Napriek dlhodobému aktívnemu saldu, ktoré dosahujú všetky krajiny V4 sa hodnoty príjmov z exportu služieb cestovného ruchu v rámci krajín líšia. Preto sme osobitne skúmali stranu aktív, a to výdavky zahraničných návštevníkov v krajinách V4. Z komparatívneho hľadiska dosahuje najvyššie príjmy z aktívneho zahraničného cestovného ruchu Poľsko. Výška výdavkov je spôsobená rôznymi faktormi, ako sú hlavné zdrojové trhy danej krajiny, počet medzinárodných príchodov turistov či priemerná dĺžka ich pobytu. Pre bližšie skúmanie problematiky príjmov sme sa zamerali na preskúmanie ich vzťahu k výške HDP. Výsledkom bolo, že korelačné koeficienty vo všetkých krajinách

dosiahli vysoké hodnoty, čo znamená, že väzba medzi príjmami zo zahraničného cestovného ruchu a výškou HDP bola silná, a teda zahraničné príjmy zo spotrebovaných služieb cestovného ruchu majú schopnosť priamo ovplyvňovať rast, resp. pokles HDP.

Posledným zistením je, že výdavky zahraničných návštevníkov sú vždy vyššie v prípade viacdňových turistov, ktorí v krajine strávia minimálne jednu noc. Problém bližšej špecifikácie komoditnej štruktúry služieb cestovného ruchu nastáva v tom, že štatistické dáta vo väčšine prípadov abstrahujú od diverzifikácie turistov na medzinárodných a domácich, a preto jediným relevantným zdrojom informácií z ktorého sme vychádzali boli európske turistické štatistické účty, ktoré kvantifikujú výlučne príjmy a výdavky domáчих a zahraničných účastníkov cestovného ruchu.

Spracovaním problematiky sme zistili, že cestovný ruch je odvetvie veľmi citlivé na medzinárodné výkyvy a ľahko ovplyvniteľné globálnymi krízami, čoho dôsledkom je aj finančná kríza v roku 2008, ktorá sa v nasledujúcich rokoch prejavila na zníženej hodnote vývozu služieb v cestovnom ruchu. Tento fakt nám dáva podnet pre ďalšie spracovanie v súvislosti so skúmaním dopadu celosvetovej pandémie koronavírusu na odvetvie služieb cestovného ruchu. Spracovaná téma je vhodná pre ďalšie skúmanie vývoja exportu služieb krajín V4 v nasledujúcich rokoch.³

Zoznam bibliografických odkazov

- CEIC. *Czech Republic Tourism Statistics*, 2019.[online]. Dostupné na: <https://www.ceicdata.com/en/czech-republic/tourism-statistics>
- EUROSTAT. *Tourism satellite accounts in Europe 2016 edition*..[online].Dostupné na: <https://lnk.sk/xiy8>
- EUROSTAT. *Tourism satellite accounts in Europe 2019 edition*.. [online] Dostupné na: <https://lnk.sk/dp59>
- EUROSTAT. *Tourism statistics in the European Statistical System.2008*. [online]. Dostupné na: <https://lnk.sk/bmly>
- EUROSTAT. *Nights spent at tourism accommodation establishments*, 2021.[online]. Dostupné na: <https://lnk.sk/szl2>
- EUROSTAT. *Real GDP per capita.2021*.[online]. Dostupné na: <https://lnk.sk/zxkx>
- EUROSTAT. *Štatistika cestovného ruchu*. 2018. [online].[cit. 28. október 2021].Dostupné na: <https://lnk.sk/dvbe>
- GABRIELE, Alberto. *Export of services and economic growth in developing countries*. [online]. UNCTAD, 2004. [online] Dostupné na: https://unctad.org/system/files/official-document/ditctncdmisc20036_en.pdf
- GÁLL, Jozef. – KROŠLÁKOVÁ, Monika. *Medzinárodný obchod so službami cestovného ruchu v EÚ – historické a súčasné perspektívy*. Zborník príspevkov z konferencie, 2018. [online].[cit. 29. september 2021]. Dostupné na: https://of.euba.sk/www_write/files/veda-vyskum/publikacie/2018-12-16-svoc-2018.pdf#page=85

³ Príspevok je súčasťou projektu Mladých učiteľov, vedeckých pracovníkov a doktorandov s prideleným číslom I-21-101-00

- GREGOVÁ, Elena. – DENGOV, Victor. *The practical economic policy in transition economies of V4 countries at the present stage of globalization*. 2015.[online]. [cit. 15. september 2021]. Dostupné na: <https://lnk.sk/uet0>
- GÚČIK, M. 2011. *Cestovný ruch. Politika a ekonómia*. Banská Bystrica: Univerzita Mateja Bela, Ekonomická fakulta, 2011. 186 s. ISBN 978-80-89090-98-3.
- ITC-UNWTO. *National tourism export strategies*, 2017. Dostupné na: https://www.intracen.org/uploadedFiles/intracenorg/Content/Exporters/Sectors/Service_exports/Trade_in_services/ITC-UNWTO%20National%20Tourism%20Export%20Strategies.pdf
- KNOEMA. *Service Export in Current Prices*. 2020. [online] Dostupné na: <https://lnk.sk/jkw6>
- KNOEMA. *World Development Indicators*, 2021. [online]. [cit. 25. september 2021]. Dostupné na: <https://knoema.com/WBWDI2019Jan/world-development-indicators-wdi>
- LOUNGANI, Prakash a kol. *World Trade in services*. International Monetary Fund, 2017. [online]. Dostupné na: <https://lnk.sk/fanu>
- MATOUSKOVÁ, Eleonóra. *Cyclical fluctuations in the Economics in V4 countries*. The EURASEANs journal on global socio-economic dynamics, 2020. [online]. [cit. 27. september 2021]. Dostupné na: <https://lnk.sk/aisq>
- MILENKOVSKI, Ace a kol. *The impact of the International Tourism receipts on GDP: The case of Republic of Macedonia*. International Journal of Academic Research in Accounting, Finance and Management Sciences, 2016. [online]. [cit. 10. september 2021]. Dostupné na: <https://lnk.sk/pvxu>
- MINISTERSTVO HOSPODÁRSTVA SR. *Priority proexportnej politiky Slovenskej republiky na obdobie 2018 – 2020*. [online]. [cit. 28. september 2021]. Dostupné na: <https://www.mhsr.sk/>
- NOVACKÁ, Ľudmila (2016). *Aktuálne témy cestovného ruchu v stredoeurópskom priestore*. Geografické informácie 20(2) 263-285.
- NOVACKÁ, Ľudmila *Cestovný ruch, technika služieb, delegát a sprievodca*. Bratislava: Ekonóm. 2014. 476 s. ISBN 9788022539487
- NOVACKÁ, Ľudmila. *Visitor export in relation to economic impacts of travel and tourism in the capital Bratislava*. 2014. [online]. Dostupné na: <http://ocs.ef.jcu.cz/index.php/inproforum/INP2014/paper/viewFile/571/470>
- OECD. *Tourism trends and policies 2020. Hungary*. [online]. Dostupné na: <https://www.oecd-ilibrary.org/sites/6b3a24f7-en/index.html?itemId=/content/component/6b3a24f7-en>
- PROHOROV, Anatolijs. *Services Sector Export in Europe*. ResearchGate, 2018. [online]. Dostupné na: <https://bit.ly/3xJ5O5U>
- SOPKOVÁ, Gabriela. *Determinants of economic growth in V4 countries and Romania*. [online]. Journal of competitiveness, 2017. Dostupné na: <https://www.cjournal.cz/files/244.pdf>
- STRÁŽAY, Tomáš. *Možnosti a limity ďalšej „vyšehradizácie Vyšehradu*. Ročenka zahraničnej politiky Slovenskej republiky 2011. [online]. Dostupné na: <https://www.ce-eol.com/search/chapter-detail?id=552638>

- ŠENKOVÁ, Anna. – ŠAMBRONSKÁ, Kristína. *Analýza stavu cestovného ruchu na báze devízových príjmov a devízových výdavkov z činností cestovného ruchu v SR*. In: International Scientific Correspondence Conference, 2015. [online]. Dostupné na: <https://lnk.sk/anps>
- ŠENKOVÁ, Anna. – ŠAMBRONSKÁ, Kristína. *Teoretické východiská merania vplyvu cestovného ruchu na národné hospodárstvo na základe satelitného účtu cestovného ruchu*. Zborník vedeckých prác z katedry ekonómie a ekonomiky, 2011. [online]. Dostupné na: <https://www.pulib.sk/web/kniznica/elpub/dokument/Kotulic21/subor/Senkova.pdf>
- TRADEMAP. *List of exporters for the selected service*. 2021. [online]. Dostupné na: <https://lnk.sk/mnc8>
- UPPENBERG, Kristian. – STRAUSS, Hubert. *Innovation and productivity growth in the EU services sector*. European Investment Bank, 2010. Dostupné na: https://www.eib.org/attachments/efs/efs_innovation_and_productivity_en.pdf
- VUJOVIC, Mirko. *Impact of tourism on balance of payments and gross domestic product*. ResearchGate, 2015. Dostupné na: <https://lnk.sk/bdwb>
- WIRTZ, Jochen a kol. *Global business services: Increasing specialization and Integration of The World Economy as Drivers of Economic Growth*. Journal of Service Management, 2015. [online]. Dostupné na: <https://lnk.sk/srz7>
- THE WORLD BANK. *GDP per capita (constant 2010 US\$)*. 2021. [online]. Dostupné na: <https://data.worldbank.org/indicator/NY.GDP.PCAP.KD>

Institutional provision of economic diplomacy in selected countries¹

Ján Hrisko²

Abstract

In the context of globalization and the high degree of openness of most countries' economies, their prosperity is particularly dependent on their ability to advance their economic interests in the world. Economic diplomacy is adapted to this, dealing with the issues of the activities of state representatives at the bilateral level as well as at the multilateral level. The aim of this paper is to compare the management models of economic diplomacy and to describe the roles, functions and responsibilities of individual actors who are responsible for its performance. We focused on the description of the institutional provision of three models in selected countries, on the example of the Slovak Republic, Canada, the Czech Republic, Uzbekistan, Austria and the United Kingdom. The synthesis of the acquired knowledge and their comparison will evaluate the positive and negative aspects of the three models of economic diplomacy in the world.

Key words

economic diplomacy, foreign trade, management models

JEL Classification: F10, F50

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Introduction

For democratic countries in the current 21st century, military force is no longer a relevant means of achieving their foreign policy goals. However, reducing the risk of using force to advance one's own geopolitical and trade interests does not mean that states stop competing with each other, quite the contrary. In conditions of interdependence and globalized markets, their competition is being transferred more to the economic sphere, and the original military adversaries are becoming more and more economic competitors. Given this, economic diplomacy can be considered one of the key components of the state's foreign policy. Constant changes in the global economic environment of international relations have resulted in a significant economization of international relations, which in turn has the effect on changing the priorities of individual countries' foreign policies. These are moving from the topics of classic diplomacy mainly to the areas of economic diplomacy. There are many reasons to pay attention to the process of international economic decision-making i.e., economic diplomacy. As J. Odell

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emphasized in his book *Negotiating the World Economy* (Odell 2000): "Where power relations are balanced, decision-making and negotiation can determine outcomes." The review of economic decision-making also sheds light on how governments are working to make their policies and economic diplomacy more effective. Economic, commercial or even trade diplomacy does not have a generally accepted uniform and exact definition; even in the long run, the economic aspect of diplomacy itself has not been discussed or given importance. However, the globalization of the world economy has severely affected all areas of economic and social life, and its effects have also had a significant impact on the development and functioning of international relations and foreign trade. It influenced the foreign policy of the states and thus also its executive component i.e., diplomacy itself.

The most significant recent publications on diplomacy (Barston, 2006) and (Berridge, 2015) mention economic diplomacy, although its definition and interpretation vary slightly. On the other hand, there are publications by specialists in trade diplomacy (Bayne-Woolcock, 2004) or (Naray, 2011) and (Ruël, 2012), whose works are supplemented at a high professional level by Slovak and Czech authors such as (Tóth, 2006) and (Štouračová, 2012).

In general, economic diplomacy can be considered as a part of diplomacy as a means to fulfil the aims and objectives of the economic dimension of foreign policy. It is also a tool for implementing the intentions of the foreign dimension of the state's internal economic policy, namely pro-export policy, policy associated with the inflow of foreign investment, investment support programs abroad and, last but not least, support programs for export activities of small and medium-sized companies. According to the OECD, economic diplomacy can be defined as a framework of support and services provided by the state to domestic entities in order to successfully establish itself on the foreign market. (OECD, 2017). In the 21st century, economic diplomacy is being confronted with new challenges, to which states must adapt to its activities. Russian diplomacy expert D.A. Degterev points out that economic diplomacy is currently multi-criteria and multilevel, and suggests that "macroeconomic diplomacy is inextricably linked to microeconomic diplomacy in such a way that the former creates international opportunities and scope for the latter" (D.A. Degterev, 2007). Globalization is forcing economic diplomacy to go deep into domestic decision-making to capture its international implications. It makes economic diplomacy much more complex, brings more problems and more actors.

1 Methodology

The aim of this paper is to compare the models of economic diplomacy management and to describe the roles, functions and responsibilities of individual actors who are responsible for its performance. We focused on the description of the institutional provision of three models in selected countries, on the example of the Slovak Republic, Canada, the Czech Republic, Uzbekistan, Austria and the United Kingdom. To achieve our stated goal, selected research methods were used, namely the method of selection, analysis, induction, deduction and comparison. The paper used mainly secondary sources obtained from the publications of several domestic and foreign authors dealing with the issue of economic diplomacy, as well as information provided by recognized

international institutions. Due to the constant development of the world economy and international relations, in addition to the publications of leading economists, up-to-date Internet sources were used to examine the issue. As the scope of the researched issue is relatively extensive, the relevant information was first selected using the selection method to achieve the goal. In the first part, we described two examples of the functioning of a unified model of economic diplomacy management. The dual model in the second part and the third agency model in the third part. For each of these three models, we have given two examples of countries that apply the given model of economic diplomacy management. We have described in detail the responsible state administration bodies and other agencies that complete their institutional framework of economic diplomacy. The synthesis of these findings evaluates the positive and negative aspects of the compared models.

2 Results and Discussion

Each country, in pursuing its own international and economic interests in the process of development, has begun to apply the institutional model of economic diplomacy management that suits it best in terms of promoting its interests. In general, three specific and basic forms of organizational-competence model of economic diplomacy management are defined, namely:

– unified model

Within this model, all competencies associated with the provision and implementation of economic diplomacy at the government level are managed by one central state administration body, most often the Ministry of Foreign Affairs. Such model is applied in the Slovak Republic, but also in some Scandinavian countries e.g., in Denmark, Sweden, Finland, but also in Italy and Canada.

– dual model

Dual model is often referred to as the competitive model. The competencies of direct execution and management of economic diplomacy at the government level are divided into two state administration bodies, most often between the Ministry of Foreign Affairs and the Ministry of Foreign Trade, or the Ministry of Economy or the Ministry of Industry. Currently, this model is applied e.g., in Czech Republic, Hungary, or India and others.

– shared agency model - third agency model

In the model of a shared or third agency, the competencies of the Ministry of Foreign Affairs remain in the foreign economic agenda at the level of passive monitoring of the situation and, if necessary, foreign representations provide logistics and political support. The agency, most often established on the basis of a law or other decision of an initially authorized state body, covers not only trade diplomatic but also commercial activities through a network of its branches. The shared agency model is used e.g., in Austria, Germany, and Singapore.

2.1 Unified model of economic diplomacy management

Slovak Republic

The Slovak Republic is one of the examples of applying the unitary i.e., unified model of economic diplomacy management. For Slovak highly export oriented economy, good-quality economic diplomacy is extremely important. The organization of the economic diplomacy management has undergone many changes since the establishment of the Slovak Republic. Competencies between the key subjects of Slovak economic diplomacy, the Ministry of Foreign Affairs and the Ministry of Economy, have been repeatedly transferred. The first major change took place in 1997, when the integrated model replaced the dual model i.e., transferring of some competencies from the Ministry of Foreign Affairs to the Ministry of Economy. The Trade and Economic Departments (hereinafter OBEO) fell under the Ministry of Economy, but the political management belonged to the Ministry of Foreign Affairs. At that time, corporate delegates were also sent to OBEO as representatives of companies and delegates of the Foreign Trade Promotion Fund. Due to lack of funds, their activities were terminated. Competences passed to economic diplomats. Another important change occurred in 2011, when the integrated model of economic diplomacy management, which was applied in Slovakia in 1993-1997, was re-established. In the current model, the Ministry of Foreign and European Affairs of the Slovak Republic has a key position in the management of economic diplomats, while the Ministry of Economy of the Slovak Republic also participates in the performance of economic diplomacy, which sets professional criteria for selecting economic diplomats.

Due to the aforementioned transfer of competencies in the management of economic diplomacy in 2012, the most important actors concluded a memorandum of cooperation. This memorandum stipulates that economic diplomacy is part of the main political activity of the embassy, with the head of the mission being responsible for its performance. Professional and personnel management is in the hands of the Ministry of Foreign Affairs, based primarily on the concept of pro-export policy and the inflow of foreign direct investment managed by the Ministry of Economy.³ The priorities, focus and goals of the foreign trade policy of the Slovak Republic are contained in the document entitled Concept of External Economic Relations and Economic Diplomacy of the Slovak Republic. The latest concept, which should apply for the period 2021 - 2030 (hereinafter the "VEV and ED Concept"), is still in the process of preparation with the participation of all key central state administration bodies.

Diplomats representing the Slovak Republic to the WTO, who are financed and managed by the Ministry of Economy of the Slovak Republic, have a special position. Several analysts point to the aspect of covert dual management and consider it to be one of the main problems in the development of Slovak economic diplomacy. It is for this reason that there is a covert battle between the mentioned ministries. The institutional framework of economic diplomacy is a network of 89 foreign missions (of which 64 embassies, 7 missions to international organizations, 8 consulates general, 1 liaison office, 1 Slovak Economic and Cultural Office and 8 Slovak institutes), whose task is to implement the concept of VEV and ED abroad. The number of economic diplomats has

³ Memorandum of Cooperation between the Ministry of Economy of the Slovak Republic and the Ministry of Foreign Affairs of the Slovak Republic in fulfilling the tasks of economic diplomacy in the activities of the foreign service of the Slovak Republic.

been declining since 2011, which only confirms the critical condition of Slovak economic diplomacy. In 2021, the Slovak Republic is represented abroad by almost 40 economic diplomats, if we do not take into account the combined exercise of function with consular and political agenda. In comparison, the Czech Republic has up to 118 economic diplomats abroad, Hungary approximately 140, Denmark 105. Embassies, consulates general and a network of economic diplomats, together with honorary consuls, are also important players in the management system of Slovak economic diplomacy. Complementary actors are the Ministry of Transport and Construction of the Slovak Republic, which is also responsible for tourism promotion, the Ministry of Agriculture and Rural Development of the Slovak Republic, responsible for supporting exports in the agricultural sector and the Ministry of Finance, which is responsible for financial diplomacy. Departmental organizations such as the Slovak Investment and Trade Development Agency (SARIO) and the Slovak Business Agency (SBA), which focus on supporting small and medium-sized enterprises, also play an important role. The role of SARIO is to provide services to Slovak companies and entrepreneurs in order to find suitable markets for their products abroad, and at the same time to help potential foreign investors in Slovakia. Its mission is to accelerate the investment, export and innovative potential of Slovakia with the intention of increasing the country's attractiveness for foreign investors and potential business partners. As complementary actors we also include the Slovak Chamber of Commerce and Industry (SOPK) and EXIMBANKA SR, which are important financial institutions for export support. The inclusion of EXIMBANKA SR among the main actors of ED SR is based on the Strategy of External Economic Relations, which defines EXIMBANKA SR as one of the institutions whose central task is the implementation of the state's pro-export policy. EXIMBANKA SR is an export-credit institution and the only direct state instrument used to support exports. It enables Slovak exporters to enter into trade and investment relations, where the commercial financial sector shows less interest in taking the risk.

Despite the fact that the Slovak Republic is currently applying a unified model of economic diplomacy under the responsibility of the Ministry of Foreign Affairs of the Slovak Republic, there is still competition with the Ministry of Economy of the Slovak Republic. Several analysts point to the aspect of so-called hidden dual management and consider it one of the main problems in the development of Slovak economic diplomacy. Another problem is the undersizing of the number of economic diplomats and the cumulation of their functions with the political or consular agenda. As foreign trade is crucial for the Slovak Republic and its economy, this situation is alarming, all the more so if the activities of economic diplomacy can bring real results and support to domestic companies, which is subsequently reflected in the revenue component of the state. The territorial focus of economic diplomacy is based on export, investment, research and innovation priorities and goals, and last but not least, it must reflect the real possibilities of economic diplomacy to influence the export efforts of Slovak companies.

Canada

As in the case of the Slovak Republic, the Canadian model of economic diplomacy management is unified i.e., an integrated model is applied. The Department of Foreign Affairs, Trade and Development (DFATD) has played a key role, having undergone several structural changes since its inception. It is currently a strong pillar of the Global Affairs Canada (GAC).

As the so-called integrated ministry manages Canadian diplomatic relations, provides consular services to the citizen, promotes the country's international trade, and coordinates international development and humanitarian assistance. It is also responsible for maintaining Canadian government offices abroad with diplomatic and consular status on behalf of all government departments. The GAC includes four ministries, the Ministry of Foreign Affairs, the Ministry of International Trade Diversification, the Ministry of International Development and the Ministry of Tourism, Official Languages and Francophonie. The department has undergone many changes and reorganizations since its foundation in 1909. Originally established as the Ministry of Foreign Affairs, the department was also known as Foreign Affairs, Trade and Development Canada and Foreign Affairs and International Trade Canada. The department's name was subsequently changed in 1993 to the Department of Foreign Affairs and International Trade (DFAIT) formalized by a law of parliament in 1995, about 60 years after Canada gained control of its foreign policy (1931). In December 2003, two separate departments were established, named Foreign Affairs Canada (FAC) and International Trade Canada (ITCan). In early 2006, under Prime Minister Stephen Harper's new government, Foreign Affairs Canada and International Trade Canada were reunited to re-create a single department - Foreign Affairs and International Trade Canada. In 2013, the Act on the implementation of certain provisions of the budget submitted to Parliament proposing other measures was included in the comprehensive draft law on the budget of the Conservative Government. This specifically concerned a section that formed the Canadian International Development Agency by merging it into a department, creating the Department of Foreign Affairs, Trade and Development (DFATD). On November 4, 2015, the new Liberal government of Prime Minister Justin Trudeau changed the name of the ministry again. While the legal name of the department remains the Department of Foreign Affairs, Trade and Development, its public designation under the Federal Program is Global Affairs Canada. (Government of Canada, 2021).

The Department of Foreign Affairs and International Trade continues its agenda under the name of the Department of Foreign Affairs, Trade and Development. Canada's foreign affairs and international trade mandate is to manage Canada's diplomatic and consular relations and to promote the country's international trade. Under Global Affairs Canada, there are several bodies that facilitate Canada's international trade system, including: Trade Controls Bureau, Export Development Canada, Canadian Commercial Corporation, Trade Commissioner Service.

The Trade Controls Bureau is responsible for administering the Export and Import Permits Act. While the economic benefits of free trade are one of Canada's biggest assets, the role of the Trade Controls Bureau is primarily to: regulate trade in military and strategic goods inside and out and prevent the proliferation of weapons of mass destruction, as well as obligations under the bilateral agreement and protection of the vulnerable Canadian industries.

Export Development Canada is a Canadian export credit agency and state-owned enterprise wholly owned by the Canadian government. Its mandate is to promote and develop trade between Canada and other countries and to help Canada compete in the international market. EDC's products and services include trade credit insurance, export financing for Canadian companies and their foreign customers, international market expertise, and information on opportunities in international markets.

The Canadian Commercial Corporation is a Canadian federal crown company tasked with facilitating international trade on behalf of Canadian industry, particularly with foreign governments. The CCC supports the growth of international trade by helping Canadian exporters gain access to foreign government procurement markets. Through a contractual approach between governments and governments, the CCC qualifies Canadian exporters to win international contracts with governments abroad while significantly reducing the risks associated with foreign procurement.

The Trade Commissioner Service (TCS) is part of Global Affairs Canada and has a network of more than 1,000 trade professionals working at Canadian embassies, senior positions and consulates in 161 cities around the world and with offices across Canada. Other organizations that assist Canada's international trade and foreign investment include, for example: the Canada Border Services Agency, Invest in Canada (formerly the Foreign Investment Review Agency), and the Canadian International Tribunal; which is an independent more or less judicial body. Since 2006, economic diplomacy has been a key priority for the Canadian government for economic growth, which underpins everything from domestic immigration and job creation policies to the expansion of duty-free ports and an ambitious trade agenda. The government's Global Markets Action Plan, launched in late 2013, aims to ensure that all diplomatic assets support Canadian business. In this regard, the Canadian government has a very strong representation of institutions and agencies for the successful regulation of international trade in economic diplomacy activities.

2.2 Dual model of economic diplomacy management

Czech Republic

According to the organization of its management system and the implementation of the economic diplomacy, the Czech Republic belongs to the second mentioned group – the dual model. Two key ministries have a decisive and priority role in fulfilling the Czech Republic's economic diplomacy: the Ministry of Foreign Affairs of the Czech Republic and the Ministry of Industry and Trade of the Czech Republic. The definition of their competence in the performance of tasks is regulated by the so-called Competence Act⁴ and the rules of mutual cooperation are regulated by two agreements⁵ between the

⁴ Act no. 2/1969 Collection of Laws of the Czech Republic, on the establishment of ministries and other central state administrative bodies, as amended.

⁵ Agreement on cooperation between the Ministry of Foreign Affairs and the Ministry of Industry and Trade in matters related to foreign trade policy, foreign trade and export promotion in the Czech Republic's foreign service, signed at ministerial level in 1998 and amended in 2000. Agreement between the Ministry of Foreign Affairs and the Ministry of Industry and Trade on the coordination of the activities of subordinate contributory organizations whose actions affect foreign economic activity, signed at ministerial level in 1999.

mentioned ministries, which also include the coordination of the activities of their subordinate contributory organizations engaged in foreign economic activities.

The Ministry of Foreign Affairs of the Czech Republic is the central state administrative body for foreign policy, within which it creates the concept and coordinates external economic relations. Embassies are the main implementation site of all segments of the Ministry's foreign policy. Their key tasks include increased attention to the economic dimension of bilateral relations and the practical implementation of economic diplomacy through the work of economic diplomats.

The Ministry of Industry and Trade of the Czech Republic is the central state administrative body for trade policy in the context of the European Union's single market and pro-export policy. The position of the Ministry of Industry and Trade of the Czech Republic is important in terms of the application of economic diplomacy. It systematically manages economic diplomacy within the framework of the government's pro-export policy measures, and ultimately bears full responsibility for its implementation. The definition of their competence in the performance of tasks regulates both the so-called Competence Act and the rules of mutual cooperation, regulated by two agreements between the mentioned ministries, which also include the coordination of the activities of their subordinate contributory organizations engaged in foreign economic activities. State agencies play an important role in the process of implementing economic diplomacy, not only through their foreign offices, but also thanks to the rich offer of services in the Czech Republic. It is important to mention CzechTrade first. It is a pro-export agency of the Ministry of Industry and Trade of the Czech Republic. It is an important element of the current model of economic diplomacy in the Czech Republic. An important fact is that the agency's operating model creates space for a functional bond between the workplaces of the economic diplomatic service abroad (embassies and their commercial and economic sections) on the one hand and the Czech business and export public on the other. Another is CzechInvest, a state-subsidized organization for business and investment support, and it is subordinated to the Ministry of Industry and Trade of the Czech Republic. CzechInvest strives to ensure that the Czech Republic is perceived abroad as a suitable location for foreign investments. Unlike the CzechTrade agency, the CzechInvest agency is governed directly by law. The contributory organization of the Ministry of Foreign Affairs of the Czech Republic is the Administration of Czech Centers. Its activities are concentrated into four main areas: public diplomacy - culture, education, science, research and innovation, the promotion of external economic relations and tourism and the protection of human rights, the transition to democracy. Currently, there are a total of 26 branches abroad on 3 continents - in addition to the Czech Centers, they also manage the Czech House in Moscow, Jerusalem and Bratislava. Among the financial structures supporting exports in the Czech Republic, it is important to mention the Export Guarantee and Insurance Company (EGAP) in this context. It is a credit insurance company focused on market-insurable political and commercial risks associated with financing the export of goods, services and investments from the Czech Republic. And the Czech Export Bank (CEB), whose mission is to provide financial services related to exports, to support Czech exports regardless of the size of the contract, to build awareness of the Czech Republic in the world, and thus strengthen its competitiveness.

The so-called trade and economic sections (OEU) are established at individual embassies, which represent specialized bodies for foreign trade relations. The institutional framework of economic diplomacy is represented by a network of 109 embassies with a

wide representation of economic diplomats in the number of 118 economic diplomats, 6 agricultural, 3 economic diplomats for scientific and technical cooperation, 1 diplomat for defense cooperation and 59 foreign offices, respectively, representations of integrated agencies CzechTrade and CzechInvest. The number of Czech economic diplomats is thus significantly higher than in the Slovak Republic.

Uzbekistan

To compare the individual models, we have chosen Uzbekistan as another country that also belongs to the dual model through the implementation of the economic diplomacy. The basic institutions governing Uzbekistan's economic diplomacy are the Ministry of Foreign Affairs of the Republic of Uzbekistan and the Ministry of Investment and Foreign Trade of the Republic of Uzbekistan and its subordinate agencies. These include: The Investment Project Development Center, the Export Promotion Agency and the Investment Promotion Agency under the Ministry of Investment and Foreign Trade of the Republic of Uzbekistan. Uzbekistan pursues an open, mutually beneficial and constructive foreign policy based on the country's national interests. Uzbekistan's current foreign policy is taking into account the dynamic changes in the world and the region, as well as the country's extensive reforms.

The Ministry of Foreign Affairs of the Republic of Uzbekistan is part of the system of the Cabinet of Ministers of the Republic of Uzbekistan, which implements the foreign policy of the Republic of Uzbekistan in accordance with the principles established by the Constitution of the Republic of Uzbekistan and international legal norms. The Ministry operates under the direct supervision of the President of the Republic of Uzbekistan. The basic role of the Ministry is to promote the principles of state sovereignty and the actual implementation of the foreign policy of the Republic of Uzbekistan, the protection of state interests and the rights of the citizens of Uzbekistan in relations with foreign countries and international and regional organizations. On the basis of the above-mentioned agenda, the Ministry further develops proposals in matters of foreign policy strategy, protection and promotion of foreign policy interests as well as general issues of Uzbekistan's international activities; coordinates the work of ministries, institutions in the development of international relations with foreign partners and assists in the development of foreign economic relations, establishing and expanding contacts with international financial, economic and other organizations and others.

The Ministry is the relevant state body responsible for the implementation of a unified state investment policy, management of foreign investments, especially direct investments, cooperation with international financial institutions and international financial organizations, as well as the formation and management of a unified state policy in foreign trade and international economic cooperation. The Ministry of Investment and Foreign Trade of the Republic of Uzbekistan performs mainly these main strategic tasks and functions, such as implementing a unified state investment policy, ensuring development management and the effective implementation of state development programs and investment programs, including sectoral and regional investment programs; management of initiatives to attract foreign investment, implementation of effective interaction with international economic and financial institutions, foreign government financial organizations at bilateral and multilateral level or management of activities of public authorities and organizations, permanent representatives of the Republic of Uzbekistan

in international and foreign financial and economic institutions, as well as in cooperation with the Ministry of Foreign Affairs representatives of foreign economic activity in foreign institutions of the Republic of Uzbekistan.

Uzbekistan is open to dialogue and seeks to expand cooperation with all partners in the name of peace, progress and prosperity, based on the following basic principles: sovereign equality of states, non-use of force or threat, inviolability of borders, interference in the internal affairs of other states; fulfillment of international obligations in good faith, respect for and protection of human rights and other generally recognized principles and standards of international law.

2.3 Third agency model

Austria

Austria, like the Slovak Republic, is one of the small pro-export countries, where exports of goods and services account for about 50% of GDP. The management of economic diplomacy in Austria is built on a decentralized basis. The competences of the state in the field of economic diplomacy are largely transferred primarily to government agencies or other non-governmental entities. In the case of Austria's economic diplomacy system, chambers of commerce play an important role. As in the United Kingdom, Austria applies a third agency model that is specific.

The main body responsible for carrying out Austria's economic diplomacy at government level is the Federal Ministry of Economics, the Family and Youth. The government is fully aware of the important role of exports in the Austrian economy, which is why in 2004 it presented a joint initiative of the Federal Ministry of Economics and the Austrian Chamber of Commerce - Go international. It is a strategy designed to support Austria's internationalization. The internationalization offensive supports Austrian exporters and investors, even under difficult conditions of international competition. It does not limit itself to securing existing markets or entirely new markets, but seeks to build on the strengths and weaknesses of the Austrian foreign sector in order to create a sustainable basis for dynamic and globally oriented foreign trade.

The post of Special Representative for Strategic Foreign Trade has been created, who has his own working apparatus at his disposal within the Federal Ministry of Economy. The tasks assigned to this unit include "opening the door" to new markets and deepening emerging contacts, defending and promoting the interests of the Austrian business sector. One of the main tasks of the Special Representative is the concept and creation of the aforementioned "Go international" strategy. The program is organized according to the three basic areas of the country's involvement in international economic relations, namely: export of goods, services and foreign direct investment by foreign entities in Austria and domestic entrepreneurs abroad. The program also includes a system of state co-financing of export and investment projects. The interests of the business community at the national and international level are represented by the Austrian Chamber of Commerce (Wirtschaftskammer Österreich, WKÖ). Within the system of economic diplomacy, this organization functions as a national organization for 9 regional chambers (in each of the federal regions of Austria) and 110 trade associations for various industries. Membership in the chamber is mandatory. Its members are all active

Austrian companies. Although WKÖ is established as a public body, its activities are managed on a commercial basis. An important activity of the WKÖ is the support of the foreign economy. This is provided by the specialized department of the Außenwirtschaft Österreich (AWÖ). AWÖ has created an international network of economic centers around the world and a network of specialized experts in all regional chambers. The WKÖ/AWÖ foreign centers act as trade and economic departments of embassies and consulates, giving them the character of diplomatic and economic bodies.

The so-called third economic diplomacy agency in Austria is the WKÖ/AWÖ, which defines the objectives and is also responsible for their implementation. WKÖ/AWÖ's foreign offices serve as economic departments of embassies and consulates and comprehensively cover Austria's economic diplomacy. In the case of Austria, the Ministry of Economy (BMWFJ) and the Ministry of Foreign Affairs (BMeiA) do not actively participate in economic diplomacy, but provide logistics and political support, namely BMeiA through links to the embassy network. The Austrian Economic Service, the Austrian Development Agency and the Austrian Control Bank also play an important role in the institutional system for managing economic diplomacy in Austria.

The Austrian Economic Service (AWS) is a development bank that helps Austrian entrepreneurs, especially small and medium-sized enterprises. AWS supports companies with its advantageous ERP loans, grants and company guarantees in financing their projects. AWS also provides consulting, know-how or service support and can offer support services from the start of business to international projects.

The Austrian Development Agency (ADA) is the Austrian development cooperation agency and is responsible for the implementation of bilateral programs and projects in partner countries with an estimated budget. The main department of ADA is the department of international programs and projects. Experts at home and abroad are in direct contact with partner countries and ensure a consistent and effective course of Austrian development cooperation.

The Austrian Control Bank (OeKB) is the central body providing financial and information services for foreign trade and the capital market. It provides services for export and foreign investment, such as risk insurance and refinancing of exports and foreign investment. OeKB is owned by several Austrian commercial banks and, as a result, carries out export promotion activities under a mandate agreement on behalf of the state. Both exporters and foreign investors, and thus the Republic of Austria, benefit from its services. It seeks to mitigate risks for exporters and foreign investors, which is why the Austrian Credit Agency ECA has been set up to minimize political and commercial risks for exports.

The model applied in Austria is very specific and unique in Europe. Export support in Austria is much more concerned with the private sector than state institutions.

United Kingdom

A well-developed model of economic diplomacy management with clearly defined competencies and responsibilities is the model of the United Kingdom, which we classify in the third mentioned group, but it also has several elements from the previous dual model.

Export and investment support in the United Kingdom is provided by the organization UK Trade & Investment (UKTI), which reports to two parent ministries, the Foreign and Commonwealth Office (FCO) and the Department for Business, Innovation & Skills (BIS). It is interesting that the staff of UKTI consists only of current employees of the two departments. It is a government professional agency that manages the business and economic divisions of the British embassies. The agency's domestic operations are also covered by the activities of 320 international trade advisers, who provide direct support mainly to small and medium-sized enterprises in 9 English regions. UKTI's main responsibilities include two main sections, namely promotion of export and foreign direct investment inflows. The individual services provided by the agency include product promotion, support in entering foreign markets, support for development in the given market and expansion to other markets in the region. The UKTI section informs headquarters in London regarding the services provided, significant assistance and business opportunities. The results of success in a given country are monitored mainly depending on the criterion of the so-called Business wins. Following the acquisition of a contract with significant UKTI assistance, the client (i.e., the company that actually obtained the brokered contract) is asked to quantify the value it has obtained through cooperation with UKTI. The figures are added up for the UKTI section in each country and the result is compared annually with the commitment made by the section and accepted by the UKTI headquarters. It is a really well-established support mechanism in order to be as effective as possible.

UKTI's activities focus exclusively on energy, infrastructure, retail, financial services and the natural sciences. This professional agency does not operate outside these areas. Other segments are covered by the British Chamber of Commerce, which operates in these countries. The Foreign and Commonwealth Office (FCO) cooperates with the UKTI in the field of economic diplomacy, but presents itself abroad as autonomous. UKTI sections operate in 102 UK embassies with a number of economic representatives.

An important part of the UK's and Northern Ireland's economic diplomacy apparatus and export promotion partner is the Export Credit Guarantee Department (ECGD), an export guarantee and credit agency that provides typical financial services to British exporters and investors. Another important element of the British concept of economic diplomacy is the Department of International Development (DFID). Due to its status as a government agency and establishment, it is the most important element of state development aid, which is part of the concept of economic diplomacy in the United Kingdom, operating in 150 countries around the world.

Conclusion

Each of these three models of institutional provision of economic diplomacy management is unique. The nature and concept of the model is based on the size and nature of the economies of these countries. Each of the models relies on a permanent dialogue with the business community, which is an important aspect and basis for the success of the implementation of economic diplomacy abroad. Based on the observed, we can conclude that the key institution in all observed models is the Ministry of Foreign Affairs. This ministry delegates powers and competencies between other important ministries,

and other governmental and third agencies to support the country's exports, investments, development cooperation and promotion.

In the conditions of the Slovak Republic, return to the integrated model in practice eliminated significant problems that in the conditions of the dual model negatively affected the effectiveness of economic and diplomatic activities of commercial attachés who are directly subordinate to the head of the foreign mission and as a result their scope for autonomous operation vanished. The administrative burden associated with keeping separate accounts has also been removed. We still cannot talk about a perfectly set up model. The problem is the insufficient budget for economic diplomacy and the still low level of expertise of diplomats. Their choice is influenced by political pressure, and their professional readiness to hold the post fade into the background. In practice, we often encounter examples where their function cumulates with the consular or political function. The integrated model seems to be a suitable solution, but this system should be reworked and there should be a clear awareness of the key role of economic diplomacy for the highly open pro-export-oriented economy of the Slovak Republic. Canada also applies a unified model, but its model is far better developed with clear institutional competencies. The basic institution that governs economic diplomacy in Canada is the government institution Global Affairs Canada. The main department of the institution for economic affairs is the Department of Foreign Affairs, Trade and Development. In this regard, the Canadian government has a very strong representation of institutions and agencies for the successful regulation of international trade in economic diplomacy activities.

An important finding is the fact that there is no room for institutionally unclear competence tasks of individual actors of economic diplomacy of a given country abroad in any of the models. And this is the most common problem we have seen. Especially in the currently set conditions of the system in the Czech Republic. We are talking about the so-called dual tracks of Czech economic diplomacy. Despite the existence of the so-called competence act and subsequent agreements between the ministries, there are problems with the institutional provisions. There is a double subordination of economic diplomats who are employees of the Ministry of Foreign Affairs, but professional and methodological management is provided by the Ministry of Industry and Trade. The problem is the asymmetry in the assignment and evaluation of tasks, as well as the disagreement of opinions in defining trade and economic priorities in the activities of embassies, where there are often differing views between the ambassador and the head of commercial and economic sections.

The last model shared, the third agency model, has clearly set competencies, such as rights and obligations for individual actors in the institutional provision of economic diplomacy. Ultimately, a strong government agency provides the necessary processes to support exports and the inflow of foreign investment. In order for this model to work flawlessly, it is necessary to ensure the primary precondition for its functioning, namely the high performance of the government administration, which the aforementioned United Kingdom meets with the given model. This is also the case in Austria. However, the model applied in Austria is very specific and unique in Europe. Export support is much more concerned with the private sector than state institutions. The main pillar is the Go International Initiative, which creates a strong motivation for exports.

References

- ADA. (2021). *Oesterreichische Entwicklungszusammenarbeit: Austrian Development Agency*. Retrieved November 30, 2021 from http://entwicklung.at/oesterreichische_entwicklungszusammenarbeit/akteure/ada/
- AWS. (2021). *Austria Wirtschaftsservice: Über die austria wirtschaftsservice*. Retrieved November 30, 2021 from <http://www.awsg.at/Content.Node/dieaws/46608.php>
- BMWFJ AU. (2021). *Bundesministerium für Wirtschaft Familie und Jugend Internationalisierungsoffensive*. Retrieved November 30, 2021 from <http://bmwfj.gv.at/Aussenwirtschaft/internationalisierungsoffensive/Seiten/default.aspx>.
- EDC. (2021). *About us*. Export Development Canada. Retrieved November 27, 2021 from <https://www.edc.ca/>.
- EXIMBANKA. (2021). *EXIMBANKA SR - profil*. Retrieved November 26, 2021 from https://www.eximbanka.sk/slovenska-verzia/o-nas/profil.html?page_id=149
- CCC. (2021). *Role in Government*. Canadian Commercial Corporation, Retrieved November 27, 2021 from <https://ccc.ca/en/about/our-role>.
- GLOBAL AFFAIRS CANADA. (2021). *About us*. Government of Canada, Retrieved November 26, 2021 from https://www.international.gc.ca/controls-controles/about-a_propos/index.aspx?lang=eng.
- GOV UK. (2021). *UK export - finance*. Retrieved November 30, 2021 from www.ecgd.gov.uk.
- GOVERNMENT OF CANADA. (2021). *How government Works. Government of Canada*. Retrieved November 26, 2021, from <https://canada.ca/en.html>.
- GOVERNMENT OF CANADA. (2021). *Organizational structure: Global Affairs Canada*. Government of Canada. Retrieved November 26, 2021 from <https://www.international.gc.ca/global-affairs-affaires-mondiales/corporate-ministere/organizational-organisationnelle/index.aspx?lang=eng>.
- JUSTICE LAWS WEBSITE. (2021). *Department of Foreign Affairs, Trade and Development Act, S.C. 2013, C. 33, S. 174*. Justice Laws Website. Retrieved November 26, 2021 from <https://laws-lois.justice.gc.ca/eng/acts/f-27.5/fulltext.html>.
- MFA UZ. (2021). *Foreign policy of the Republic of Uzbekistan*. MFA. Retrieved November 28, 2021 from <https://mfa.uz/en/pages/vneshnaya-politika>.
- MFA UZ. (2021). *Tasks, functions and rights of the ministry*. Retrieved November 28, 2021 from <https://mfa.uz/en/pages/about-functions>.
- MH SR. (2021). *Memorandum o spolupráci Ministerstva hospodárstva Slovenskej republiky a Ministerstva zahraničných vecí Slovenskej republiky pri plnení úloh ekonomickej diplomacie v činnosti zahraničnej služby Slovenskej republiky*. Retrieved November 23, 2021 from <http://economy.gov.sk>.
- MIFT UZ. (2021). *Subordinate organizations*. Retrieved November 30, 2021 from <https://mift.uz/en/organizations>.
- MZV ČR. (2008). *Ekonomická diplomacie a proexportní aktivity Ministerstva zahraničních věcí ČR*. Retrieved November 28, 2021 from: <https://www.mzv.cz/file/72946/EkonomickaDimenzeZahranicniPolitiky.pdf>

- MZV ČR. (2016). *Aktuální trendy ekonomické diplomacie ve vybraných zemích EU*. Retrieved November 30, 2021 from https://www.mzv.cz/file/1987915/Aktualni_trendy_ekonomicke_diplomacie_ve_vybranych_zemich_EU.pdf.
- MZVaEZ SR. (2014). *Ekonomická informácie o teritóriu. Rakúska republika*. Retrieved November 30, 2021 from https://export.slovensko.sk/wp-content/uploads/2015/03/Rak%C3%BAsko-Ekonomick%C3%A9-inform%C3%A1cie-o-terit%C3%B3riu_November-2014.pdf.
- ODELL, J.S. (2000). *Negotiating the World Economy*. Ithaca, NY: Cornell University Press.
- OPEN CANADA. (2021). *Economic Diplomacy: Time to get down to business*. Retrieved November 28, 2021 from <https://opencanada.org/economic-diplomacy-time-to-get-down-to-business>.
- PAJTINKA, E. (2007). *Hospodárska diplomacia a jej úloha v 21. storočí*. Retrieved November 30, 2021 from file:///C:/Users/Viera/Downloads/278-Article%20Text-542-1-10-20111115%20(1).pdf.
- PAJTINKA, E. (2007). *Hospodárska diplomacia: Hľadanie efektívneho modelu riadenia, alebo boj o obchodných atašé?* In: Medzinárodná politika.
- SARIO. (2021). *Slovenská agentúra pre rozvoj investícií a obchodu - 20 rokov úspešných príbehov*. Retrieved November 26, 2021 from <https://sario.sk/sk/o-nas/kto-sme>.
- SPCR ČR. (2010). *Systém řízení ekonomické diplomacie v České republice*. Retrieved November 28, 2021 from <https://www.spcr.cz/files/cz/dokumenty/analiza.pdf>.
- ŠŤOURAČOVÁ, Judita. *Proměny ekonomické diplomacie v ČR a ve světě. 1. vyd.* Praha: Professional Publishing, 2012.
- Trade Commissioner Service. (2021) About the Trade Commissioner Service. Government of Canada, Retrieved November 27, 2021 from <https://tradecommissioner.gc.ca/index.aspx?lang=eng>.
- VISITBRITAIN. (2021). *Practical information*. Retrieved November 30, 2021 from <https://www.visitbritain.com/gb/>.
- WKO. (2021). *Wirtschaftskammer Oesterreich: Aussenwirtschaft Austria*. Retrieved November 30, 2021 from <https://wko.at/service/aussenwirtschaft/start.html>

Approaches to the development of EV infrastructure depending on the prediction of the development of electric mobility in the EU

Rastislav Lauko

Abstract

The subject of this article is to better understand the relationship between development of electric vehicle charging infrastructure in connection with development of electric vehicles sales in Europe. Optimal set-up among these two main elements of emerging e-mobility sector has principal effect on currently running policy discussions (targets setting within Revision of Directive on Alternative Fuels Infrastructure Deployment), business models of charging point operator / e-mobility provider as well as further positive perspectives of electric vehicle sales in Europe.

Article summarizes key assumptions of methodology used by ChargeUp Europe (professional association of leading charging point operators) and concludes, that increasing utilization of EV infrastructure assets is not at the centre of methodology assumptions nor conclusions (of main scenario), which might collude with sustainability of charging point / mobility providers business models.

key words

business model of charging point operators, Power / BEV ratio, target setting within AFIR revision

JEL Classification: O33

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Introduction

The relationship between the quantity and quality of the charging infrastructure and the prediction of the development of electric vehicles will fundamentally affect expenditures from public and private funds for further development of the infrastructure, customer experience of electric vehicles, and its subsequent use. All these factors have a major impact on the business framework of charging infrastructure operators / charging service providers.

The identification of approaches in this area within the EU and their critical evaluation, as well as the naming of previous practical experience in the field of electromobility is the subject of this article in order to provide relevant recommendations for the optimal development of the sector in the future.

1 Work methodology

The main goal of this paper is to assess the currently discussed methodologies for the development of charging infrastructure for electric vehicles in order to identify important assumptions for the development of charging infrastructure in terms of its long-term sustainability.

Based on an research of available literature (including studies, articles, publications), the primary methods of document analysis, interpretation, subsequent synthesis and deduction are applied in this article. As part of the methodological approaches, I will analyse selected data sets, while using description and qualitative evaluation.

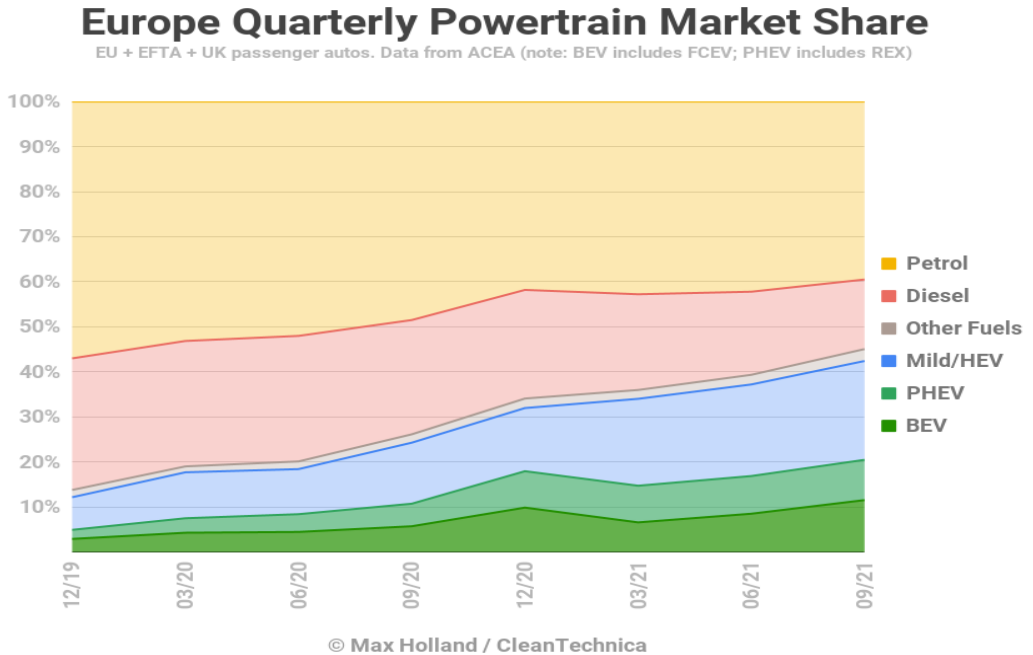
At the same time, quantitative methods have been used in this article, namely a regression model of panel data, which evaluated the relationship between the development of electric vehicle sales (BEV segment) in relation to the development of charging infrastructure (separately assessed against AC and DC) in Central Europe.

2 Results and discussion

2.1 The current state of the electromobility sector

In 2021, the situation in the electromobility sector in Europe was positive, despite the ongoing COVID - 19 pandemic. All relevant car manufacturers are constantly expanding the offer of electrified models, customers started to trust the technology, which is reflected in a decent growth rate of electric vehicle sales. Electromobility in last quarters of 2021 was accelerating significantly on a global scale as well as in the conditions of the European Union. As could be seen in Chart 1 below, different types of electrified drive (BEV - pure electric cars, PHEV - plug-in hybrids, Hybrids and MildHybrids) were gaining trust among customers, while fundamentally replacing traditional types of drives - mostly diesel drive, resp. gasoline powered vehicles.

Graph 1 Quarterly sales of passenger cars in Europe by type of drive



Undoubtedly, there are several reasons for the positive development of electric car sales. It is not the purpose of this article to analyse them in detail. The expanding offer from manufacturers is largely a response to the regulations previously adopted in the area of tightening emission standards.

At the same time, customers' awareness of the impact of passenger transport on environment is increasing. In addition, the price level of electric cars as well as technological progress (for example related to extended range or charging speed) are clearly positively reflected in customer's purchasing decisions.

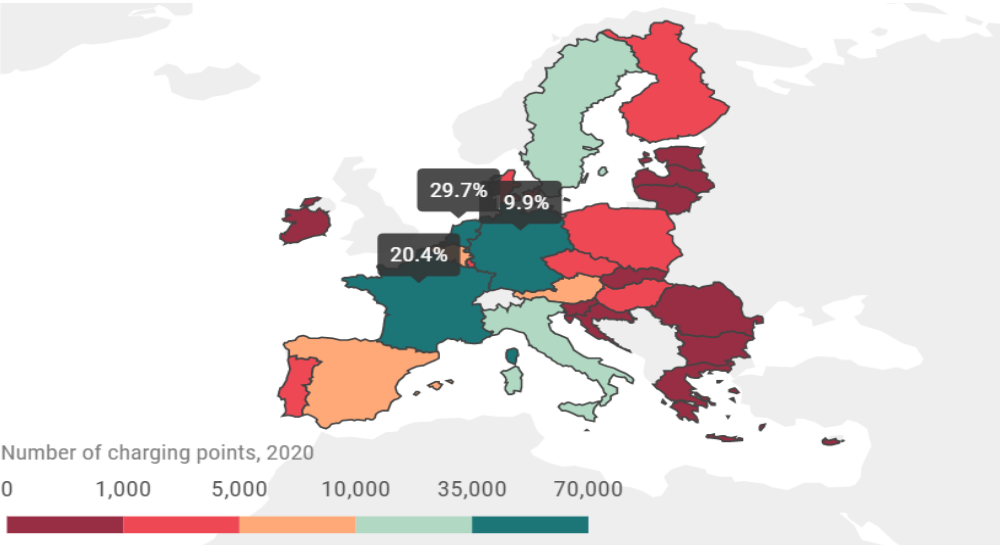
Developments in the sale of electric cars are not homogeneous within the European Union. Electromobility is advancing more strongly in Member States with relatively high GDP compared to Member States with relatively lower GDP. In these Member States, electromobility is still in its infancy. (measured in terms of the share of electric cars in total vehicle sales in a given year).

Among the factors that create the preconditions for the sale of electric cars undoubtedly belong the number and quality (we can understand the term quality from different angles, but above all in relation to the location, availability, price of services, reliability, charging speed, etc.) of the charging points which form the infrastructure for charging electric vehicles. The current numbers of electric cars sold in Europe alone suggest that the infrastructure is built to an extent and quality that does not create barriers to the normal use of electric cars.

Fig. 1 Distribution of charging points within the European Union

Distribution of electric car charging points across the EU

70% of all charging points are located in just 3 countries



Source: ACEA

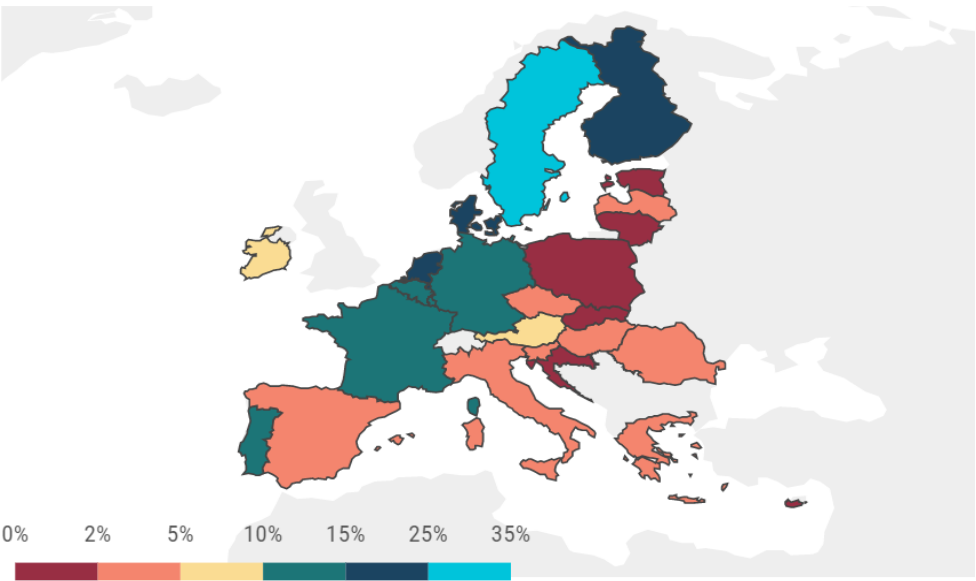
ACEA, the European Automobile Manufacturers Association, has published a study on the relationship between electric vehicle share in individual Member States and the number of charging infrastructures and the uneven location within countries. The main outputs are as follows.

ACEA evaluates that from approx. 250,000 charging points in the European Union, more than 70% are located in only 3 Member States, namely 30% of the total in the Netherlands, a further 20.4% in France and 19.9% in Germany, these 3 Member States occupy only 23% of the territory of the European Union. Romania, which is about six times larger than the Netherlands, has only 493 charging points, which is about 0.2% of the total number of charging points in Europe.

Fig. 2 Market share of electric cars in individual countries

Market share of electrically-chargeable cars

By country, 2020



Created with LocalFocus

Source: ACEA

Sour

Although the presented comparison represents a significant simplification of the relationship between electric vehicle sales and related charging infrastructure, it is quite clear from the above map figures (Figure 1 and Figure 2) that in Member States where electric vehicles have higher market share, there is also significantly more developed infrastructure.

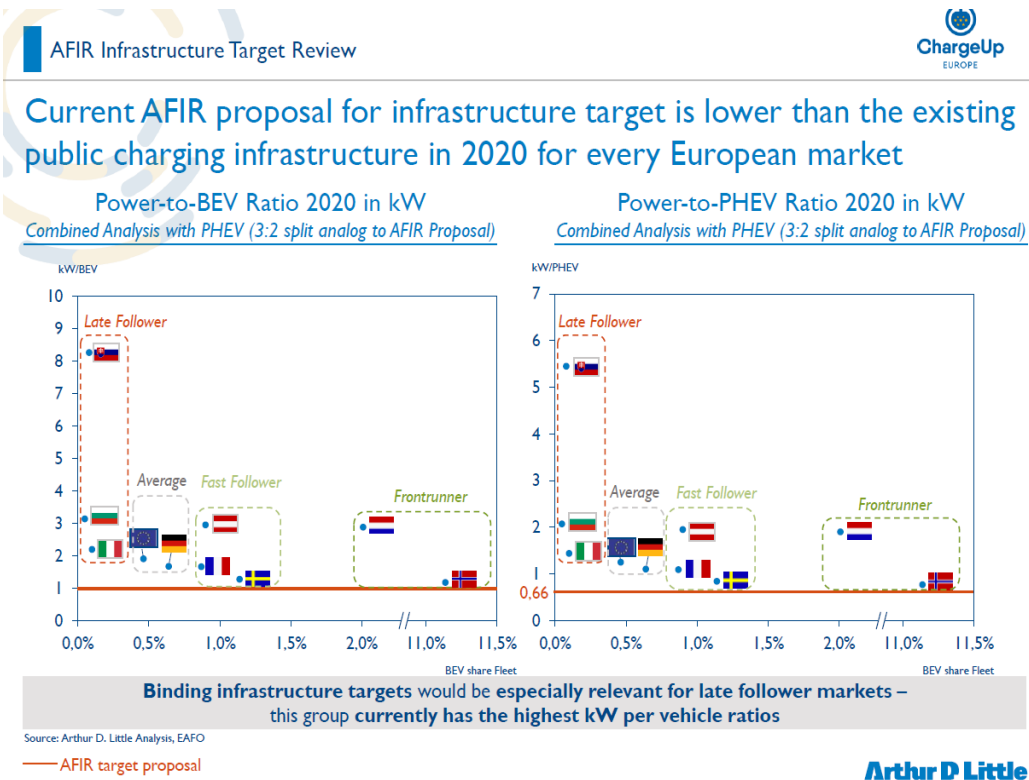
The simplification of ACEA's output is that, for example, the number of charging infrastructures is not evaluated for the size of the country, there is no distinction between different types of charging infrastructure and the output in question equalises AC

chargers with HPC (ultra-fast) chargers, which is in terms of their use (number of charging sessions per day) contrary to their purpose for which they were built.

The fact that this simplified view is more complicated in the real world is also indicated by the examples of Portugal and Finland (see Figure 1 and Figure 2), which have a relatively high market share of electric cars in relation to the European average, as well as a relatively small number of chargers (compared to countries that are European leaders in terms of number of charging points).

As can be seen from Figure 3, an interesting example is Slovakia, which has a very favourable ratio of installed power in the charging infrastructure to the market share of electric cars. In Slovakia, the number of charging stations (moreover, with a high ratio of fast charging stations) is disproportionate (high) to the low number of electric cars and their share in the total fleet taking into account also rather small area of Slovakian territory.

Fig. 3 The ratio of charging infrastructure installed power to the number of electric cars



2.2 Perspectives for electromobility within the EU

The current positive trend in the development of electromobility in the EU and ambitious goals based on the Green Deal, respectively. Fit for 55 and related legislative proposals (primarily the Alternative Fuel Infrastructure Directive (AFIR)) lead to a review of public policies and the setting of new targets for the development of charging infrastructure.

Understanding and correctly estimating the number of charging points divided into public and private chargers, further broken down by charging speed in specific markets in relation to the prediction of electric vehicle sales and plug-in hybrid vehicles is a key prerequisite for the development of electromobility.

The relationship between the quantity and quality of the charging infrastructure and the prediction of the development of electric vehicles will fundamentally affect the investment in the construction of charging stations, the customer experience of electric vehicles users, the use of this charging infrastructure. All these factors have a major impact on the business framework of charging infrastructure operators / charging services providers.

The ratio of: Installed capacity / number of BEVs (pure electric cars), alternatively Installed capacity / number of PHEVs (plug-in hybrids), primarily set for measuring the status of individual markets (national), is used extensively in public discussions on the development of charging infrastructure. comparison, or for the purpose of setting targets.

The ratio of the installed power in the charging infrastructure to the number of electric cars or pug-in hybrids expresses the intensity and at the same time the quality (speed) of the built and operated public charging infrastructure that individual drivers of electrified vehicles can use. The higher the ratio, the more likely it is that drivers can use (charge) their electric vehicle, as they will have sufficient power in the operating charging infrastructure needed to extend the range. The indicator at the same time integrates different charging speeds, which are directly dependent on the installed power and thus takes into account the quality of the charging infrastructure in terms of charging speed. In simplicity, for the purposes of this indicator, it is equivalent to have one 100 kW fast charger or 5 (five) 20 kW slow chargers in a given area.

However, this indicator also has its inherent shortcomings in assessing the adequacy of the charging infrastructure to the number of electrified vehicles. One of the shortcomings is the concurrent charging. Imagine a situation where five electrified vehicles arrive at one charging point with a charging power of 100 kW and at the same time the driver's preference is to start charging their vehicle as quickly as possible, while a charging speed of 20 kW is sufficient for them. As a result, a que of four vehicles will be created. Naturally, in this situation, drivers would prefer the existence of 5 charging points with an output of 20 kW / each charging point, which would result in the simultaneous charging of 5 electric cars.

Another shortcoming of this indicator is the fact, it does not take into account the location of charging points in relation to the needs of electric car users. Similarly, it does

not take into account important aspects that determine the use of the charging infrastructure, such as price, charging authorization, operational reliability of the charging infrastructure, and the like.

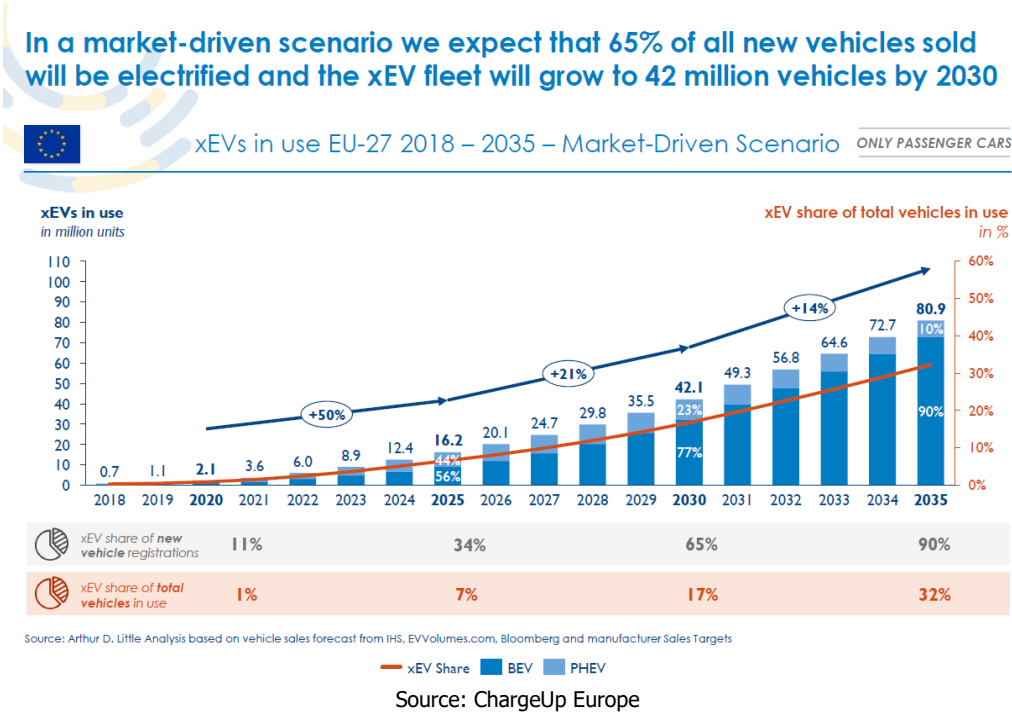
Charge up Europe, which brings together major charging infrastructure operators and charging service providers in collaboration with the consulting company Arthur D Little, has developed a methodology to set new targets for the update of the Alternative Fuels Infrastructure Directive (AFIR). whereas this methodology sets minimum capacity targets for charging infrastructure in Europe by 2030.

The basic logic of this methodology is the assumption that the charging infrastructure for electric vehicles and its future development should be derived from the goals related to the plans for the sale of electric cars on the European market. At the same time, the different charging usecases of electric vehicle users need to be taken into account, with different technologies to be used for these different needs. (AC charging, DC charging (50-150 kW), HPC charging- over 150 kW)

.In line with the already proven solution of the "egg-chicken" dilemma, in which the development of electromobility in general (especially in Europe) recognizes that the construction of infrastructure should be ahead in time, and thus create the preconditions for growth in electric vehicle sales in the period from the present to 2030, the methodology envisages the rapid development of the charging infrastructure by 2025, which will enable the optimal sett-up of the electromobility market in Europe in 2030.

The methodology assumes the following increase in sales of electric cars and their share in the total fleet of passenger cars in Europe, as shown in Figure 4.

Fig. 4 Forecast of electric car sales within the EU until 2035

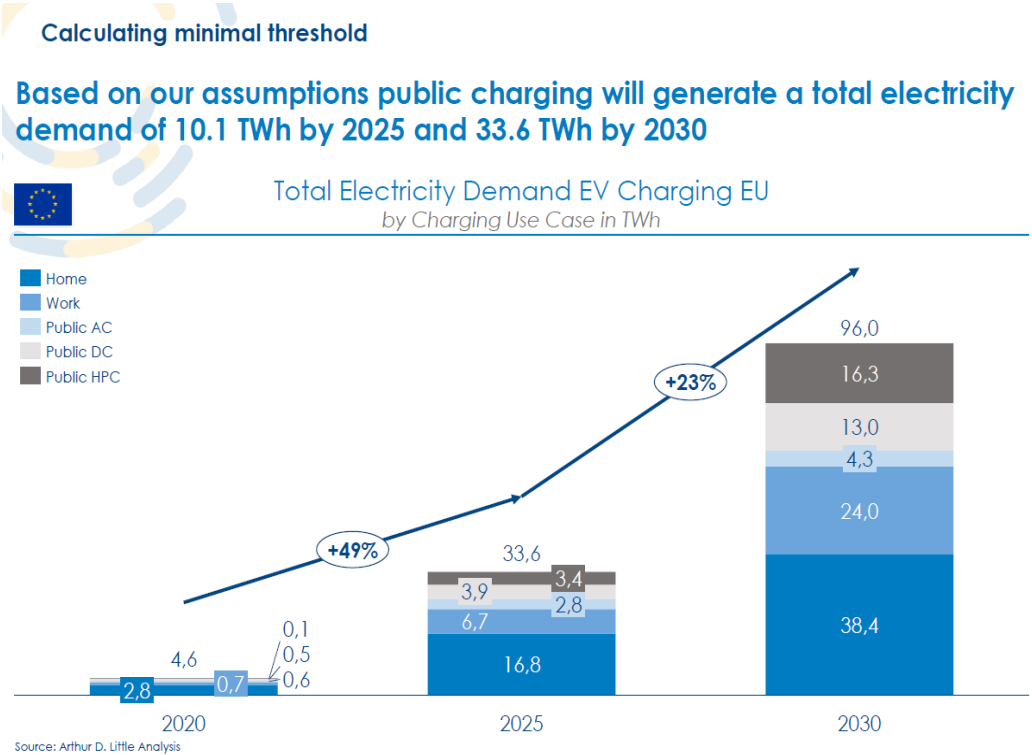


At the same time, the methodology assumes that with the growing share of electric cars in the total population of passenger cars, the number of users living in urban environments will increase and thus their charging will be more dependent on the use of public charging infrastructure, primarily in the fast charging segment (in contrast with users who have access to home charging in their garages or reserved parking spaces in parking garages). Similarly, charging requirements will be increasing in places where electric car users are working.

Another prerequisite for this methodology for calculating the required installed capacity of the charging infrastructure as well as the total amount of electricity used to power electric vehicles is the annual average mileage (15,000 km for BEV and 5,000 km for PHEV), average electricity consumption per 100 km (a declining trend is expected due to the development of technology and more significant use of smaller cars).

The above-mentioned assumptions result in a significant increase of the required installed capacity in the charging infrastructure, which will allow the transmission of the calculated amount of electricity (See figure below)

Fig. 5 Prediction of electricity consumption for charging electric cars within the EU until 2030



Source: ChargeUp Europe

The methodology used by the Charge up Europe association, uses the following assumptions to calculate the need for the number of charging stations.

In the first place, it is based on the assumption of the ratio of charging stations to the number of electric cars (according to different charging speeds), which reflect the current situation (reference to EAFO). At the same time, this methodology models the individual "usecases" of home charging, work charging, public slow charging (AC), public fast charging (DC), and public ultra-fast charging (HPC). In connection with forecasted level of EV sales and resulting need of electric energy needed for their charging this methodology concludes in the main scenario to the required number of charging stations (according to the charging speed). The assumptions regarding the ratios of the number of charging stations to the number of electric vehicles are of an arbitrary nature, the subsequent usability of individual types of charging stations is the result of the calculation.

In this approach, it is important to be aware of the following aspects. The business model of charging infrastructure operators as well as charging service providers is significantly dependent on the use (utilization) of individual charging points. The sustainability of business in this sector is based on the assumption of a growing number of users, which will result in an increase in the use of existing infrastructure with a consistent increase in revenues from already implemented infrastructure investments which enables these subjects to cover fixed expenditures (in terms of financing costs and related operating costs).

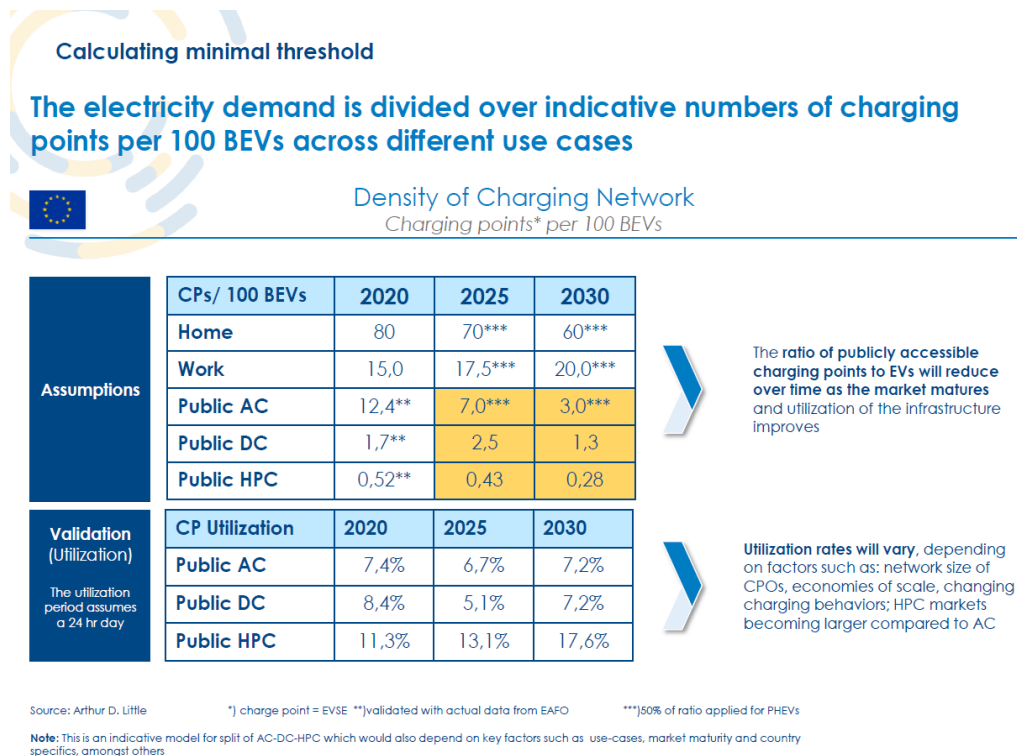
The purpose of this article is not to analyse in detail the economic nature of the charging infrastructure operator's business model, but the key revenue generating factors are evident. Charging infrastructure operators who have "outpaced" the growth of the customer base through their investments in network development (many of them with the participation of European Union funds) sometimes might have the difficulty to cover the operating costs themselves (which are significantly affected by the capacity component of energy distribution tariffs), not to mention the generation of resources for further network development.

If the ratio of charging stations to the number of electric vehicles currently forms the starting position for the next 10 years, it is appropriate / necessary to verify the extent to which these ratios form the basis for an economically sustainable business model.

There is a significant risk that the right decision regarding the "egg chicken" dilemma (infrastructure vs. electric car) will now be evaluated without taking into consideration the sustainability of the economic nature of the business model and only afterwards, when confirming the business model (and knowing an economically justifiable minimum utilisation rates in given conditions) without the impact of subsidies, to use the current ratio of charging infrastructure to electricity as a starting point for the future.

The methodology itself (as shown in Figure 6) predicts an even lower utilization rate of some segments of the charging infrastructure. This is in contrast to the generally accepted expectations of higher assets utilisation rates. It is, of course, possible to achieve higher yields (through increasing unit prices for charging services) even with lower utilization, but this approach would reduce the competitive advantage of the electric car over traditional internal combustion vehicles.

Fig. 6 Prediction of the ratio of the number of charging points to the number of electric cars within the EU by 2030



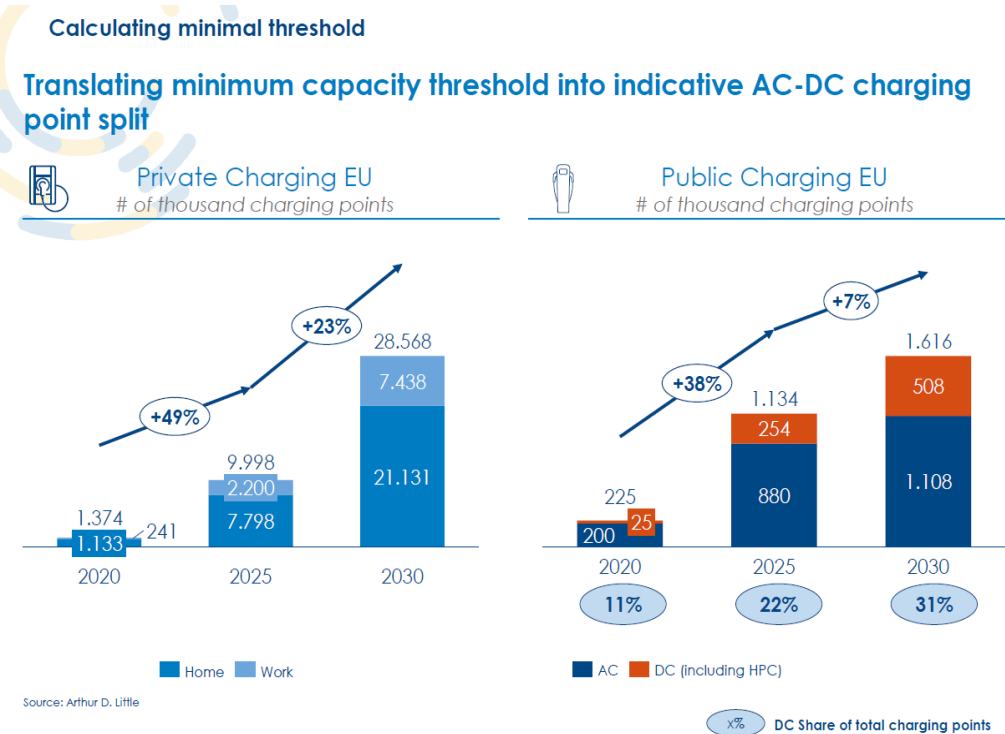
Source: ChargeUp Europe

The result is, in the sense of the assumptions described above, an increase in the number of charging points as pointed out by Figure 7 below.

Understanding and correctly estimating the number of charging points broken down by charging speed in specific markets in relation to the prediction of the development of sales of electric vehicles and plug-in hybrid vehicles is a key prerequisite for the development of electromobility itself.

On the one hand, building public charging points in the AC slow charging segment is significantly easier in terms of the existence of free capacities in the affected part of the distribution systems and ultimately significantly cheaper (in terms of hardware - charging station prices, capacity charges), compared to the public DC and HPC fast charge segment (for the above reasons). This also applies if we compare the equivalent charging power (eg. 7 x AC charging station with power every 22kW versus 1 X 150 kW DC charging station). It is clear that AC charging and DC / HPC fast charging have specific "usecases"

Fig. 7 Prediction of the number of charging points within the EU until 2030



Source: ChargeUp Europe

I have created two models for further research. The first has the ambition to assess the relationship between the historical development of the AC charging infrastructure and the sale of electric cars on the selected market. The second model has the ambition to evaluate the dependence between the historical development of DC charging infrastructure and the sale of electric cars on the selected market in the same time horizon. The selected market is the region of Central Europe, specifically the member States Slovakia, Poland, Hungary and Austria (Table 1).

For the purposes of model creation, I used a regression model of panel data with random effects (REM). Using this model, I have examined, on the basis of historical data (period 2012 - 2021), the dependence between the number of new registered electric vehicles in a given year in a given country and the number of charging infrastructure (broken down into AC chargers- stations with an output of up to 22 kW and a DC charging station with an output of more than 22 kW), which was available to the owners of electric cars on the relevant market in the given period. GRETl software was used for model creation and subsequent quantitative analyses. The dependent variable is BEV - the number of "clean" electric cars, the independent variables are AC and DC charging stations.

The selection of the most suitable model of panel data was realized through panel diagnostics. The random effects model (REM) appears to be a more suitable model in terms of the results of the Hausman test (Chi-square (2) = 1.39823, statistical value = 0.497026).

The resulting estimate of the regression model is as follows:

Model 1: A random effects model using 40 observations

Comprising 4 cross-sectional units (4 countries)

Time series length = 10

Dependent variable: BEV

	Coefficient	Standard deviation	z	p-value
const	714,777	651,187	1,098	0,2724
DC	-0,971081	0,292861	-3,316	0,0009 ***
AC	10,0331	1,35229	7,419	1,18e-013 ***

Based on the results of Durbin Watson (DW) statistics, which is a residue autocorrelation test from statistical regression analysis, as well as on the Woolridge test, I have evaluated partial autocorrelation (positive). At the same time, I have confirmed the occurrence of heteroskedasticity at the level of significance of 5%, as the result of the statistics expressed by the p value in the Bresus-Pagan test is 6.43163e-10

In order to modify the model, I have omitted AC as an independent variable in accordance with original intention, and the modified model demonstrates the following results:

Model 2: A random effects model using 40 observations

Comprising 4 cross-sectional units (4 countries)

Time series length = 10

Dependent variable: BEV

	Coefficient	Standard deviation	z	p-value
const	775,741	845,596	0,9174	0,3589
DC	1,08215	0,144537	7,487	7,05e-014 ***

This model passed the autocorrelation test, while checking the homoskedasticity of the linear model at a significance level of 0.05.

Similarly, I have adjusted the model so that I have used only the AC variable as the independent variable, the resulting statistics are shown below.

Model 3: A random effects model using 40 observations

Comprising 4 cross-sectional units (4 countries)

Time series length = 10

Dependent variable: BEV

	Coefficient	Standard deviation	z	p-value
const	622,829	718,214	0,8672	0,3858
AC	5,77957	0,481243	12,01	3,16e-033 ***

Presented results of Model no. 2 and Model No. 3 show at a level of significance of 5% for independent variables significantly lower values than 0.05, and therefore based on the above I can conclude that for the variables AC and DC in the coefficient β_1 of the linear regression models (in Model 2 and Models 3) are statistically significant.

One simple but principled conclusion follows from the above. The development of sales of electric cars (category BEV) based on the assessment of historical data in the countries of Central Europe is significantly more sensitive to the growth of charging infrastructure in the AC segment (normal charging with alternating current up to 22kW) compared to the increase in charging points in Central European countries in the DC segment (fast DC charging with power greater than 22kW).

Comparing the future needs with the current state of the charging infrastructure is a necessary prerequisite for determining the right number of charging points divided into public and private chargers, further broken down by charging speed in specific markets in relation to the prediction of electric vehicle sales and plug-in hybrid vehicles

The aim of the examination of dependencies within the mentioned models was to verify the assumptions of the development of the charging infrastructure, which has been methodologically used by the Charge-Up Europe association in its recommendations and subsequent possible adjustments of the initial assumptions.

Based on a quantitative assessment and analysis of the current development of the electromobility sector in selected Central European countries, it appears that the Charge - Up for Europe association insufficiently evaluated in its methodological approach the historical dependence between electric vehicle sales and infrastructure development by individual segments (AC) versus DC).

Tab. 1 Number of AC and DC charging infrastructure and number of electric cars in the period 2011 - 2021 in Slovakia, Austria, Poland and Hungary

Slovakia				Austria			
ROK	verejná rýchlonabíjacie stanice (> 22 kW)	verejná normálne nabíjacie stanice (<= 22 kW)	Spolu	ROK	PHEV	BEV	Spolu
2011			0	2011	17		17
2012			0	2012			0
2013			0	2013		13	13
2014	18	32	50	2014	49	69	118
2015	37	62	99	2015	68	123	191
2016	57	255	312	2016		55	55
2017	74	347	421	2017	185	209	394
2018	115	347	462	2018	288	302	590
2019	233	350	583	2019	219	156	375
2020	268	656	924	2020	852	867	1719
2021	624	922	1546	2021	794	692	1486
Austria				Poland			
ROK	verejná rýchlonabíjacie stanice (> 22 kW)	verejná pomalé nabíjacie stanice (<= 22 kW)	Spolu	ROK	PHEV	BEV	Spolu
2011			0	2011		631	631
2012			0	2012	267	427	694
2013	13	1160	1173	2013	184	654	838
2014	66	1327	1393	2014	434	1271	1705
2015	208	1327	1535	2015	1101	1677	2778
2016	263	1644	1907	2016	1237	3826	5063
2017	504	3234	3738	2017	1826	5433	7259
2018	546	3429	3975	2018	1937	6760	8697
2019	594	3742	4336	2019	2108	9231	11339
2020	1347	6885	8232	2020	8037	15578	23615
2021	1957	10930	12887	2021	12843	25705	38548
Poland				Hungary			
ROK	verejná rýchlonabíjacie stanice (> 22 kW)	verejná pomalé nabíjacie stanice (<= 22 kW)	Spolu	ROK	PHEV	BEV	Spolu
2011			0	2011			0
2012			0	2012	12		12
2013		70	70	2013	34		34
2014	3	115	118	2014	105	43	148
2015	8	290	298	2015	176	86	262
2016	32	290	322	2016	132	138	270
2017	113	410	523	2017	514	475	989
2018	281	488	769	2018	667	639	1306
2019	308	579	887	2019	1184	1446	2630
2020	652	1039	1691	2020	4553	3449	8002
2021				2021	7429	4601	12030
Hungary							
ROK	verejná rýchlonabíjacie stanice (> 22 kW)	verejná pomalé nabíjacie stanice (<= 22 kW)	Spolu	ROK	PHEV	BEV	Spolu
2011			0	2011			0
2012			0	2012			0
2013	2	60	62	2013		8	8
2014	3	120	123	2014	24	28	52
2015	22	158	180	2015	58	166	224
2016	37	163	200	2016	109	201	310
2017	54	206	260	2017	389	753	1142
2018	74	508	582	2018	689	1267	1956
2019	124	592	716	2019	1046	1821	2867
2020	287	1008	1295	2020	2043	2854	4897
2021	451	2038	2489	2021	3364	2649	6013

Source: own research

Conclusion

Despite the positive development of electric car sales in the last quarters of 2021 within the EU, there are fundamental regional differences in individual Member States. The current debate on the reassessment of binding targets under the motion of modification of the Directive on the Deployment of Alternative Fuels Infrastructure is the best time to take into account regional differences. It is very necessary that economic pre-conditions for the sustainability of the business models of the key players concerned (e.g. charging infrastructure operators) must also be taken into account. As further subsidies for charging infrastructure development through public funds are expected, it is appropriate to assess whether the current setting of charging stations to electric vehicle ratios (including the setting of the charging station's structure itself) is sustainable in the long run.

The article mentions the weaker points of the methodology that is articulated in the public debate, especially in the area of indicators and assumptions, while the aim is not to identify these points and make them subject to self-serving criticism, but rather

to point out possible consequences that would ultimately affect the entire electromobility sector in a long run.

List of bibliographic references

- ACEA (2021, July 27), *Progres report 2021, Making the transition to zero based mobility*, Available at: https://www.acea.auto/files/ACEA_progress_report_2021.pdf
- AustriaTech (2020, January), *Electromobility in Austria, Facts and Figures, January 2020*, Available at: https://www.austriatech.at/assets/Uploads/Publikationen/PDF-Dateien/68e9ddd74d/Facts_Figures_2020_01_E.pdf
- Hildermeier J.,(2020 September 14) *The expansion of Europe's EV charging infrastructure: new rules and incentives needed*, *energypost.eu: The expansion of Europe's EV charging infrastructure: new rules and incentives needed*, Available at: <https://energypost.eu/the-expansion-of-europes-ev-charging-infrastructure-new-rules-and-incentives-needed/>
- ChargeUp Europe (2021, November), *For Consumers and Climate, ChargeUp Europe's position on AFIR proposal*, Available at: <https://static1.squarespace.com/static/5e4f9d80c0af800afd6a8048/t/6183a691e794dc2c37309d63/1636017810621/For+Consumers+and+Climate+-ChargeUp+Europe+position+on+AFIR+proposal+%281%29.pdf>
- ChargeUp Europe (2021, June 24), *A methodology for minimum capacity targets for EV Charging Infrastructure*, Available at: <https://static1.squarespace.com/static/5e4f9d80c0af800afd6a8048/t/60d42022d01b22d4c24ca42/1624514595669/ChargeUp+Europe+-+methodology+for+minimum+capacity+targets+for+EV+Charging+Infrastructure.pdf>
- ChargeUp Europe (2021, June), *Through binding capacity targets for publicly accessible charging infrastructure and Member state action plans*, Available at: <https://static1.squarespace.com/static/5e4f9d80c0af800afd6a8048/t/60d426dda0462c583a9d0353/1624516320310/Charging+up+Europe+through+binding+capacity+targets+for+publicly+accessible+charging+infrastructure+and+Member+State+action+plans+.pdf>
- European Court of Auditors (2021 April 13), *Infrastructure for charging electric vehicles*, Available at: https://www.eca.europa.eu/Lists/ECADocuments/SR21_05/SR_Electrical_charging_infrastructure_EN.pdf
- Výrost T., Baumöhl E., Lyócsa Š.,(2013) *Quantitative Methods in Economics III.* ,Košice,Slovensko: ELFA
- LUKÁČIKOVÁ, A.,LUKÁČIK, M (2008) .: *Econometric modeling with applications*. Bratislava, Slovensko: ECONOMIST
- Falchetta G., Noussan M.(2021): *Electric vehicle charging network in Europe: An accessibility and deployment trends analysis*, Transportation Research Part D: Transport and Environment, Volume 94, May 2021, 102813, <https://doi.org/10.1016/j.trd.2021.102813>

Possibilities of sponsorship in golf

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Abstract

Sports has not already been for a long time only entertainment but business of many millions. Sports clubs, but athletes themselves want to achieve the best results as much as possible. When they achieve wished success they bring bigger interest of fans and this causes increased interest of sponsors and the final consequence is increased income. Sports institutions are managed like business and to achieve their aims they use similar marketing tools. Sponsorship creates the big part of sports marketing. Well-elaborated sponsorship concentrates on emotions and is able to be well-directed. Rise of awareness of given brand is the biggest contribution. The article brings the base for identification of sponsorship used in golf branch. We do not only focus on golf sponsorship in the world but in Slovakia as well from the point of view of golf institutions, events, but mainly of professional golfers themselves. With the help of regression analysis and we research aspects that influence sponsors in deciding about support of professional golfer. The aim of the publication is to give a definition of sponsorship base in golf branch.

Key words

golf, professional athlete, sponsorship, sports marketing

JEL Classification: C12, C21, M31, M37, Z20

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Introduction

The rearrangement of financial means in companies from classic marketing communication into others, less traditional communication tools is one of trends at present time in the field of marketing communication. The big companies more and more often use the sponsorship which becomes more popular communicative tool. The sponsorship represents one of ways how to support positive perception and image of the society. It is the unique form of service and reciprocal service in interest to achieve marketing intension and goals. Its most frequent display is financing in sports, culture and social activities. Despite that we have been fighting almost for two years with the covid pandemic, the companies have not stopped to invest their money for the sponsorship. Mostly the big multinational companies sponsor sports teams and stars who influence their fans and all nations by their performance.

They chose the most often those most successful ones, but last years when there is an expansion of social networks the companies search among young promising sportsmen as well. If the companies are at the very birth of the next star they build up their image far easier what is the smart solution for a small amount of money. Image and quality are essential factors in sports field. Tiger Woods might be the typical example.

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The excellent golfer, but is he still the best? He was not very successful in his career last years. ¹

In spite of that his incomes are enormous and they are counted in mil. Euros. Therefore he has such lucrative contracts with companies that are willing to pay as much as possible. Thanks to it he has tithes even hundreds another offers that he refuses. The star like him catches fantastic attention. He is the celebrity and also the social celebrity. His popularity guarantees his lifetime at market. The bigger it is the more his value increases – that is image. The power of Tiger is so big that as a matter of fact it is not important which scores he plays in a particular tournament. Sports stars do not only serve to media and sports clubs to gain popularity, but they make those companies which support them more visible. If the companies are strong and they are the same in their business focus, the hard confrontation begins. We can see the textbook example in the relationship between Tittles and Callaway companies. While one of them sponsors golf No.1, the second sponsors No.2. This is the way how companies build their image in the eyes of their consumers. Not only the sports performance of the sportsman, but his / her private life is important for sponsors. Publicly presented drug or sexual affairs of Tiger Woods forced sponsors to threaten with withdrawal from the potential next cooperation with Woods, because it might damage their reputation.

The publication is focused on the analysis of the sponsorship not only of professional golfers but also on the most important golf tournaments and the specific golf institution in Slovakia as well. The aim is to integrate the sponsorship into wider connections within the bounds of tools of marketing communication, identification of sponsorship tools in the world and in Slovak conditions.

1 Methods of the work

The sponsorship presents the significant tool within the bounds of communication mix for provision of increasing in awareness of companies. The main aim of the scientific contribution is to define the use of the sponsorship in sports field in Slovakia and in the world on the basis of comparison from accessible information sources. The subject of the solution is the use of the sponsorship for professional golfers, golf events and institutions. The outcome is the analysis of the current situation and forms of using this cooperation. To achieve the aim we have analyzed sports marketing. By means of abstraction we have been finding information that were published in various literary works to be able to define the main concepts of researched problems. We have realized the analysis by gradual gathering of information, their classification, evaluation and consequent interpretation. We have used synthesis for finding out connections among set aside components, features and their interconnections and follow-up reproduction of researched area. By using the regression model we have identified aspects which influence efficiency of the commercial sponsorship of elite professional golfers. Data for this study were gathered on the basis of PGA statistics. Participants of this research (N = 10) are the best-paid golfers in 2021.

2 Results and discussion

2.1 The sponsorship in sport

The sponsorship in sport already appeared in ancient Greece, when winners of Olympic competitions often got presents, refreshment, lifelong provision within the bounds of municipal state. The sportsman was supported by the entity which did not expect countervalue, it was something like the patron act. At the sponsorship it is always about value and for countervalue, about services for services in return, about the reciprocal profit from both sides. At the end of 80's of the 20th century the term the sports advertisement was used that was gradually replaced with Anglo-Saxon term sponsorship (Dvořáková, 2005). Sponsoring within the bounds of sports environment makes an effective marketing communication tool that is one of the forms in public relations. Companies try to associate their names with the sportsman himself, the club, the tournament and to get into public awareness and strengthen their image (Tajtáková et al., 2016).

Boučková (2003) says, the applicant for the sponsorship can be successful only then if he puts forward to the sponsor his concept about the whole project aim, he introduces personalities connected with the project, compares his project with similar even competing ones, prepares his proposals for advertising and public relations activities and he also determines required amount financial means. Knowing all this the potential sponsor will be able to evaluate easier the presented project from his point of view to spend his money on a reasonable and purposeful thing for fulfilment of given communication goals.

By means of the sports sponsorship according to Durdová (2005), teams, clubs, sports actions institutions, sports sites can be supported, and last but not least the particular sportsman can be supported by the sponsorship too. Individuals can be supported not only financially but with material help as well, or they can get the sportswear or sports facilities. The success of the professional sportsman is then subconsciously transmitted on products he promotes. The top-level sportsman has to achieve an international success in his field and he has to be different in some way from his opponents and his sponsor can identify with him.

Sponsoring of sports team is used from top-level sport to the lowest leagues. The sponsor provides especially finances, sports facilities, accommodation, transport, cars. That who is sponsored offers primarily advertising on his sports dress, advertising by means of contribution in media etc. (Čáslavová, 2009). Sports clubs are sponsored in similar way. In this case the sponsor wants to be connected with social appreciated values and success. The sports club has sportsmen, teams, coaches who organize various sports actions and their sponsors get opportunity to gain publicity.

A lot of sports actions carry the name of their sponsors. For example in golf it is almost in all tournaments PGA and LPGA e.g. QBE Shootout, Sony Open Hawaii, The American Express, AT&T Pebble Beach, Honda Classic and more. Companies gain a lot of advantages, from admissions, VIP areas, playgrounds' names, tickets, advertisements during broadcast. Novotný (2011) claims even though this form is highly demanding, very often in millions dollars, where the sponsor pays for all costs or a big part of costs connected with organizing that event, advertising, the sportsman presence, and it can bring extraordinary awareness of its brand. Sponsors can support even sports

institutions, unions, federations, associations or committees. We know also the sponsoring of sports compounds where the sponsor buys his right to mark his chosen sports compound (Kunz, 2018). It is visible in the golf course not only as a support of whole golf course but especially of its particular holes.

2.2 The sponsorship of the professional sportsman

In a professional sport the core of the product is made by quality of professional players. Athletes are the strong marketing tool to ensure a good attendance of sports events. Famous people have always been excellent sellers. To introduce the known face is one of the fastest and easiest way how the company can create association of its brand in the consumer minds. The theory of the human brand (Thompson, 2006) shows that consumers make their own strong bonds on known people who are attractive, open-minded, authentic and they bring positive marketing results. Personal brands of sportsmen belong among their most valuable assets. (Su, Baker, Doyle& Kunkel, 2020) and the positive associations with brands continue even after the bad sports falls. (Pegoraro & Jinnah, 2012), or after the sports career is finished. Michal Jordan is a good example of that. Sportsmen get stimulus to create strong present of the brand in consumers' minds. One of the omnipresent contexts to build a personal brand are social media.

Stars become famous not because of their extraordinary performance in the playground but because of that fact who they are and how they are perceived by their fans. (Horne, 2006). The more famous celebrity is for the widest part of population the more effective his commercial advertisement will be. We try to create the biggest harmony between the celebrity and the product. It is important to perceive the chosen celebrity in the general public as to be connected with the product which promotes. The better reputation the better is the product accepted among people. Advertising market is wild and it can be very hard to distinguish similar products from each others. It is necessary to find that way so that the product would be excellent in another tidings in advertisements. (Orvis, 2016) If we want to get the right celebrity for our campaign, in our case a golfer, we have to look at him from more points of view. What success has he reached in golf ? We will not be interested only in his sports career, but his private life as well. It is important to pay an attention to all negative affairs, characteristics that are connected with the sportsman. Of course every advertising tiding is better to accept when the sportsman is physically attractive.

The importance of social media in sports business shows how they support mutual actions among sportsmen and their fans. Social media has changed relationship among sportsmen and fans, they have decreased some barriers and have made them closer. (Pegaro, 2010). Sportsmen use social media to share their private lives, developing contacts with fans, obtaining sponsors and advertising (Geurin, 2017). Except for that social media are not used as a platform for sportsmen to be able to present their image but they also allow fans to communicate, comment and to be in touch with sportsmen. (Geurin-Eagleman&Burch, 2016). As for efficiency of contributions in social media consumers appreciate authenticity, and they are interested in a real, genuine sportsman personality (Frederik & Clavio, 2015, p.340).

2.3 The sponsorship of a professional golfer

The personality of a sportsman becomes an administrator of quality and success in a current product or society. To chose the right sportsman for a promotion of the company is a very demanding decision because the company has to be mindful of the sportsman worth, we can connect with the sportsman. The companies have to solve the question what sportsman to chose, if the starting star or well-time proved successful one. Tiger Woods who is the best-earned golfer in 2020 with 62,2 mil. dollars is always a good choice. The operation on his spine and devastating car-accident in February restricted him only in seven tournaments and financial payment was only 191 000 dollars. In spite of that Woods continues to be a champion because brand keep fighting for him. He has got in his portfolio Nike, Taylor Made, Hero Motor Corp, Bridgestone and another dozen brands. Since then he became a professional golfer he has earned on promotion more than 1,5 billion dollars and in prize money from PGA Tour only 121 mil. dollars. At the beginning of 2021 he signed a lasting several years pact with franchise 2K company Take – Two Interactive Software for his golf video-game. Before he had been a face of gaming franchise PGA Tour of company Electronic Arts in 1998-2013. At the end of the last year he extended the contract with Monster Energy (Badenhausen, 2021).

We have identified determinants that have influenced sponsors of the professional golfer in the regression linear analysis. (chart 1). We chose top 10 PGA golfers who are the best-paid sportsmen in their fields in 2021 . By the method of the smallest squares we researched the influence of the age and the number of years in a professional career. (chart 4), the number of followers on Facebook and Instagram (chart 5), career victories (chart 3), victories in the highest competitions of series Major (chart 2) on dependent variable value of sponsor contributions that is possible to find in the chart 1. Because we chose only 10 golfers we made the analysis individually to prove the statistical significance in particular cases.

Chart 1 The influence of individual factors on sponsor contributions in 2021

Name	Age	PGA (y.)	Facebook follow.	Insta. follow.	Career wins	Major wins	Sponsor 2021
<i>TigerWoods</i>	45	25	3 224 614	2 700 000	82	15	62 000 000
<i>Phil Mickelson</i>	51	29	76 283	1 200 000	45	6	42 000 000
<i>Dustin Johnson</i>	37	14	314 456	1 200 000	24	2	16 000 000
<i>Rory McIlroy</i>	32	14	1 367 118	2 200 000	20	4	28 000 000
<i>Jordan Spieth</i>	28	9	589 129	1 600 000	12	3	25 000 000
<i>Justin Thomas</i>	28	8	5 000	1 200 000	14	1	7 000 000

<i>Bryson</i>							
<i>DeChambeau</i>	28	5	111 198	811 000	8	1	9 000 000
<i>Xander Schauffele</i>	28	6	2 509	253 000	4	0	7 000 000
<i>John Rahm</i>	26	5	99 864	427 000	6	1	6 000 000
<i>Hideki Matsuyama</i>	29	8	0	78 300	7	1	10 000 000

Source: the own chart

Chart 2 The influence of factor of Major tournaments on sponsor contributions

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	<i>Confidence interval</i>
const	7,62668	2,27111	3,358	0,0100	(2,38948, 12,8639)
Major wins	3,99215	0,418856	9,531	1,21e-05	(3,02627, 4,95804)
Mean dependent var		21,20000	S.D. dependent var		18,54005
Sum squared resid		250,3890	S.E. of regression		5,594518
R-squared		0,919062	Adjusted R-squared		0,908945
F(1, 8)		90,84140	P-value(F)		0,000012
t(8, 0,025)		2,306			

Source: the own chart

$$\hat{y}_i = 7,62668 + 3,99215x_i \quad (1)$$

Provided on the understanding that the professional golfer does not win either one Major tournament he obtains on the average 7,6 mil. dollars on sponsor contributions. When there is one more victory in Major tournament total sponsor contributions increase on the average almost about 4 mil. dollars. The creation of the prognosis : If the professional golfer wins 5 Major tournaments , estimated total sponsor contributions will be 27,58 million. If he won 10 tournaments estimated sponsor incomes from sponsoring would be 47,53 mil. dollars.

$$P\{3,02627 \leq \beta_1 \leq 4,95804\} = 0,95 \quad (2)$$

Confidence interval : In 95 % cases of 100 after increase in Major victories about 1, sponsor contributions increase about more than 3 mil. dollars and less than 4,96 mil. dollars.

$$H_0: \beta_1 = 0 \quad (3)$$

$$H_1: \beta_1 \neq 0 \quad (4)$$

$$9,531 > 2,306 \quad (5)$$

Because the inequality applies, we reject the zero hypothesis, the regression coefficient is statistically significant - the number of Major victories influence the height of sponsor contributions of the professional golfers.

$$H_0: \beta_1 = 2,5 \quad (6)$$

$$H_0: \beta_1 \neq 2,5 \quad (7)$$

$$\left| \frac{3,99215 - 2,5}{0,418856} \right| > 2,306 \rightarrow 3,56244 > 2,306 \quad (8)$$

We reject zero hypothesis H_0 , that with the increase in the victory of Major tournament about 1, the total sponsor contributions rise about 2,5 mil. dollars. By the regression model with the independent change the number of victories of Major tournaments, we can explain 91,91 % of variability of total sponsor contributions. The rest 8,09 % of variability of total contributions are caused by factors that are not put into the regression model and accidental influencers.

Chart 3 The influence of the career victory on sponsor contributions in 2021

	<i>Coefficient</i>	<i>p-value</i>	<i>Confidence interval</i>
Variable const	5,22250	0,1089	(-1,45352, 11,8985)
Career wins	0,719707	4,56e-05	(0,510980, 0,928435)

Source: the own chart

$$\hat{y}_i = 5,22250 + 0,719707x_i \quad (9)$$

Provided that the professional golfer does not win either one tournament, he obtains on the average 5,2 mil. dollars on sponsor contributions. When he wins one more in the tournament total sponsor contributions rise on the average almost about 719, 7 thousand dollars. The creation of the prognosis: If the professional player wins 5 classic tournaments, estimated total sponsor contributions will be 8,82 million. If he won 10 tournaments, estimated total sponsor contributions would be 12,42 mil. dollars from sponsoring. In 95 % cases of 100 after increase in Major victories about 1, sponsor contributions rise more than about 511 thousand dollars and less than 928 thousand dollars.

$$H_0: \beta_1 = 0 \quad (10)$$

$$H_1: \beta_1 \neq 0 \quad (11)$$

$$7,951 > 2,306 \quad (12)$$

Because the inequality applies, we reject the zero hypothesis, the regression coefficient is statistically significant - the number of victories influences height of sponsor contributions of professional golfers.

$$H_0: \beta_1 = 0,5 \quad (13)$$

$$H_0: \beta_1 \neq 0,5 \quad (14)$$

$$\left| \frac{0,719707 - 0,5}{0,0905148} \right| > 2,306 \rightarrow 2,427 > 2,306 \quad (15)$$

We reject the zero hypothesis H_0 that with increasing of the victory in the tournament about 1 total sponsor contributions will rise about 500 thousands dollars. By the regression model with the independent change the number of victories in classic tournaments we can explain 88,78 % of variability of total sponsor contributions. The rest 11,22 % of variability of total sponsor contributions are caused by factors that are not put into the regression model and accidental influences.

Chart 4 The influence of the age factor and the length of the professional career on sponsor contributions

	<i>Coefficient</i>	<i>p-value</i>
Const	54,5450	0,1550
Professionals year	4,65631	0,0240
Age	-2,72944	0,1340

R-squared	0,854361	P-value (F)	0,001179
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Source: the own chart

$$\hat{y}_i = 54,5450 + 4,65631r_1 - 2,72944v_1 \quad (16)$$

Provided that the professional golfer is 30 and his professional career is 10 years, his sponsor contributions would be 19,22 mil. dollars.

$$H_0: \text{model is not statistically significant} \quad (17)$$

$$H_1: \text{model is statistically significant} \quad (18)$$

Authentication of statistical significance of the model as a whole, where p-value is 0,001179 that is smaller than 0,05, it means that the regression model is statistically important. By the regression model with the independent change of the golfer's age and the number of years of his professional career, we can explain 85,44 % of variability in total sponsor contributions. The rest 14,56 % of variability of total sponsor contributions are caused by factors that are not put into the regression model and accidental influences.

Chart 5 The influence of the factor of followers on social networks and sponsor contributions

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>
Follow. Facebook	-0,000185240	0,000206657	-0,8964	0,3998
Follow. Insta-gram	-0,000185173	0,000263574	-0,7025	0,5050
P-value (F)				0,581808

Source: the own chart

We evaluate the influence of followers on Facebook and Instagram on sponsor contributions.

$$H_0: \text{model is not statistically significant} \quad (19)$$

$$H_1: \text{model is statistically significant} \quad (20)$$

The authentication of the statistical importance of the model as a whole, at p-value 0,58 that is not smaller than 0,05, it means, that the regression model is statistically insignificant. That fact how many followers the golfer has on social networks is not statistically important.

2.4 The sponsorship in a golf field

Golf belongs to 10 sports in the world with the highest number of players and therefore it attracts the sponsor support. It is inevitable for companies to increase the value of their brand at a suitable sponsorship at the most suitable sports event. The choice of the right event creates the way to get a better attitude to the target audience. (Shani& Sandler, 2006). It is important to understand a broad range of marketing initiative that are connected with sponsoring. Merchants should make every effort to create the relationship with sports event which is attached to firms by sponsored sport. The organizers of specialized sports events should realize that sponsoring at their events can be devaluated. (Miloch & Lambert, 2006) . For example for the furniture-making firm is hard to have a profit from sport. Vice versa, car-maker that makes the important value to speed and technology can create the positive image in the relation towards to the furniture-making firm. Therefore the positive changes in a firm value can be add in a good harmony between the sports event and sponsoring.

The name of the general sponsor in a tournament is held during the whole season within the highest series of PGA golf events. We can find here such names of car-industry companies – BMW, Honda but agriculture machinery John Deer as well. IT companies as AT&T, Sony, Dell are generally big supporters and various companies from the financial field RSM, American Express, Farmer Insurance, RBC, Wells Fargo, Charles Schwab. The one of the biggest sponsor within PGA tour is a corporation FedEx and the ranking of the best golfers in the world holds its name. In Slovakia there is a different situation. The only one professional golf tournament exists at present in Slovakia - called Slovak championship open, where IT sector companies , banking and insurance sectors, but also smaller local enterprises are involved. Golf in Slovakia still is not popular enough to attract companies with high sponsor contributions. For instance in the USA the general sponsor has to pay several mil. dollars so that the tournament could have his name. Within Slovak championship open the general partner has to pay 10 000EUR. The partnership at this tournament begins from 1350 EUR when the company gets the logo in the partner chart, branding on TV Golf channel, branding on the tee, the playing position in PRO – Am and the logo in Golf magazine.

Sponsoring in golf last but not least makes the sponsorship of sports compound. The sponsor buys on the golf course the right for marking the whole sports compound or his hole on the 18-hole course. Only two golf courses in Slovakia have the names of the general partner. The Sedin golf resort has the name of insurance stockbroking company Granden and The golf resort Skalica has the name of industry processing Grafobal. We can see mostly sponsoring of the hole itself in Slovakia and it is on the average 5000 EUR per year. The company ensures that way advertising space on the billboard on the course, the logo in the score card, tee marking with the company name but also hospitality programme including social events for partners, VIP car-parking but also enlarged golf service.

National or regional golf institutions can also gain support from companies. On the territory of The Slovak Republic there is The Slovak golf association active which is supported by companies. It is interesting to know that this association has not had the general partner yet. Its main partners are Radio and TV of Slovakia and worldwide network of consulting companies that provide service in the field of audit, tax and consulting KPMG. The media partner is The golf report magazine. The another partners

are Lucka, O2 business services, Gordana - glass, The national sports center, Ecofis and the golf booking system TeeTime.

Conclusion

Golf offers for sponsors the extremely attractive demographic group. Companies connect their names with the professional golfer, the golf institution and the golf compound. When they make the right choice of golfer the company analysis his significance, relevance, reputation and his difference. At the end of the company decision the company will decide if the personality of the professional golfer can be the holder of their message.

We used the regression analysis in our research at identification of determinants that influence sponsors of top 10 PGA players who are the best-paid golfers in 2021. Because we watched only a small amount of players we had to find the influence of the age and the number of years in the professional career, the number of followers on Facebook and Instagram, career victories, victories in the highest competitions of series Major individually. The influence of Major victories became the most relevant factor which has an influence on sponsors in the highest rate. The regression model coefficient of the value 0,000012 is statistically important. By the regression model we can explain 91,91 % of variability of total sponsor contributions. The formulation of the hypothesis of the number in victories on the amount of sponsor contributions with p-value 0, 000046 is statistically important. By the regression model with the independent change the number of victories in classic tournaments, we can explain 88,78 % of variability of total sponsor contributions. By checking out of statistic importance of the model as a whole with p-value 0, 001179 we confirmed statistic importance of the influence of the golfer age and his number of years in his professional career. By the regression model with the independent change of the age and the number of his professional career we can explain 85,44% of variability of total sponsor contributions. At p-value 0,58 we proved that the regression model is statistically not important on sponsor contributions at the influence of followers on social networks.

The value of company can increase in a good harmony between the sports event and sponsoring. Within the highest series of PGA tour a lot of tournaments have the name of the general sponsor. We can find here the names of car-industry, IT companies, financial corporations or the biggest transport company. Because golf is still not sufficiently popular in Slovakia to attract firms or companies with high sponsor contributions, especially strong companies of IT sector, banking and insurance industry to support it.

The sports compounds have gained the support of companies as well. The sponsor buys the right to mark the whole of the sports compound, or the particular hole. Only two golf courses have the name of the general sponsor in Slovakia. The support of the particular hole is more popular. Last but not least the sponsor can be connected with socially appreciated value and with success of the golf association of international or regional importance. On the one hand all these mentioned attributes develop sports field of golf, on the other hand increase the value of the firm or the company that supports it. Therefore we consider this form of marketing communication one of the most effective.

Bibliography

- Badenhausen, K. (2021). *Highest-paid golfers 2021: sponsors drive woods, mickelson and mcilroy*. Retrieved December 8, 2021, from <https://www.sportico.com/personalities/athletes/2021/highest-paid-golfers-2021-sponsors-woods-mickelson-mcilroy-1234632139/>
- Boučková, J. a kol. (2003). *Marketing*. Praha : C. H. Beck.
- Čáslavová, E. (2009). *Nové impulzy ve sportovním spoznoringu. In management a marketing sportu a cestovního ruchu*. Plzeň: Západočeská univerzita v Plzni.
- Durdová, I. (2005). *Základné aspekty sportovního marketingu*. Ostrava: VŠB - Technická Univerzita Ostrava.
- Dvořáková, Š. (2005). *Sportovní marketing*. Brno: Masarykova univerzita v Brně.
- Frederick, E.L., & Clavio, G. (2015). Blurred lines: An examination of high school football recruits' self-presentation on Twitter. *International Journal of Sport Communication*, 8(3), 330–344.
- Geurin, A.N. (2017). Elite female athletes' perceptions of new media use relating to their careers: A qualitative analysis. *Journal of Sport Management*, 31(4), 345–359.
- Geurin-Eagleman, A.N., & Burch, L.M. (2016). Communicating via photographs: A gendered analysis of Olympic athletes' visual self-presentation on Instagram. *Sport Management Review*, 19(2), 133–145.
- Horne, J. (2006). *Sport in consumer culture*. Basingstoke, NY: Palgrave Macmillan.
- Kunz, V. (2018). *Sportovní marketing CSR a sponzoring*. Praha: Grada Publishing.
- Miloch, Kimberly S., Keith W. Lambert. (2006). Consumer Awareness of Sponsorship at Grassroots Sport Events. *Sport Marketing Quarterly*, 15(3), 147–154.
- Novotný, J. (2011). *Sport v ekonomice*. Praha: Wolters Kluwer.
- ORVIS, G. (2016). *Celebrity Endorsements: Why Retailers Should Engage Micro-Influencers*. Retrieved December 7, 2021, from <https://www.shopify.com/retail/move-over-celebrities-why-micro-influencers-are-the-latest-force-in-influencer-marketing-for-retail>
- Pegoraro, A. (2010). Look who's talking—Athletes on Twitter: A case study. *International Journal of Sport Communication*, 3(4), 501–514.
- Pegoraro, A., & Jinnah, N. (2012). Tweet 'em and reap 'em: The impact of professional athletes' use of Twitter on current and potential sponsorship opportunities. *Journal of Brand Strategy*, 1(1), 85–97.
- Shani, D., Sandler, D. (1996), Climbing the Sport Event Pyramid. *Sports Marketing*, 30(18), 6.
- Su, Y., Baker, B., Doyle, J., & Kunkel, T. (2020). Rise of an athlete brand: Factors influencing the social media following of athletes. *Sport Marketing Quarterly*, 29(1), 33–46.
- Tajtaková, M., Nová, J., Bedřich, L. (2016). *Marketing neziskových organizací, sportu a kultúry*. Bratislava: Wolters Kluwers.
- Thomson, M. (2006). Human brands: Investigating antecedents to consumers' strong attachments to celebrities. *Journal of Marketing*, 70(3), 104–119.

Current state and development determinants of electromobility ¹

Monika Matušovičová²

Abstract

The support of the environmental approach of the automotive industry is represented by the concept of electromobility, or more precisely production of ecological cars. The importance of electromobility in the world has been growing for a long time now. The main determinants that currently determine the development of electromobility in the world are mainly the mileage range of electric vehicles, their price and charging speed. The aim of this paper is to analyze and evaluate the global and European electric car markets. At the same time, we will be using the PESTLE analysis to identify key factors that affect the development of electromobility and the number of electric cars.

Key words

electromobility, electric car market, factors of electromobility development

JEL Classification: M31

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Introduction

Today, up to a quarter of global energy production is consumed by transport, which also accounts for a fifth of global carbon dioxide production. That is why automotive companies, battery manufacturers, innovators, cities and states are working hard to make transport greener. Increasingly stringent emissions regulation is forcing the massive introduction of low- or zero-emission vehicles. The support of the environmental approach in the automotive industry is represented by the concept of electromobility, or more precisely production of ecological cars. At present, electric cars are the only commercially available vehicles with zero emissions. Although electromobility is not the only way to meet emission limits, it is the most ready-to-use solution available for series production. Other alternative drives (especially hydrogen fuel cell cars) are not yet ready for mass production.

Because of that, the importance of electromobility at present time is constantly growing. We call electromobility the whole concept involving battery manufacturers, electric vehicle manufacturers, cities and states, energy users and distributors (Janoušek, 2014). The central elements of the whole concept are electric vehicles, supplemented by charging infrastructure, information technology and legislation.

In the upcoming years, electromobility, especially in conjunction with the development of smart electric networks, it is expected to provide new jobs and at the same time

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contribute to the protection of the earth's climate and reduction of fossil fuel consumption through greater use of renewables.

1 Methodology

The aim of this paper is to analyze and evaluate the global and European electric vehicle market and using the PESTLE analysis to identify the key factors that affect the development of electromobility and the number of electric vehicles.

In order to achieve the set goal, the paper uses classical scientific methods such as analysis, synthesis, description and comparison. We have worked with data and survey results reported in studies by international consulting companies and research agencies IEA, Statista, Roland Berger&fka and KPMG. For logical justification of the conclusions was used the method of deduction.

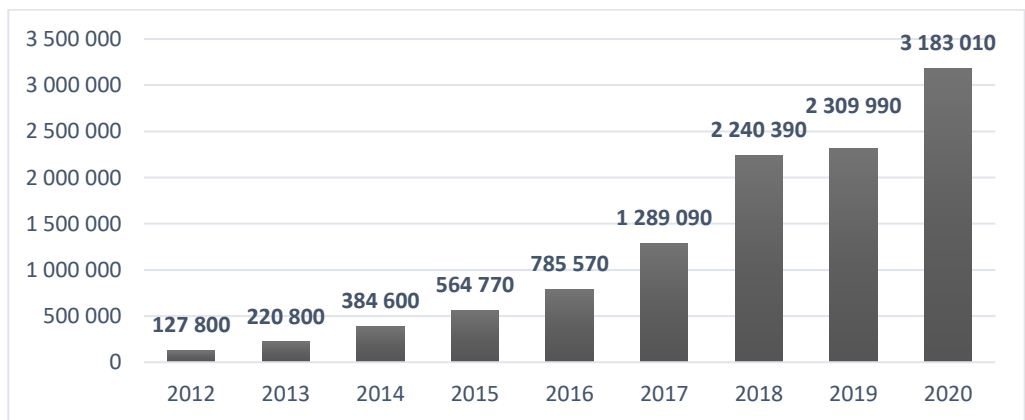
2 Results and Discussion

2.1 Current state of the electric car market

The electric car market is a young and fast-growing segment of the automotive industry. Even at the beginning of the millennium, electric cars represented a completely negligible part of the global market with approximately tens of pieces.

A significant rise in the global electric car market can be observed in 2010, when the total number of electric cars sold more than doubled compared to 2009 and amounted to approximately 16,500 units. An even more significant increase in sales occurred in 2011, when the number of electric cars reached just over 55,000, which meant more than a threefold increase compared to the previous year (IEA, 2017).

Graph 1 Electric car sales worldwide (BEV, PHEV)



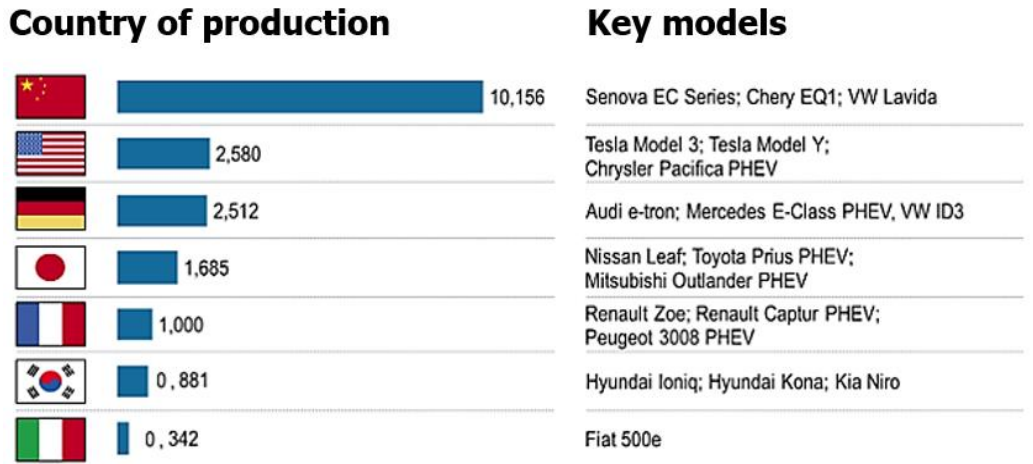
Source: KORDS, M. 2021. Absatz von Elektroautos weltweit bis 2020. Available from: <https://de.statista.com/statistik/daten/studie/406683/umfrage/anzahl-der-verkaeufe-von-elektroautos-weltweit-prognose/>.

In the following years, the number of electric cars sold, as illustrated in Graph 1, approximately doubled on year-to-year basis. In 2017 more than a million electric vehicles were sold worldwide for the first time, in 2020 sales rose to 3.183 million electric cars (Kords, 2021).

Since the beginnings of the electric car industry, the United States has played a major role in the development and number of electric cars. Until 2010, they clearly dominated the entire market. Since the "electric car boom" began in 2010, other countries have begun to join. In 2010, it was mainly Japan and Norway, where electric cars are very popular. The dynamically developing electric car market in China surpassed the United States in 2015 and China became a leader in electric car sales. Statistics declare more than 1.3 million e-cars sold in 2020, making China the clear market leader. According to a study carried out by the International Energy Agency, electric car sales are currently concentrated in ten countries - China, the United States, Germany, Norway, the United Kingdom, Japan, Canada, France, the Netherlands and Sweden (IEA, 2021).

The Chinese market is currently the largest electric car market in the world. China not only sells but also produces more electric cars than in all the other countries in the world combined. The most populous country in the world is expected to maintain this significant lead it has gained in electromobility. According to experts from the consulting firm Roland Berger&fka in their most recent study the E-mobility index 2019, China was ranked first among the seven most important countries. China is followed by the USA and Germany.

Graph 2 The most important countries in the global electric car market
PRODUCTION (prognosis for 2017 - 2022, in millions)



Source: Study E- mobility index 2019. Roland Berger&fka, Munich, November 2019, p. 7. Available from: https://www.fka.de/images/publikationen/2019/E-Mobility_Index_2019.pdf.

China is currently the world leader in production, sales and number of registered electric vehicles. The interest of Chinese citizens in electric cars is not only documented

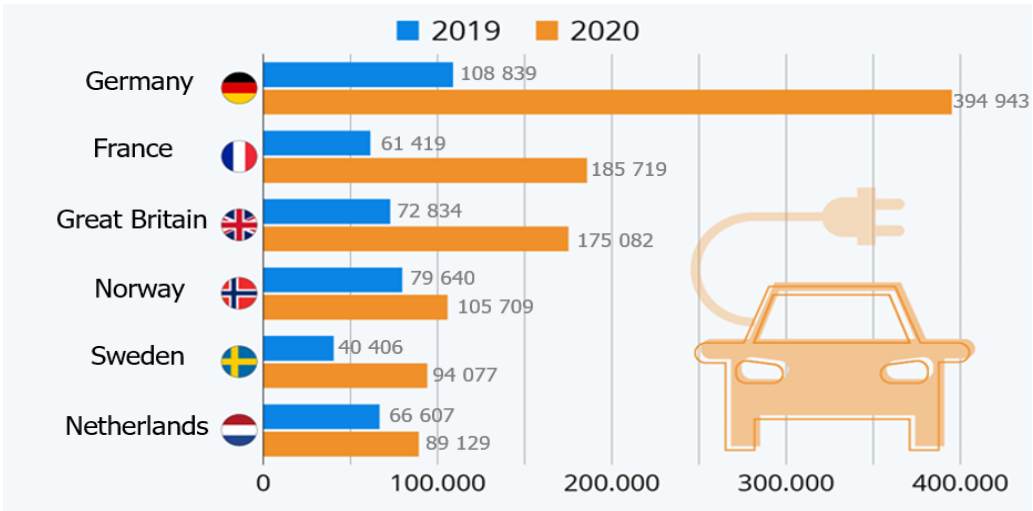
by the highest number of new electric car registrations, but also for example by the fact that they have a great choice of vehicles. Chinese customers can choose from more than 75 different models, which is incomparably more than customers in the United States or Europe (Hertzke - Müller - Schenk, 2017).

The United States has played a key role in the development of the electric car market. Initially, they dominated the entire market in terms of production, development and registration of electric cars. Since 2005, i.e. since the statistics are available, the United States has been the market leader in electric cars, but in 2015, China came to the lead. According to an analysis by the company Navigant Research, the number of electric vehicles in the United States should reach 1.1 million by 2024 (Žuffa, 2018). Sales are dominated by Tesla. The best-selling model is the Tesla Model 3, followed by the Model X and the Model S. The Bolt EV model from company Chevrolet (Wagner, 2020) is also successful in sales.

The European electric car market has started to develop more since 2009. Since this year, the number of electric cars on European roads has been growing constantly. While in 2013 more than 55,000 electric cars were newly registered in European countries, in 2015 it was almost 150,000 electric cars and in November 2021, 1 million electric vehicles were registered for the first time (Hennsler, 2021).

Graph 3 shows the European markets according to the highest number of new registrations in 2019 and 2020. Germany is currently the leader in electromobility in Europe with 394,943 newly registered electric vehicles. In 2020, the second highest number of registrations was reported in France. Specifically, there were 185,719 newly registered electric vehicles. The United Kingdom ranks third in the number of new registrations with 175,082 vehicles, followed by Norway with 105,709 registered electric cars. Sweden closes the top five with 94,077 newly registered electric cars.

Graph 3 Electric car sales in Europe in 2019 and 2020 (newly registered BEV, PHEV)



Source: Suhr, F. Europäischer Elektroautomarkt nimmt Fahrt auf. 16.02. 2021. Available from: <https://de.statista.com/infografik/24193/anzahl-der-neuzulassungen-von-elektroautos-in-europaeischen-laendern/>

As for the best-selling models on the European market, the best-selling electric model in Europe is, according to current statistics, Renault Zoe, followed by the second best-selling Tesla Model 3, which is also the best-selling electric car on a global scale. The third best-selling electric vehicle in Europe in 2020 is the Volkswagen ID.3. (Suhr, 2021).

Regarding the popularity of electric cars in European countries, Norway is clearly in the first place, with 81 electric cars per 1,000 inhabitants. Iceland, Sweden, Germany and the United Kingdom follow with a big gap (Janson, 2021).

Slovakia is directly affected by electromobility. However, the number of electric cars on the roads in the Slovak Republic is very small compared to classic cars. The development of sales of electric vehicles in Slovakia was supported by a subsidy scheme that came into practice in November 2016. As is illustrated in Table 1, interest in alternative battery drives has increased significantly over the next two years. We can clearly see from the table that in 2019 no subsidy was available in the Slovak Republic. While in 2017 and 2018 the trend of newly registered cars in the category of electric cars (BEV) was rising with 209 and 293 vehicles respectively, the year 2019 saw a drop in sales to 165 registered electric cars per year. Compared to the neighboring countries, we were the only market where sales of electric cars declined in 2019. After the reintroduction of subsidies, 9,014 electrified models were registered in 2020, and 918 pure electric cars were sold, which represented 1.2 percent of all registered cars.

Table 1 Sales of electric vehicles in the Slovak Republic

	2015	2016	2017	2018	2019	2020
BEV	52	59	209	293	165	918
PHEV+HEV	131	363	1936	2434		8096
PHEV					202	863

Source: own processing from data: Ročenka ELEKTROMOBILITA. 2020. p. 17. Available from: <https://www.pcrevue.sk/library/PDF%20ARCHIV/Elektromobilita%202020+inz.pdf>, Ročenka ELEKTROMOBILITA. 2021. p. 37. Available from: file:///C:/Users/mmatu/AppData/Local/Temp/ELEKTROMOBILITA%202021v1.pdf.

In 2021, electric cars in Slovakia accounted for only 1.5 percent of new passenger car sales, which is very small compared to about eight percent on the European market. According to the Association of the Automotive Industry, the Slovak Republic, together with countries such as Poland, Bulgaria and Malta, is one of the few countries where there is currently no support for their purchase (Turza, 2022).

2.2 Selected factors of electromobility development

The importance of electromobility has been growing on a worldwide scale for a long time now. In the coming years it is expected that the field of electromobility will experience great development, which is supported in all developed countries of the world. Using the PESTLE analysis will be further identified the most important factors that affect the development of electromobility and the number of electric vehicles.

Political factors

Government subsidies for the purchase of electric cars and subsidy programs have a significant impact on the interest in buying electric cars. The competitiveness of the electric car industry is not yet at a level that can fully compete with the market for cars with conventional internal combustion engines. For this reason, governments provide subsidies and other benefits for the purchase and subsequent operation of an electric vehicle.

As already mentioned, in recent years China has been the leader of electric cars. The Chinese government is trying to contribute to the improvement of urban air quality by subsidizing the electric car market. The total amount of subsidies is at the level of 23% of the purchase price of the vehicle. Only vehicles manufactured by Chinese manufacturers are subsidized, which means that only Chinese vehicles are among the best-selling models on the market. Subsidies are granted not only to regular users but also to the manufacturers themselves who produce or plan to produce electric cars.

The United States has one of the largest and most developed electric vehicle markets. The United States government provides various types of financial and non-financial benefits to support the roll-out of electric vehicles. Since 2010, tax breaks for the purchase of an electric vehicle have been provided in the range of \$ 2,500 to \$ 7,500, depending on the size and carrying capacity of the vehicle. More than half of the states in the USA uses tax breaks, tax exclusions and tax credits to encourage the purchase of electric vehicles. In addition to financial support, some states allow drivers of electric cars to use reserved road lanes or vehicles are exempt from registration fees. In selected states, electric cars are exempt from parking fees or have a toll discount (Zuffa, 2018).

EU countries governments support the purchase of electric vehicles through subsidies to the citizens. Subsidies for electric cars in Europe are the highest in Norway. Electric vehicles are exempt from VAT, do not pay road tax, are exempt from tolls, have a 50% discount on ferry transport, can use lanes reserved for public transport, do not pay fees for parking and entrances to city centers and are also exempt from the registration tax. Taxation of these vehicles is zero, while vehicles producing increased emissions are taxed at a higher percentage. When buying an electric car in Germany, the buyer receives a subsidy of 4,000 euros and does not pay road tax for the electric car for the first ten years. In larger cities, electric cars also benefit from the fact that they have free parking, reserved parking spaces and can use lanes for public transport. In France, when buying a purely electric car, the customer receives an environmental bonus of up to 6,000 euros and 4,000 euros as scrapping fees for old diesel models. In some cities and regions, electric car owners do not pay property tax or road tax. When buying a vehicle in Great Britain, a subsidy of up to £ 3,500 is provided for the purchase of an

electric car or hybrid with electric drive, and they also do not pay registration tax or other fees (Srpová, 2019).

To the growth in sales of electric vehicles in Slovakia also contributed a state subsidy, as the first specific project in the form of direct support for the purchase of electric vehicles, which the Ministry of Economy of the Slovak Republic began to provide in 2016. The last support in 2020 enabled citizens, companies and cities to get a bonus of up to 8,000 euros per electric car and 5,000 euros per plug-in hybrid vehicle when buying an electric car, up to a maximum purchase price of 50,000 euros with VAT. The development of electromobility is also supported by a reduced registration tax, zero road tax, accelerated depreciation of electric vehicles, the introduction of color-distinguished registration plates for electric cars and plug-in hybrids, free parking, driving in reserved lanes or permission to enter low-emission zones.

Economic factors

The economic factors that affect the development of electromobility include in particular the price of electric vehicles, the price of electricity, the price of petrol and diesel and the costs of operating and maintaining an electric vehicle.

Currently, the biggest disadvantage of electric cars compared to vehicles with internal combustion engines is the high purchase price. An electric car can be up to one-half more expensive than a comparable internal combustion car. The reason for high prices is mainly low production and expensive batteries. The development of an electric car is a very expensive process and these costs are logically reflected in the price of the vehicle. At present, there are also still very few manufacturers of batteries for electric vehicles, and moreover, their production is quite low and does not allow them to optimize production costs. For this reason, the prices of batteries are so high that they significantly increase the overall production price of electric cars.

On the other hand, electric cars paradoxically have lower operating and service costs. The operating costs of an electric car depend on its electricity consumption, electricity prices and service costs. This is similar as in the case of internal combustion engines. However, electric cars have the advantage that the price for electricity per 100 km is significantly lower than the price of petrol or diesel. The same is true for service visits, because the drive unit of an electric car is structurally simpler and less stressed. The maintenance costs of an electric car are very low and account for about half the cost of a vehicle with an internal combustion engine. This is due to the fact that electric cars have fewer moving parts in the engine. Electric cars also do not need oil, spark plugs, pumps, catalytic converters and do not require emission checks. The electric motor therefore lasts several years even without any maintenance.

Social factors

The decisive social factors include the population's approach to the environment and trends in the field of automobiles. According to Bláhovec (2018), current trends in the field of automobilism are new materials and electromobility. According to the consulting company KPMG (2020), the key trends are connectivity, digitalization and electromobility. Another possible trend is, for example, vehicle sharing, so-called carsharing.

Technological factors

Vehicle mileage range, battery quality and charging time are among the main technological factors in the development of electromobility. Current electric cars have a real range of approx. 250 km. Tesla and Jaguar luxury cars offer a range of around 500 km. Due to the length of charging and the number of charging stations, mileage range is an important factor that determines purchasing decisions. The electric car is currently an ideal vehicle for the city. It is quiet and does not produce emissions. On the other hand, thanks to the new generation of electric cars and the ever-expanding network of charging stations, it is no longer the case today that electric cars are only suitable for the city. Electric cars with a range of over 400 km can already be considered a full-fledged replacement for a vehicle with an internal combustion engine. The range of the vehicle is also related to the quality of the batteries, because the better the battery, the longer the range.

Charging time depends on the selected charging method. The basic type of charging is home AC charging. This is, of course, slower, but it can also be charged from a standard 230 V socket or using a home wallbox. The fastest way to recharge the batteries is to use fast charging stations, where charging takes 30 to 50 minutes depending on the vehicle (PC REVUE, 2020). Charging stations are one of the most important factors for the charging speed of electric cars. Therefore, their performance is constantly increasing.

Legislative factors

The main force of today's transition to electromobility is the pressure of regulators. The European Union is constantly tightening the amount of harmful carbon dioxide emissions allowed. Currently, an emission limit of 95 grams of CO₂ per kilometer is set. The intermediate target was set at 2025, when CO₂ emissions from passenger cars and commercial vehicles will have to fall by 15 percent compared to 2021. The final target for 2030 sets a reduction in CO₂ emissions from passenger cars of 37.5 percent compared to 2021.

According to Deloitte, the share of electric cars will have to reach 10 percent in 2025 in order to meet the limits. By the end of the decade, every fifth car sold in the EU will have to be an electric car. To these limits must be added the restrictions of individual states and cities. Ireland, the Netherlands and Slovenia plan to ban the sale of internal combustion vehicles in Europe from 2030. France and the United Kingdom have announced this measure for 2040. The most ambitious in this regard is Norway, which plans to ban the sale of combustion cars starting from 2025 (Kvašňák, 2019).

Ecological factors

Air pollution is one of the main global problems. For those who think about protecting the environment rather than saving costs, it is good to know that electric cars do not produce emissions during operation. However, this fact is a bit debatable, because it also depends on what source the energy that the vehicle is supplied with comes from and how ecological its production was.

The use of electric cars will solve several environmental problems, but at the same time it will create a new one in the form of used batteries. Today, it is clear that used batteries from electric cars can be recycled in several ways.

The first option is to disassemble the battery and reuse its functional parts. In a similar way, batteries can be used in households as a backup source. For example, used Nissan Leaf car batteries are applied as a source of energy to street lighting, for caravans, apartments and houses, often in combination with solar panels (Niedermeier, 2019).

A new method of recycling was also discovered by Professor Zheng Chen, who published a method in the journal *Advanced Energy Materials*, where a certain type of battery can be used to produce a new functional battery with the same capacity and performance (Zecha, 2020).

Conclusion

The automotive industry is undergoing a fundamental transformation caused not only by a new regulatory framework towards emissions and technological innovation, but also by new trends in areas such as shared economy, urbanization and the new way of working.

Today, vehicles with conventional internal combustion engines are considered to be one of the most significant polluters of the environment. This statement is one of the main reasons why alternative drives, which do not show negative externalities during the operation of the car, are beginning to come to the foreground. The support of the environmental approach in the automotive industry is represented by the concept of electromobility, or more precisely production of ecological cars.

Electromobility is a trend today that is moving from marginal technology for enthusiasts to the mainstream. The reason mainly is the activities of regulators, which significantly tighten the requirements for emissions of new vehicles manufactured by car manufacturers. As well as support schemes for the purchase of electric cars and at the same time restrictions on entry to cities, or the sale of vehicles with internal combustion engines.

China is currently the world leader in the production, sale and number of registered electric vehicles. The largest markets in Europe are Germany, France, the United Kingdom and Norway. The largest electric vehicle markets are also the most generously subsidized markets. This leads to the conclusion that electric cars currently still need support to be competitive compared to classical vehicles with conventional internal combustion engines.

Despite the overall decline in car registrations during the COVID-19 pandemic, the importance of electromobility in the world has been growing for a long time. According to the BNEF analysis, the electric vehicle segment was expected to grow by 8.1% in China and 5% in Europe in 2021 due to financial incentives and infrastructure spending (Stock, 2021).

References

- Bláhovec, P. (2018). *Aktuální trendy v automobilovém průmyslu*. Available from: <https://www.systemonline.cz/automotive-it-pro-automobilovy-prumysl/aktualni-trendy-v-automobilovem-prumyslu.htm>.
- Hennsler, S. (2021). Bis Ende November wurden in Europa 1 Mio. E Auto zugelassen. In: *Elektroauto – News* 07.12. 2021. Available from: <https://www.elektroauto-news.net/2021/ende-november-europa-eine-millionen-eauto-zulassungen>.
- Hertzke, P. – Müller, N. – Schenk, S. (2017). *China's electric-vehicle market plugs in. McKinsey&Company 2017*. Available from: <https://www.mckinsey.com/global-themes/china/chinas-electric-vehicle-market-plugs-in>.
- IEA. (2017). *Global EV Outlook 2017*. Available from: <https://www.iea.org/publications/freepublications/publication/GlobalEVO Outlook2017.pdf>.
- IEA. (2021). *Global EV Outlook 2021*. Available from: <https://iea.blob.core.windows.net/assets/ed5f4484-f556-4110-8c5c-4ede8bcba637/GlobalEVO Outlook2021.pdf>.
- Janson, M. (2021). *Wo E-Autos am beliebtesten sind*. 30.04. 2021. Available from: <https://de.statista.com/infografik/22833/bestand-an-elektro-pkw-nach-laendern/>.
- Janoušek, R. (2014). *Ekonomické a systémové aspekty elektromobilů*. České vysoké učení technické v Praze: Diplomová práce.
- KPMG. (2020). *Automotive key trends*. Available from: <https://automotive-institute.kpmg.de/GAES2019/megatrends-beyond-the-obvious/automotive-key-trends#automotive-key-trends>.
- Kords, M. (2021). *Absatz von Elektroautos weltweit bis 2020*. Available from: <https://de.statista.com/statistik/daten/studie/406683/umfrage/anzahl-der-verkaeufe-von-elektroautos-weltweit-prognose/>.
- Kvasňák, L. (2019). Začnete si šetřit na elektromobil. In: *TREND* 28. marca 2019.
- Niedermeierová, J. (2019). Když lidé nevědí, kde si svoje auto dobijí, jednoduše si ho nekoupí. In: *Příloha Hospodářských novin*, 20. srpna 2019.
- Ročenka ELEKTROMOBILITA. (2020). Available from: <https://www.pcrevue.sk/library/PDF%20ARCHIV/Elektromobilita%202020+inz.pdf>.
- Ročenka ELEKTROMOBILITA. (2021). Available from: <file:///C:/Users/mmatu/AppData/Local/Temp/ELEKTROMOBILITA%202021v1.pdf>.
- Roland Berger&fka. (2019). *Study E-mobility index (2019)*. Available from: https://www.fka.de/images/publikationen/2019/E-Mobility_Index_2019.pdf.
- Srpová, E. (2019). Podpořte elektromobily, vyzval vládu šéf Škody Auto. In: *Hospodářské noviny*, 19. 3. 2019.
- Stock, K. (2020). *As Covid-19 Hits Electric Vehicles, Some Thrive, Others Die*. Available from: <https://www.bloombergquint.com/business/as-covid-19-hits-electric-vehicles-some-thrive-others-die>.
- Suhr, F. *Europäischer Elektroautomarkt nimmt Fahrt auf*. 16.02. 2021. Available from: <https://de.statista.com/infografik/24193/anzahl-der-neuzulassungen-von-elektroautos-in-europaeischen-laendern/>.

- Turza, R. (2022). S e-autami meškáme, neplníme plány EÚ. In: *Hospodárske noviny* 21. – 23. januára 2022.
- Wagner, I. (2020). *Best selling plug - in electric cars in the United States 2019*. 25.8. 2020. Available from: <https://www.statista.com/statistics/257966/best-selling-electric-cars-in-the-united-states/>.
- Zecha, J. (2020). *Identifikace trhu s elektromobily v ČR*. Technická univerzita Ostrava, Ekonomická fakulta. Ostrava 2020.
- Žuffa, M. (2018). *Elektromobilita*. Brno: Masarykova univerzita.

Finančné sprostredkovanie a tzv. brokerpool

Andrea Slezáková¹

Financial intermediation and the so called brokerpool

Abstract

The Financial Intermediation Act represents the fulfilment of the legislator's intention to unify the conditions for the distribution of financial services in the insurance or reinsurance, capital market, supplementary pension saving, retirement pension saving, deposit-taking, lending, consumer credit and housing credit sectors. The regulation of financial intermediation has evolved dynamically over the last eleven years and has undergone numerous changes. The increasing regulatory burden can be attributed to the fact that financial intermediaries make a significant contribution to the conclusion of financial service contracts and come into contact with a large number of clients. By distributing financial products, they contribute to the profits of financial institutions, the financial intermediaries in the economy, bringing together surplus and scarce funds. Just as the financial crisis (and, nowadays, the pandemic crisis) has led legislators, both national and European, to increase the demands placed on financial institutions, so too, logically, have the demands on the distributors of their services. The authors reflect on the 'brokerpool' model as a way of carrying out financial intermediation.

Key words

financial intermediation, brokerpool, financial agent

JEL Classification: K2, K29

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Úvod

Regulácia finančného sprostredkovania a finančného poradenstva reflektovala i reflektuje na ideu vytvorenia rovnakých požiadaviek na podnikanie, ako aj na potrebu regulácie činností a zabezpečenia dohľadu (Slezáková et al., 2020). Zákon č. 186/2009 Z. z. o finančnom sprostredkovaní a finančnom poradenstve a o zmene a doplnení niektorých zákonov v znení neskorších predpisov (ďalej len „zákon o finančnom sprostredkovaní“) zjednotil podmienky vykonávania finančného sprostredkovania a finančného poradenstva v oblasti finančných služieb v sektoroch poistenia alebo zaistenia, kapitálového trhu, doplnkového dôchodkového sporenia, poskytovania úverov, úverov na bývanie a spotrebiteľských úverov, prijímania vkladov a starobného dôchodkového sporenia. Integrovaná regulácia finančného sprostredkovania a finančného poradenstva v rôznych sektoroch neexistuje ani v práve Európskej únie, ktoré sa vyznačuje práve sektorovým prístupom, ktorý navyše nie je vzájomne plne prepojený a zladený, a to ani v priamo súvisiacich oblastiach, ako je napríklad distribúcia finančných nástrojov (podľa MiFIDII) a investičných produktov založených na poistení (podľa IDD)(Slezáková et al., 2020).

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Tento nedostatok konzistentnosti na úrovni európskych predpisov, ktoré sú základom pre implementáciu v národnom práve tak predstavuje veľkú výzvu pre tvorcov národnej legislatívy (Slezáková et al., 2020).

Zákon o finančnom sprostredkovaní umožňuje uskutočňovanie finančného sprostredkovania niekoľkým kategóriám finančných agentov, spomedzi ktorých pozornosť venujeme podriadeným a samostatným finančným agentom.

1 Metodika práce

Na základe analýzy boli finančnoprávne rozdelené na jednotlivé prvky. Následne boli relevantné časti syntézou zložené do celku. Z poznania jednotlivých podstatných častí na základe syntézy ako všeobecnej poznávacej metódy možno dospieť k všeobecnému tvrdeniu (Mosný et al., 2018).

2 Výsledky a diskusia

2.1 Podriadený finančný agent

Podriadený finančný agent vstupuje do zmluvného vzťahu so samostatným finančným agentom (Slezáková et al., 2016). Základ ich spolupráce tvorí písomná zmluva, spravidla pôjde o zmluvu o obchodnom zastúpení. V tom istom čase môže mať uzatvorenú písomnú zmluvu len s jedným samostatným finančným agentom. Typicky pôjde o fyzickú osobu, ktorá pracuje vo veľkej distribučnej sieti samostatných finančných agentov fungujúcej často na MLM princípe (tzv. multi-level marketing), ktorý stanovuje delbu odmeny medzi viaceré úrovne predaja (Slezáková et al., 2020). Rozsah povolenia na vykonávanie činnosti samostatného finančného agenta (zmluvnej strany) a uzatvorené písomné zmluvy s finančnými inštitúciami v príslušnom sektore priamo determinuje činnosť podriadeného finančného agenta (Sidak et al., 2014). Z čoho vyplýva, že podriadený finančný agent teda môže ponúkať len tie finančné služby, ktoré je oprávnený sprostredkovať jeho zmluvný partner. Podriadení finanční agenti sú povinní strpieť oprávnenia nadriadeného subjektu zabezpečujúce riadny výkon činnosti, ktoré budú zmluvne zakotvené (Slezáková et al., 2020).

Pri začatí vykonávania činnosti podriadeným finančným agentom hrá kľúčovú úlohu register finančných agentov, finančných poradcov, finančných sprostredkovateľov z iného členského štátu v sektore poistenia alebo zaistenia a viazaných investičných agentov (ďalej spravidla len „register“) (Slezáková et al., 2020). Je vedený Národnou bankou Slovenska. Podriadený finančný agent musí byť zapísaný v registri. Navrhovateľom na jeho zápis do registra je samostatný finančný agent (disponuje prihlasovacím menom a heslom) (Slezáková et al., 2020).

V tomto kontexte vnímame elektronický návrh na zápis ako vyústenie nadväzujúce na existujúci zmluvný vzťah (Slezáková et al., 2020). Pre uskutočnenie zápisu do registra je nutné kumulatívne naplniť dve podmienky, a to úplnosť návrhu a uhradenie poplatku

(Slezáková et al., 2020). Pripomíname, že Národná banka Slovenska pri registrácii ne-skúma či navrhovaný podriadený subjekt spĺňa zákonné požiadavky na výkon činnosti, za správnosť a úplnosť údajov ex lege zodpovedá navrhovateľ. U podriadeného finančného agenta môžeme zápis do registra analogicky prirovnať ku konštitutívnym účinkom individuálneho správneho aktu vytvárajúci nový právny stav (Slezáková et al., 2020). Samozrejme podčiarkujeme slovo analogicky, pretože zápis v registri nie je druhom individuálneho správneho aktu, avšak účinky sú obdobné, nakoľko právna úprava hovorí o oprávnení podriadeného finančného agenta na výkon činnosti odo dňa registrácie. Pre úplnosť doplníme, že o analogických konštitutívnych účinkoch hovoríme len vtedy, ak sú naplnené ďalšie zákonné podmienky na výkon činnosti (poistenie zodpovednosti za škodu pri vykonávaní finančného sprostredkovania).²

O uskutočnení zápisu Národná banka Slovenska upovedomí elektronicky samostatného finančného agenta - navrhovateľa (Sidak et al., 2014). Tomuto ex lege vzniká povinnosť vydať podriadeným subjektom osvedčenie o zápise (Sidak et al., 2014), ktorého vzor ustanovuje opatrenie o registri.³ Ide o písomný dokument, ktorý preukazuje zápis. Slúži najmä na účel legitimácie sa pred klientom (Slezáková et al., 2020).

2.2 Samostatný finančný agent

Z hľadiska možností ponúkaných zákonodarcom na podnikanie v oblasti finančného sprostredkovania, predstavuje samostatný finančný agent kategóriu, pre ktorú je príznačná spolupráca s finančnými inštitúciami. Samostatný finančný agent je oprávnený ponúkať vzájomne si konkurujúce finančné produkty, *ergo* má potenciál zaujať klienta širokou škálou finančných služieb, keďže má možnosť uzatvárania písomných zmlúv s viacerými finančnými inštitúciami pôsobiacimi v príslušnom sektore v tom istom čase. Písomná zmluva, ktorú právna úprava ukladá uzatvoriť⁴, bude reprezentovaná najmä zmluvou o obchodnom zastúpení (Škopová et al., 2006). Zákon o finančnom sprostredkovaní v prechodných ustanoveniach pretransformoval subjekty, ktoré podnikali podľa osobitných sektorových právnych predpisov účinných do 31. decembra 2009. Do predmetnej kategórie boli do zodpovedajúcich sektorov zaradení poisťovací agent, sprostredkovateľ zaistenia, sprostredkovateľ investičných služieb a sprostredkovateľ oprávnený byť činný pre dve a viac doplnkových dôchodkových spoločností.⁵

Samostatného finančného agenta definujeme ako fyzickú osobu – podnikateľa alebo právnickú osobu disponujúcu povolením na vykonávanie činnosti, ktorá patrí medzi dohliadané subjekty finančného trhu. Povolenie na vykonávanie činnosti samostatného

² Najmä povinné profesijné poistenie zodpovednosti za škodu. Porovnaj ustanovenie § 30 ods. 6 prvá veta a ods. 7 prvá veta zákona o finančnom sprostredkovaní.

³ Porovnaj prílohu č. 4 opatrenia o registri.

⁴ Porovnaj ustanovenie § 7 zákona o finančnom sprostredkovaní.

⁵ Porovnaj ustanovenie § 41 ods. 1, ods. 2 a ods. 3 zákona o finančnom sprostredkovaní.

finančného agenta udeľuje Národná banka Slovenska. Danej téme sa venujeme v osobitnej kapitole. Samostatný finančný agent je povinný mať miesto podnikania, sídlo, organizačnú zložku na území Slovenska.⁶

Odborná literatúra pri vykonávaní podnikania tohto druhu uvádza ako možnú stratégiu tzv. *allfinance* koncepciu. Ide o diverzifikačnú stratégiu, ktorej cieľom je ponúknuť klientovi rôzne finančné služby „z jednej ruky“. Z hľadiska praxe pôjde o samostatných finančných agentov, ktorí sú oprávnení na výkon činnosti vo všetkých šiestich sektoroch.

Samostatnému finančnému agentovi právna úprava umožňuje budovanie siete podriadených finančných agentov za splnenia zákonných podmienok. Samostatný finančný agent ako nadriadený subjekt realizuje tzv. „prenesený dohľad“ nad podriadenými subjektmi. Je povinný v písomnej zmluve s podriadeným finančným agentom zakotviť súbor práv, ktoré bude voči nemu vykonávať za zákonných podmienok.⁷ Predmetné oprávnenia samostatného finančného agenta vnímame ako súbor špecifických opatrení slúžiacich na zabezpečenie riadneho výkonu činnosti podriadeného finančného agenta.

V prípade, že na základe zmluvného vzťahu s finančnou inštitúciou je samostatný finančný agent oprávnený inkasovať, máme za to, že mu vzniká povinnosť zriadiť osobitný účet slúžiaci na tento účel (Slezáková et al., 2016). Uvedená úprava slúži na ochranu finančných prostriedkov určených finančnej inštitúcii alebo klientovi či tretej osobe oprávnenej zo zmluvy o poskytnutí finančnej služby (Slezáková et al., 2016). Oddeľenie prostriedkov na osobitný účet len potvrdzuje fakt, že nejde o vlastníctvo samostatného finančného agenta. Finančné prostriedky nie sú zahrnuté v prípade vyhlásenia konkurzu ani do konkurznej podstaty (Slezáková et al., 2016).

Samostatný finančný agent zodpovedá za škodu, ktorú spôsobí pri vykonávaní finančného sprostredkovania a tento je povinný uzatvoriť poistenie pre prípad zodpovednosti za škodu. Z právno-teoretického hľadiska členenia druhov poistenia podľa právnej úpravy môžeme v súlade s Občianskym zákonníkom rozlíšiť poistenie zmluvné a zákonné (Lazar et al., 1994). Pričom poistenie zodpovednosti za škodu spôsobenú pri výkone finančného sprostredkovania môžeme zaradiť do podskupiny k povinnému zmluvnému poisteniu, kedy zákonodarca prostredníctvom osobitného predpisu ukladá fyzickej alebo právnickej osobe uzavrieť poistnú zmluvu (Slezáková et al., 2016). Účelom poistenia zodpovednosti za škodu je zabezpečenie ochrany poisteného pred nepriaznivými následkami vzniku jeho zodpovednosti, ktoré by mohli mať až devastálny charakter, ako aj zabezpečenie ochrany poškodeného pred negatívnymi dôsledkami nedostatočnej solventnosti subjektu, ktorý mu spôsobil škodu a zodpovedá za ňu (Karfiková et al., 2010).

V nadväznosti na predmetnú funkciu profesijnej zodpovednosti poukazujeme na zákonodarcom stanovenú minimálnu výšku poistného krytia, aby boli zabezpečené nároky poškodených klientov samostatného finančného agenta, ktoré môžu vzniknúť v budúcnosti a zákonné obmedzenie maximálnej výšky spoluúčasti.⁸

⁶ Porovnaj ustanovenie § 6 zákona o finančnom sprostredkovaní. V sektore poistenia alebo zaistenia zákonodarca pripúšťa u právnickej osoby i ústredie a okrem iného prechodný pobyt a miesto podnikania u fyzickej osoby.

⁷ Porovnaj ustanovenie § 29 ods. 4 zákona o finančnom sprostredkovaní.

⁸ Porovnaj ustanovenie § 30 ods. 2 zákona o finančnom sprostredkovaní.

Zodpovednosť za škodu spôsobenú podriadeným finančným agentom môže prevziať zmluvný partner, t.j. samostatný finančný agent.⁹ Poistovne na slovenskom poistnom trhu reflektujú na ustanovenia zákona o finančnom sprostredkovaní a ponúkajú poistenie „celej siete“.

Z hľadiska praxe možno konštatovať, že najviac zastúpení sú samostatní finanční agenti, obchodné spoločnosti, konkrétne spoločnosti s ručením obmedzeným. Predmetnej právnej forme a jej budovaniu siete podriadených finančných agentov sa budeme venovať v ďalšom texte.

3 „Brokerpool“

Cieľ podnikania samostatného finančného agenta tvorí neustále rozširovanie kmeňa klientov. Logicky preto bude mať záujem na vybudovaní čo najpočetnejšej siete podriadených finančných agentov, aby títo získavali ďalších zákazníkov.

V zákone o finančnom sprostredkovaní absentuje regulácia, ktorá by určovala spôsob organizačného usporiadania podriadených finančných agentov a ich vzájomné vzťahy. V podnikaní mnohých samostatných finančných agentov sa etabloval *multi-level marketing*.

Multi-level marketing je systémom prostredníctvom ktorého dochádza k predaju produktov materskej spoločnosti prostredníctvom siete obchodníkov (Valentine, 2004). *Multi-level marketing* predstavuje metódu predaja výrobkov priamo spotrebiteľom cez distribútorskú sieť, vytvorenú z nezávislých distribútorov, ktorí zaúčajú ďalších distribútorov, pričom príjem je odvodený z maloobchodných a veľkoobchodných ziskov, ktoré sú tvorené platbami za celkový predaj výrobkov (Clothier, 1995).

Pri uskutočňovaní finančného sprostredkovania *multi-level marketing* predstavuje systém, v ktorom spoločnosť s ručením obmedzeným vykonávajúca činnosť samostatného finančného agenta uzatvára zmluvy s podriadenými finančnými agentmi, ktorí sprostredkujú klientom uzatvorenie zmluvy o poskytnutí finančnej služby. Zároveň podriadení finanční agenti získavajú ďalšie osoby majúce záujem o predmetné podnikanie.

V praxi sa v inomínatných zmluvách možno stretnúť s dojednaniami, podľa ktorých jeden podriadený finančný agent (fyzická či právnická osoba) „manažuje“ určitú organizačnú jednotku tvorenú podriadenými finančnými agentmi (môže byť nazývaná aj obchodná divízia). Ide o model používaný tzv. brokerpoolmi.

V danom obchodnom modeli získava podriadený finančný agent odplatu aj za finančné služby, distribuované podriadenými finančnými agentmi, ktorých priamo alebo nepriamo „priviedol“ do spoločnosti s ručením obmedzeným vykonávajúcej činnosť samostatného finančného agenta. Najvyššia odplata je generovaná podriadeným finančným agentom, ktorí sú na vrchole predmetnej pomyslenej pyramídy, resp. tesne pod ňou.

⁹ Porovnaj ustanovenie § 30 ods. 6 a ods. 7 zákona o finančnom sprostredkovaní.

Organizačnú jednotku (tzv. obchodnú divíziu) tvorí súbor podriadených finančných agentov, s ktorými mala spoločnosť s ručením obmedzeným príležitosť uzatvoriť inominátnu zmluvu na základe pričinenia „prvotného“ podriadeného finančného agenta, resp. každého ďalšieho podriadeného finančného agenta, ktorý je súčasťou predmetnej divízie.

Aj napriek skutočnosti, že každý podriadený finančný agent je podnikateľom a teda podniká samostatne, vzniká v praxi reťazenie podriadených finančných agentov pod sebou. Každý ďalší podriadený finančný agent (okrem „prvotného“) bude mať v inominátnej zmluve zakotvené ustanovenie o začlenení sa do organizačnej jednotky vytvorenej prvotným podriadeným finančným agentom (a zároveň definíciu predmetnej organizačnej jednotky na účely inominátnej zmluvy). Vznik zmluvy, ako dvojstranného právneho úkonu, bude vyžadovať dva jednostranné právne úkony dvoch rozličných strán (spoločnosti s ručením obmedzeným a podriadeného finančného agenta), ktoré si vzájomne adresujú a sú obsahovo zhodné (Svoboda, 2005). Z čoho vyplýva, že budú existovať súhlasné prejavy vôle oboch zmluvných strán ohľadne postavenia podriadeného finančného agenta („neprvotného“) v organizačnej jednotke. Ide o model používaný tzv. brokerpoolmi.

K právnej povahe „manažovania“ organizačnej jednotky podriadených finančných agentov „prvotným“ podriadeným finančným agentom uvádzame nasledovné. Máme za to, že ide o zastúpenie.

Nevyhnutnosťou v právnej kvalifikácii medzi zástupcom, zastúpeným a tretími osobami je rozlišovanie plnomocenstva ako jednostranného právneho úkonu (vonkajšieho vzťahu) a dohody uzavretej medzi splnomocniteľom a splnomocnencom (vnútorným vzťahom) (Števček et al., 2019).

Právne názory na účinky plnomocenstva sa líšia. Plnomocenstvo je osvedčenie, resp. potvrdenie existencie práva určitej osoby, zastupovať inú osobu (Dvořák et al., 2016). Plnomocenstvo predstavuje jednostranný právny úkon, ktorým splnomocniteľ vyhlasuje voči tretej osobe alebo osobám (tzv. vonkajší vzťah), že splnomocnil istú osobu ako oprávnenú, t.j. ako splnomocnenca, aby ho v rozsahu uvedenom v plnomocenstve zastupovala (Švestka et al., 2008). Z hľadiska vzniku oprávnenia splnomocnenca vo vzťahu k tretím osobám obmedziť účinky plnomocenstva na deklaratórne nie je správne (Števček et al., 2019). *De lege lata* je plnomocenstvo právnym úkonom, ktorý zakladá oprávnenie zastupovať (Števček et al., 2019).

Vnútorný vzťah je tvorený dohodou o plnomocenstve. Dohodu o plnomocenstve môže reprezentovať akákoľvek zmluva, ktorá zakladá vnútorný vzťah medzi splnomocniteľom a splnomocnencom (Fekete, 2017).

Inominátna zmluva medzi spoločnosťou s ručením obmedzeným a „prvotným“ podriadeným finančným agentom predstavuje podľa nášho názoru dohodu o plnomocenstve, súčasťou listiny, v ktorej je obsiahnutá, môže byť aj plnomocenstvo. „Prvotný“ podriadený finančný agent a spoločnosť s ručením obmedzeným - samostatný finančný agent spravidla však nemajú záujem na sprístupnenie citlivých údajov v nej obsiahnutých tretej osobe (podriadenému finančnému agentovi z organizačnej jednotky). A preto bude plnomocenstvo vyhotovené na inej listine. Vo vzťahu k podriadenému finančnému agentovi („neprvotnému“) bude rozhodujúce plnomocenstvo, z ktorého bude vyplývať oprávnenie „prvotného“ podriadeného finančného agenta v uvedenom rozsahu konať

za spoločnosť s ručením obmedzeným (samostatného finančného agenta). V predmetnom plnomocenstve spoločnosť s ručením obmedzeným splnomocní „prvotného“ podriadeného finančného agenta spravidla na kontrolou plnenia minimálneho počtu sprostredkovaných zmlúv o poskytnutí finančnej služby.

Opätovne uvádzame, že zákon o finančnom sprostredkovaní nezakazuje popísaný obchodný model. Považujeme ho však z dôvodu ochrany finančných spotrebiteľov za nežiaduci, pretože je zameraný výlučne na odbyt finančných služieb. Uprednostňuje kvantitu pred kvalitou. Motivuje podriadených finančných agentov k sprostredkovaniu maximálneho možného počtu zmlúv o poskytnutí finančnej služby. Vyvstáva otázka, či tieto skutočne zodpovedajú potrebám klientov, predovšetkým neprofesionálnych.

Záver

V zákone o finančnom sprostredkovaní absentuje regulácia, ktorá by určovala spôsob organizačného usporiadania podriadených finančných agentov. V nadväznosti na uvedené sa v praxi etabloval model tzv. brokerpool. Ide o samostatného finančného agenta vykonávajúceho finančné sprostredkovanie prostredníctvom podriadených finančných agentov. Pričom však zároveň umožňuje, aby existovala „vnútorná“ organizačná štruktúra, v ktorej dominuje prvotných podriadených finančný agent a pod ním hierarchicky usporiadaná skupina podriadených finančných agentov. Prvotný podriadený finančný agent rozhoduje o rozdeľovaní provízií, kontrolovaní plnenia podmienok dôveryhodnosti a odbornej spôsobilosti. Ergo možno konštatovať, že vzniká autonómna vetva, v ktorej prvotný podriadený finančný agent plní úlohy samostatného finančného agenta. V tzv. brokerpoole teda možno obchádzať zákon o finančnom sprostredkovaní tým, že na základe zmluvných dojednaní ukotvených napr. inominátnej zmluve spoločnosť, ktorá disponuje povolením na vykonávanie činnosti samostatného finančného agenta prizná prvotnému podriadenému finančnému agentovi fakticky postavenie samostatného finančného agenta. V časoch pandemickej krízy sa tento spôsob realizácie finančného sprostredkovania používa predovšetkým v situáciách, ak sa samostatnému finančnému agentovi nedarí, tento disponuje sieťou podriadených finančných agentov a stane súčasťou brokerpoolu, t.j. prvotným podriadeným finančným agentom (vo vzťahu k svojim bývalým podriadeným finančným agentom fakticky vystupuje ako samostatný finančný agent). Zneužitie práva je spojené s hľadaním hranice medzi využitím práva a jeho výkonom neoprávneným spôsobom, ktorý predstavuje výkon práva v súlade s literou zákona, avšak v rozpore s jeho účelom a duchom, zahŕňajúc dve roviny zneužitie subjektívneho práva a zneužitie objektívneho práva (Gunárová, 2015). Zneužitie objektívneho práva, vychádza z rímskoprávnej koncepcie *in fraudem legis*, ktorá vidí rozpor so zákonom, ak sa niekto pridŕža jeho doslovného znenia, avšak obchádza jeho význam (Gunárová, 2015). Môžeme teda konštatovať, že adresát právnej normy sa správa v súlade s ňou, avšak výsledok predstavuje rozpor s *ratio legis*. Keďže významom ani účelom zákona o finančnom sprostredkovaní nie je vytváranie dvoch kategórií podriadených finančných agentov (prvotných a neprvotných).

Zoznam bibliografických odkazov

- Clothier, P. (1995). *Multi-level marketing*. 2. vyd. Holice : Pelikán.
- Dvořák, J. a kol. (2016). *Občanské právo hmotné 1. 2. aktualizované a doplněné vyd.* Praha : Wolters Kluwer.
- Fekete, I. (2017). *Občiansky zákonník. Všeobecná časť. 1. zväzok . Veľký komentár. 3. aktualizované a rozšírené vyd.* Bratislava : Eurokódex.
- Gunárová, S. (2015) *Koncept zneužitia práva v daňovo-právnych vzťahoch v podmienkach európskej únie* [dizertačná práca]. Bratislava: Univerzita Komenského v Bratislave, Právnická fakulta.
- Karčíková, M. a kol. (2010). *Pojišťovací právo*. Praha : Leges.
- Sidak a kol. (2014). *Regulácia a dohľad nad činnosťou subjektov finančného trhu*. Bratislava: Wolters Kluwer.
- Slezáková, A., Šimonová, J., Jedinák, P. a kol. (2020). *Zákon o finančnom sprostredkovaní a finančnom poradenstve. Komentár*. Bratislava: Wolters Kluwer SR.
- Slezáková, A. a kol. 2016. *Samostatný finančný agent ako dohliadaný subjekt finančného trhu*. Bratislava : Wolters Kluwer, 2016.
- Svoboda, J. (2005). *Občiansky zákonník. Komentár a súvisiace predpisy*. 5. doplnené, rozšírené a aktualizované vyd. Bratislava : EUROUNION, 1345 s. ISBN 80-88984-64-5.
- Škopová, V. et al. (2006). *Zákon o poisťných zprostredkovateľoch a samostatných likvidátoroch poisťných udalostí a predpisy súvisiace*. Praha : C. H. Beck.
- Števček, M. a kol. (2019). *Občiansky zákonník I. § 1 - 450. Komentár*. 2. vyd. Praha : C. H. Beck. 1754 s. ISBN 978-80-7400-770-5.
- Švestka, J. a kol. 2008. *Občianský zákonník (§ 1-459). Komentář*. Praha : C. H. Beck.
- Valentine, J., L. (2004). *Síla MLM. Networking: podpora-marketing*. Praha : Pragma.

Neuromarketing research using method of electroencephalography

Michael Šášky

Abstract

This article aims to clarify the use and potential of electroencephalography methods in neuromarketing research. Identify the main advantages and benefits of the method as well as the prerequisites for its use. The results of research using the EEG method and their use are a secondary goal of the scientific article. We focus primarily on research and technology with the use of hardware and software. The article focuses primarily on the EEG method and its main advantages and functions. Subsequent examination of the human brain during neuromarketing research focused on consumer behavior. This article is intended to point out relevant facts and findings that can be obtained by the EEG method during neuromarketing research. The output points to the possibilities and application of the EEG in the future.

Key words

neuromarketing, electroencephalography, nano-neuromarketing, research

JEL Classification: M31, M37, M39

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Introduction

Many scientific studies are carried out in the same way as before. The same procedures and the same research methods are used, using technologies that require demanding service factors, not to mention financial and capacity options. It is also possible to obtain relevant research results with the help of other devices that fulfill a full-fledged function and can often replace those original technologies and devices. We are talking, for example, about EEG devices, ie electroencephalography. The connection using EEG technology in the brain-computer interface represents a revolutionary way of looking into the neuro-physiological reactions within the brain, which can be monitored, evaluated, and subsequently clarified. Simplifying research itself is a key option for neuromarketing research as well as neuroscience as such. At the same time, accessibility itself is much simpler and less costly compared to other types of technology and scientific procedures. There are many advantages to the EEG research method using a given device, such as mobility, simplicity, ease, availability, accuracy, immediate real-time evaluation, tracking and monitoring, and more. Such devices consist of a hardware part that can be used indoors as well as outdoors. The hardware part is connected to the software, which records and evaluates reactions and results in real-time.

1 Methodology

This article aims to clarify the use and potential of the electroencephalography method in neuromarketing research. Identify the main advantages and benefits of the method as well as the prerequisites for its use. The article is intended to point out the possibilities and application of the EEG in the future. Research methods such as synthesis, analysis, and deduction were used in writing the article. Using synthesis, we explored the links between respondents' relationships and research as such. We used both basic and advanced technological findings on the EEG method of neuromarketing research, which led to important results and outputs. Through analysis, we obtained the most important information and knowledge, which later led to solutions and results in the future. Subsequently, based on our own experience from neuroscience research focused on consumer behavior using the EEG method, we clarified the course from the perspective of both the respondent and the researcher. By clarifying the technological issue itself, we concluded that the EEG method belongs to the basic and relevant possibilities of neuromarketing research.

2 Results and discussion

2.1 Neuromarketing

"Neuromarketing uses neuroscience to expose consumers' subconscious decision-making processes. Neuromarketers study brain and biometric responses as well as behavior to understand and shape how consumers feel, think and act." (NMSBA, 2021).

It is not possible to observe exactly the interrelationships and influences in consumer behavior by traditional research methods. Neuromarketing originated naturally through development, research, and technological progress. Until then, it has not been possible to look into the human brain and observe the individual connections and functions that are related to shopping behavior and decision-making. Thus, a link has been established between the biological and social sciences, which lays a solid foundation for future neuromarketing processes and research. The basic research outputs of neuromarketing include finding out what product/service is desirable and popular. How the design of a given product influences consumer behavior and decision-making. Subsequently, we can observe the strength and importance of the brand and awareness of the brand, the way of internal (brain) and external reactions of respondents. With neuromarketing, we continue to track the impact of our ad campaigns, videos, and promotions themselves. We find out how the given promotions and marketing activities affect emotions and to what extent they are attractive, concise, and able to attract. The subject of research can also be deciding between several alternatives of advertising or campaigns, where we can use a sample of respondents to obtain relevant data, which will then decide on the future success of the advertising campaign. Among other research options applied to consumer behavior, we advise observations and findings on the price of products and services through neuromarketing research. Price is one of the key success factors, especially when launching a product/service, but also during individual product phases and cycles. Therefore, one of the ways to find out the optimal price of products and services is to

use neuromarketing research. If we can use neuromarketing research to identify at least one component of the marketing "four P's" we can talk about a big step forward in marketing research with the connection and application of research with real business. Assuming that consumers behave in the same way and have common and similar patterns of behavior, we dare to say that neuromarketing can recognize these patterns and then define the interrelationships and connections that can be applied in practice. However, many factors affect the quality and relevance of research results. One of them is the size of the research sample.

According to Daniel Kahneman, "small samples show extreme results more often than large samples." Therefore, research conducted on, say, a small sample of respondents, such as 10, is not sufficiently relevant and worthy of a definition of consumer behavior or patterns of behavior (Kahneman D., 2011).

2.2 Electroencephalography

Electroencephalography is a basic diagnostic neurophysiological method, which is based on sensing the electrical activity of the brain using electrodes. At the same time, it is the most widespread and used method of neuromarketing research. Thus, EEG is a non-invasive electrophysiological technique that examines electrical waves emitted by the brain, which are measured by sensors (electrodes) mounted on the scalp or special headsets that perform the same function and are even more practical for the application part of indoor and outdoor research. The changes observed in brain and brainwave activity represent changes in cognitive processes and behaviors. Brain wave frequencies are measured based on two basic metrics, namely performance, and coherence. Performance provides a lot of activity of the brainwaves themselves at a given frequency in real-time. Coherence aims to monitor the correlation between brain wave frequencies between different parts of the brain. Recording a higher power frequency represents more activity in the part of the brain in which it was observed. When a situation arises where individual parts of the brain record activity at once, we say that it is a cognitive process of communication between them. The research results suggest that the EEG method of neuromarketing research is inaccurate at some moments and fails to detect all processes correctly. These are mainly cases that take place inside the brain (emotional and memory centers). These centers send signals that often cannot reach the level of the scalp. This means that EEG research methods are not sufficiently relevant in this case and other neuromarketing research methods such as fMRI and the like are appropriate for this purpose (NMSBA, 2021).

The electrodes themselves measure the relationship between voltage voltages and oscillation frequencies (Hz) in brain activity. EEG recognizes frequency bands such as delta (0.5–4 Hz), theta (5–7 Hz), alpha (8–14 Hz), beta (15–30 Hz), and gamma (30–50 Hz). Frequency bands are typical of the specific behavior of respondents (Bazzani A. et al., 2020).

The EEG neuromarketing research method can process and record brain activity in a very fast way. At the same time, it should be noted that EEG devices are affordable (compared to others), they are portable, wireless, and adapted to different conditions and ways of use. This means that the use of EEG equipment for both scientific and

commercial purposes is gaining momentum and significantly. The possibilities of connecting with virtual reality and new research methods using various technologies are opening up. Another advantage of EEG devices is compatibility with a wide range of hardware and software devices and technologies. EEG devices can be combined with devices to monitor the pupils and their movements. At the same time, it is possible to observe facial movements and facial expressions. The EEG device can also be combined with functional spectroscopy (fNIRS), and oxygenation level analysis. It is also possible to measure the heart rate in real-time, which is used quite often in EEG. By combining data obtained from neuro-imaging and at the same time from the physiological reactions of the respondent, we can determine much more accurate results. Monitoring of several physical activities (whether physiological or neurophysiological, internal or external reactions) guarantees higher relevance to the results of neuromarketing research. It is important to measure and obtain more data at the same time because consumer behavior is a very complex and sophisticated concept of human behavior. With the help of neuromarketing, we can connect and clarify individual reactions to consumer behavior, however, it is necessary to obtain them from several research sources using various methods and equipment. We can monitor the interrelationships between brain activity and, say, heart rate, and then evaluate impulses to given objects and stimuli. The Neuromarketing Scientific and Trade Association says that conducting neuromarketing research requires a professional operation, experience, and interpretation of results. He also informs that the use of devices such as EEG for neuromarketing purposes is conditioned by expertise at the Ph.D. level.

EEG research allows:

- specify background - identify negative/positive associations that are conditioned by monitoring advertising or marketing activities
- Find out which parts and elements of ads are of interest and which are less attractive
- find out whether, based on the advertising scene and the message, the respondents are interested in the given product/service
- recognize reactions to a logo or brand
- we can also monitor the impact of price on a given product/service
- identify individual parts of the advertisement that are not sufficiently related to, for example, the message or are uninteresting
- estimate the expected results of the research subject
- recognize disturbing elements of advertising or sections that may distract from the set goal (Neurolab, 2021)

2.3 EEG Bitbrain Diadem Device

The brain-computer interface can be divided according to the part in which a specific EEG measurement takes place. It is primarily the prefrontal and frontal cortex, the part of the brain responsible for emotional states (Yestherapyhelps, 2021). Subsequently, the frontal theta/beta ratio where we monitor the ability to remember, frontal alpha synchronization responsible for attention but also the parts responsible for motor skills. At the same time, the devices detect the parietal part of the brain together with the occipital part, ie the main part of the brain.

Bitbrain has four models in its EEG product and equipment portfolio that differ slightly in their features. These are EEG devices Diadem, Hero, Air, and Immersive. EEG Diadem device with 12 sensors in the prefrontal, frontal, parietal, and occipital areas of the brain. The Hero also contains 12 sensors located in the central part of the brain, the frontal and parietal parts. The Air model contains 12 sensors that are adapted to the prefrontal part of the brain and also to the occipital part of the brain. The latest Immersive model has the same sensor layout as the Hero. Very well compatible with the Oculus Rift and HTC Vive Pro models, which serve as virtual reality glasses. All devices are very well adapted to research in both interiors and exteriors.

The signal transmission itself is conditioned by the stability of Ag / AgCl sensors with a double rotating mechanism. Each portable channel provides active shielding and high input impedance ($> 10G\Omega$). In general, this means very low distortion and the maximum possible fixation and connection of the sensors. This prevents problems caused by movement or electromagnetic sources. The signal transmission is 24-bit and 256Hz. The improved analog part can also recognize DC signals. It can detect low-frequency waves with a high SNR, ie the signal-to-noise ratio. These indicators tell us how the devices can perform multifunctional research functions with accurate data detection (Alda, A. et al. 2019).

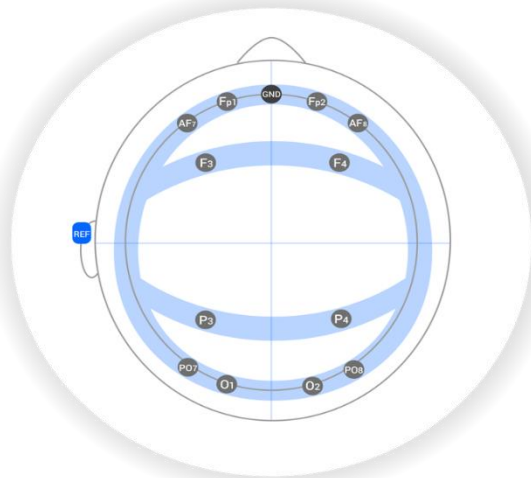
The transmitted signal quality of EEG devices intended for neuromarketing research is crucial, as it is a major factor in the quality and accuracy of the data obtained. To ensure the quality of signal transmission, it is necessary to know all the functions and settings of Bitbrain devices. Before that, however, it is necessary to place the hardware device correctly on the respondent's head and connect it to the software part. The connection of all 12 sensors guarantees the highest data recording accuracy that the device can offer.

An experiment was conducted with 10 respondents using an EEG Bitbrain Immersive device and a virtual reality adapted to a game of basketball. Respondents performed natural movements while playing basketball, while the Immersive device recorded brain reactions and their activity with 12 sensors. These sensors were exposed to physical movement and their connection could be interrupted from time to time. During this research, for example, sensor number 3 suddenly disconnected and lost the connection that recorded the frequencies. Subsequently, he was able to connect himself and record the interrupted activity with complete accuracy. In the software part of the Bitbrain Kit, we can observe the individual sensors and their connections and measurement frequencies. All data are displayed in a graph as well as the measurement of individual sensors and their connection/disconnection. The green check of the individual sensors signals the connection and, conversely, the red light indicates that the malfunction resp. a sensor that is disconnected (Alda A. et al. (2019)).

As we mentioned in the previous section, the EEG Diadem device from Bitbrain is very practical, easy, and effective just for conducting similar research to monitor emotional and cognitive states and responses to the stimuli presented. The technological part of the research is conditioned by hardware and software. It is a brain-computer interface that records and evaluates data and brain responses. The software part represents the part that is responsible for evaluating, storing, and displaying the obtained data and brain activities of the respondent. For neuromarketing research, it is possible to use the Bitbrain Kit software, which is adapted to the Diadem device or competing

software from various manufacturers. The software itself can acquire, process, and program EEG signals and data. The advantage is compatibility with platforms and programs such as LSL, Metlab, Python, BCI200, and OpenVibe. The Bitbrain Diadem EEG device consists of two parts. The head unit, which is connected to the top of the head, includes the amplifier, which provides data transmission and frequency measurement. The head of the Diadem device is 190 g, which means that respondents during the research have no idea that they have the device attached to their heads. The EEG amplifier has 125g, a range of 10m using Bluetooth technology, and the ability of 8 hours of continuous recording. It records EEG signals at a resolution of 24 bits at 256Hz, which is a sufficient range to conduct neuromarketing research. At the same time, it is possible to use additional devices for heart rate monitoring, eye pupil monitoring, facial movements, skin conditions, and the like. Using complementary technologies and hardware devices to monitor other body functions, we will ensure much more relevant results of neuromarketing research itself. The Bitbrain Diadem has 12 sensors that record brain wave activity. They are located in specific places of the head of the device and are located in the front middle and back, so they would optimally monitor all brain processes in individual parts of the brain. The Diadem device is designed to be able to monitor the prefrontal and frontal parts, the parietal part, and the occipital parts of the brain. This means that it can recognize internal brain processes and their connections between different parts of the brain, as we can see in Figure 1.

Fig.1 Bitbrain Diadem device. The top view shows the head (blue) and the layout of the 12 sensors. The REF mark represents a "pin" attached to the left ear of the respondent.



Source: [Bitbrain.com/maincomponents](https://bitbrain.com/maincomponents)

The main advantages of the EEG Bitbrain Diadem device:

- Usability - the device is very quick and easy to set up and prepare for the research itself. It is also intended for non-technical professionals and its applicability is in any conditions
- Portability and wearability - very light and perfectly adapted to each type of head. The sizes of the arches can be adjusted according to the requirements of the respondent to ensure maximum comfort
- EEG sensors are perfectly positioned for the maximum possible research result
- The device can perform up to 8 hours of research continuously
- The sensors are stable throughout the research and have the ability to automatically connect in the event of accidental disconnection or signal loss
- Software compatibility is at a high level and also supports Python or Matlab programmers
- Connect and transfer using the latest Bluetooth technology
- SD storage ensures secure data storage even during long and demanding research (Bitbrain, 2021)

2.4 Neuromarketing research using EEG technology

The subject of the research and results will be the experience with the EEG device from the company Bitbrain in neuroscience research focused on advertising campaigns of Slovak companies. It should be noted that the research itself was carried out by a private company for neuromarketing business activities. It is therefore not possible to specify and refer to the persons, companies, or specific activities in the research and presentation of the campaigns, videos, and companies that created them. Neuromarketing research focused on companies' advertising campaigns is a very effective way of finding out the reactions of respondents, ie future consumers, to research subjects. It can be ads, videos, images, websites, entire campaigns, messages, products and services, design, ways of communication, and the like. We can easily research all the marketing activities that a company creates and communicates. Respondents have no idea what type of video or content will be researched because researchers are trying to prevent unwanted reactions and need to identify truly relevant brain or body responses to the research content. This means that the respondent has no idea in advance that the adrenaline advertising campaign of the company XY or, on the contrary, a very emotional campaign of another company will come at the moment of the research. Before the research itself begins, the respondent should be calm and undisturbed to avoid any interruption or lack of concentration in the conduct of the research.

The idea of the implementation of the research is as follows. Companies/firms will contact a neuromarketing team or neuromarketing research center. The pre-established agreement, subject to the NMSBA Code of Conduct and the Terms and Conditions, will be clear, defined, and agreed upon by all stakeholders, including respondents and third parties. Subsequently, the phase of addressing and obtaining respondents for the research begins. Respondents must answer a predefined person according to specified criteria. Researchers need to know the goal and target group of the research and look for adequate respondents who can provide relevant results and data. If we were to target

respondents outside the target group, it may happen that the obtained and implemented outputs would not correspond to relevance and reality. Therefore, it is necessary to obtain a target sample of respondents that belongs to the category, whether as a future or current consumer/client or a person who is interested in the issue. The organizational structure of neuromarketing research must have a precise structure and schedule to avoid complications and waiting times. Since the most optimal is to conduct research at once or during a certain period of time, it is necessary to know and develop a schedule of respondents based on a predetermined time of one research and all its essentials. It is possible to optimize the research schedule for 10-12 respondents in one day if the nature and size of the research allow it. Of course, everything depends on the size and time required for each research. As we have stated, it is necessary to ensure a sufficiently large sample of respondents to avoid skewing the results on a small sample of respondents. The larger the sample of respondents, the more accurate the relevance of the results and thus the more professional and credible.

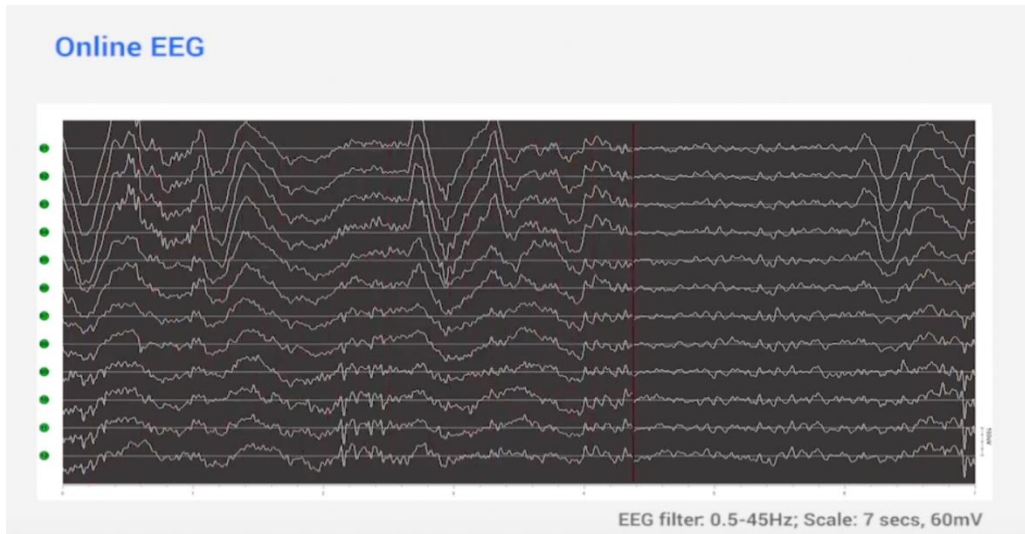
It should be mentioned that before conducting neuromarketing research itself, it is necessary to clarify the ethical aspects and necessary conditions that govern the neuromarketing codes and the neuromarketing scientific and business association itself. Respondents must be provided with all necessary information on the research, experts, subject matter, technologies used, method of procedures, use and purpose of the results obtained, data retention, security conditions, rights and withdrawal, and other requirements of the neuromarketing scientific and trade association and others. institutions or regulations. Respondents must participate in the research voluntarily. The research must be carried out in the professional environment of the designated neuromarketing center or an external environment if the nature of the research so requires it.

The Bitbrain Kit software launches data calibration and hardware connections to ensure relevance and accurate activity recording. It can take several tens of seconds for all 12 sensors to be connected, which must be green. We can do the research itself in the mode without all activated sensors, say only at 10, but it can affect the quality of the research itself and the accuracy of the results. Therefore, it is recommended to calibrate and obtain a signal for all sensors. Activity in the front of the head is called. forebrain, displayed by four sensors of the Diadem device. The midbrain sensors are located on the top of the head, two on the right side of the front and back, and two on the left side of the top of the head, front, and back. The last four activity sensors are located in the back of the head for optimal monitoring of the hindbrain. The device itself must be sufficiently fixed otherwise it cannot function properly and record brain activity. The Bitbrain Diadem must be set up and placed on the respondent's head as it must be comfortable and the respondent may not experience any signs of pushing or other discomforts during the research. However, this does not mean that after placing and connecting the device, the respondent feels some unpleasant feelings of pushing or other undesirable feelings that could disrupt the peaceful course of the research. Before the research itself begins, it is necessary to test the correctness of all devices and their functionality. It is a series of videos that are supposed to arouse emotion, peace followed by adrenaline and fear, and peace again. Such a test of the correctness of the device is necessary to recognize the individual emotions and responses of the respondent to stimuli such as peace, adrenaline, stress, and positive emotions. Subsequently, the respondent is put to rest with his eyes closed for two minutes. Software that records brain activity is being prepared for primary research.

2.5 Process for connecting EEG Bitbrain Diadem devices for neuromarketing research

1. It is necessary to connect the EEG Diadem to the amplifier, the top and side strips, which are then placed on the Diadem device on the head. In the middle of the head part, there is a mark that must be aligned with the respondent's nose to ensure the correct placement of the individual sensors in their places. If the headset is in the position and the respondent does not feel signs of printing or feel right, it is necessary to attach an associated clip in the shape of a pin to the left ear. It is part of the Diadem headset.
2. There are 12 sensors in the main part of the device that are needed correctly to require the necessary signal and connection. The initial connection takes about 10 seconds from startup. Some sensors may have an unconnected state. The connection/disconnection of the individual sensors is indicated by the green and red LEDs in the Bitbrain Kit software. If all lights are green, it means the device is ready for research. If some sensors are not connected / the lights in the software indicate a red color, then the sensors are in contact with the contact. This is a common condition for EEG devices that may not support signal/contact in all sensors. It is simply necessary to ensure direct contact with the skin and then the device connects itself and records the activity of the brain waves. This process is required until not all sensors are connected.
3. The phase of the first test consists of physical activities of the face and body. This simple test is important, especially for the application of the signal transmission quality and the ability of the EEG device to detect movements or changes in state and to avoid affecting the results. The essence of the test lies in opening and closing the eyes, blinking, moving the sled, hands, and a short walk.
4. The device is connected and ready to start research if all the green light sensors are activated, as we can see in Figure 2. However, it all depends on the nature of the research and its purpose, as it is possible to carry out research. optimization processes, for example in the form of videos, which are supposed to arouse various states such as fear, peace, adrenaline, happiness, rest, pleasant feelings, and the like. Subsequently, we can find out if everything is working properly and as expected. This is a much-needed way to test individual brain reactions as well as external reactions, for example by monitoring eye pupils and physical activities, including the heart rate. Using a seemingly simple test, we can recognize that the respondent responds to the submitted videos negatively / positively and his emotions match the subject of the video. (Bitbrain, 2021).

Fig. 2 The graph shows 12 sensors that record brain activity using EEG. Real-time brain-computer interface.



Source: Youtube/Bitbrain

Conclusion

The use of the EEG research method for neuromarketing is one of the basic methods by which we can carry out the research. Using the EEG method is not only simple (compared to other methods) but also less costly. This is research that can be carried out by researchers or a beginning neuromarketing center, and the mentioned method represents a relevant and high-quality way of obtaining, clarifying, and implementing the brain activities of respondents for the use of neuromarketing in practice. Linking research to commercial purpose and use is one of how neuromarketing addresses the problems and challenges associated with consumer behavior. With the EEG method, we can recognize basic but also deeper neurological relationships and connections within the brain. We dare say that despite the claim that it is a basic method of neuromarketing research, it is also very accurate and relevant. We can do research indoors and outdoors, which no other method can do yet. EEG devices, whether helmets, headsets, or other devices, are adapted to all conditions and activities in real-time and can record data even during demanding physical activities. This fact represents a revolutionary step in the field of neuromarketing research, as it allows doing research to experts and researchers or companies that are interested. Consumer neuroscience is not just a laboratory concept and its results should not be found only in centers or laboratories. Consumer neuroscience should be examined where the consumer is in the natural environment, whether it is making consumer decisions online or offline. The best way to get relevant data on consumer decisions is in the environment where they take place. We are talking about shopping malls, shops, brick-and-mortar stores, or a space designated for that. Online shopping decisions are smart devices that could use sensors and

cameras to detect consumers' physiological and neuro-physiological responses. The question of the future will be how we implement consumer behavior research using EEG technologies and other devices to monitor behavior and brain responses directly in the consumer purchasing and decision-making process. We see very great potential for conducting research directly in establishments and shops where win-win solutions for consumer behavior take place. It is possible to offer special memberships and rewards, or discounts, to consumers who are willing to participate in the research and provide data and findings. The consumer would become a respondent at a certain point in time, and get a headset or other device to monitor physiological and neuro-physiological reactions. Companies and neuromarketing researchers would thus have access to relevant data and consumer processes that have not previously been possible to monitor in real terms in a particular store, commercial or other space. At the same time, the consumer and the future respondent are motivated by a reward, which works very well in most cases. Where consumers can receive some reward (in whatever form), they rationalize their advantages and disadvantages in a given situation. We are based on psychological-purchasing patterns of behavior and decision-making, and we dare to say that a similar research scheme would be successful and consumers would show interest in it without the use of coercion and persuasion. In fact, the advantages of the research would outweigh the disadvantages. The research itself could be targeted, targeting specific findings. Such research would focus on a specific segment, product/products, or purchasing behavior and decision-making for a specific purpose e.g. finding out what are the disruptive elements in the purchasing process, and which parts of, say, the display or shelf in a given store were completely ignored and, conversely, which attracted the most attention. Subsequently, the research itself could take place in a regime of complete freedom, where the consumer would receive a device to monitor physiological and neuro-physiological reactions on arrival at the store and could freely shop and behave according to the purpose of arrival at the store. Upon payment, he would hand over the equipment that monitored the activities and would then be awarded a pre-determined remuneration for carrying out the research. Using EEG in practice is one of the best ways we can optimize purchasing processes, the environment, services, and all aspects that the consumer encounters when making a purchase. We get to the point where the classic form of shopping is changing, entering the world of automation, digitization, artificial intelligence, virtual reality, and other technological forms of the future that will not be avoided by consumers or companies. Therefore, it is essential to obtain and evaluate responses and consumer behavior to new and future directions and technologies that will change our daily lives and the world.

Bibliographic references

1. NMSBA. (2021). *What is neuromarketing?* Dostupné 4.12. 2021 na <https://www.nmsba.com/neuromarketing/what-is-neuromarketing>
2. Kehneman D., (2011). *Myslenie rýchle a pomalé*. Martin, SK: Aktuell. ISBN 978-80-8172-056-7.
3. NMSBA. (2021). *Neuromarketing methods*. Dostupné 5.12. 2021 na <https://www.nmsba.com/neuromarketing-companies/neuromarketing-2021>
4. Bazzani A. et al. (2020). Is EEG Suitable for Marketing Research? A Systematic Review. In *Frontiers in Neuroscience*. Front: Neurosci, pp.1343

5. Neurolab. (2022). *Electroencefalography*. Dostupné 8.12. 2021 na <https://en.neurodata.pl/eeg/>
6. Yestherapyhelps. (2021). *Parietálny lalok: vlastnosti a funkcie*. Dostupné 13.12. 2021 na <https://www.brainmarket.sk/blog/vsetko--co-ste-chceli-vediet-o-mozgu-a-bali-ste-sa-opytat/>
7. Alda A. et al. (2019). What is Minimal EEG? User centered and reliable EEG headsets for real-world applications. *IEEE SMC Brain-Machine Interface Systems Workshop*. Dostupné 13.12. 2021 na <https://musaelab.ca/bmi19/abstracts/06%20-%20Alda%20-%20What%20is%20minimal%20EEG%20User%20centered%20and%20reliable%20EEG%20headsets%20for%20real-world%20applications.pdf>
8. Bitbrain. (2021). Wearable and mobile dry-EEG headset. Dostupné 10.12. 2021 na <https://www.bitbrain.com/neurotechnology-products/dry-eeg/diadem>

Ochrana spotrebiteľ'a a reklama

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Consumer protection and advertising

Abstract

This article deals with the issue of consumer protection that is currently under increased attention. Its aim is to analyse the current legal regulation of advertising in the Advertising Act or in other Slovak legislation, with a focus on the legal provisions concerning consumer protection. Advertising is an important source of information for consumers when deciding whether to purchase goods or services. Through advertising, providers of goods and services seek to draw attention to their products in order to gain an advantage for themselves in the market. Sometimes, however, advertising may cross the line of permissibility, with the result that it is misleading, deceptive and unfair to the consumer. These circumstances increase the interest in legal regulation that protects consumers from the negative effects of advertising. In order to prevent the abuse of this means, certain limits have been set on the legality of advertising. These limits are defined in a number of private and public law provisions. Some of them are discussed in this article.

Key words

Consumer protection, advertising, legal regulation of advertising

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Úvod

Spotrebiteľské právo reguluje pomocou právnych noriem vzťahy medzi podnikateľmi a tými, komu podnikatelia ponúkajú svoje výrobky a služby, teda spotrebiteľmi (Drgoncová, J., 2007). Základnou funkciou spotrebiteľského práva je ochrana spotrebiteľ'a ako slabšej strany v upravenom právnom vzťahu medzi podnikateľom a spotrebiteľom. Slabšie postavenie spotrebiteľ'a súvisí okrem iného aj s úrovňou znalostí o výrobkoch a službách, ktoré ponúka podnikateľ spotrebiteľovi.

Zrejme každý podnikateľ sa snaží predat' čo najviac svojich výrobkov, poskytnúť čo najväčšie množstvo svojich služieb. Za tým účelom propaguje svoje výrobky, služby, aby sa stali pre spotrebiteľov atraktívnymi. Jedným zo spôsobov umožňujúcich takúto propagáciu je nepochybne reklama (Jakab, R., 2010). Reklama je „všadeprítomná“, a preto je nevyhnutná jej regulácia. V právnom poriadku Slovenskej republiky je reklama upravená vo viacerých právnych predpisoch súkromného i verejného práva.

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1 Metodika práce

Tento článok sa zaoberá problematikou ochrany spotrebiteľa, pričom jeho cieľom je analyzovať platnú právnu úpravu reklamy v Zákone o reklame, respektíve v ďalších právnych predpisoch, so zameraním na zákonné ustanovenia, ktoré sa týkajú spotrebiteľa.

Reklama predstavuje jeden z nástrojov, ktorým sa snažia podnikatelia presadiť svoje výrobky a služby. Niekedy môže prostredníctvom reklamy dôjsť k prekročeniu hranice prípustnosti, ktorého následkom je, že reklama voči spotrebiteľovi pôsobí klamlivo, zavádzajúco, nekalosúťažne. Tieto faktory zvyšujú záujem o právnu reguláciu, ktorá chráni spotrebiteľov pred negatívnymi vplyvmi reklamy.

V záujme dosiahnutia stanoveného cieľa článku boli pri jeho spracovaní použité viaceré metódy vedeckého skúmania. Predovšetkým metódy analýzy a syntézy. Na oddelenie podstatných informácií od nepodstatných poslúžila metóda abstrakcie. Záver bol formulovaný prostredníctvom metódy syntézy a indukcie. Informácie sú v článku zoradené tak, aby vytvárali jeden logický celok.

2 Výsledky a diskusia

Reklama má dlhodobo svoje stabilné miesto medzi prostriedkami, ktoré využívajú podnikatelia v boji o spotrebiteľovu peňaženku. V snahe zamedziť zneužívaniu tohto prostriedku, boli stanovené určité hranice legálnosti reklamy. Tieto hranice sú vymedzené v rôznych právnych predpisoch (Jakab, R., 2010). Ide najmä o Zákon o reklame, Zákon o ochrane spotrebiteľa, Obchodný zákonník a iné právne predpisy.

2.1 Zákon o reklame

Všeobecnú právnu úpravu pre oblasť reklamy v Slovenskej republike predstavuje zákon č. 147/2001 Z.z. o reklame a o zmene a doplnení niektorých zákonov v znení neskorších predpisov, ktorý nadobudol účinnosť 1. mája 2001. Tento zákon ustanovuje všeobecné požiadavky na reklamu, požiadavky na reklamu niektorých produktov, ochranu spotrebiteľov a podnikateľov pred účinkami nepripustnej porovnávacej reklamy a tiež pôsobnosť orgánov štátnej správy pri výkone dozoru nad dodržiavaním tohto zákona. Zákon o reklame je lex generalis v oblasti reklamy, pretože právne normy v ňom obsiahnuté sa použijú na reguláciu spoločenských vzťahov vtedy, ak osobitný zákon (lex specialis) neustanovuje inak.

Zákon o reklame v úvode definuje základné pojmy pre oblasť reklamy, ako reklama, produkt, šíriteľ reklamy, tabakový výrobok, sponzorstvo tabakového výrobku a objednávatel reklamy.

Reklama je predvedenie, prezentácia alebo iné oznámenie v každej podobe súvisiace s obchodnou, podnikateľskou alebo inou zárobkovou činnosťou s cieľom uplatniť

produkty na trhu. Ide o pozitívne vymedzenie pojmu reklama, zákon však zároveň vymedzuje reklamu aj negatívne. Reklamou nie je označenie sídla právnickej osoby, trvalého pobytu fyzickej osoby, označenie prevádzkarne alebo organizačnej zložky právnickej osoby alebo fyzickej osoby obchodným menom, ako aj označenie budov, pozemkov a iných nehnuteľných vecí alebo hnutel'ných vecí vo vlastníctve alebo v nájme týchto osôb. Reklamou taktiež nie je označenie listov a obálok obchodným menom alebo ochrannou známkou, označenie produktov alebo ich obalov údajmi, ktoré sa musia na nich uvádzať podľa osobitného predpisu (napr. identifikácia výrobcu a dovozcu atď.). Reklamou takisto nie je označenie ani zverejnenie výročnej správy o hospodárení, účtovnej závierky, auditu podniku alebo iných informácií o podniku, ak povinnosť ich zverejnenia vyplýva z osobitného predpisu.

Pod pojmom produkt je potrebné rozumieť nielen tovar, službu alebo nehnuteľnosť, ale aj obchodné meno, ochrannú známku, označenie pôvodu výrobkov a iné práva a záväzky súvisiace s podnikaním.

Šíriteľom reklamy je fyzická osoba alebo právnická osoba, ktorá reklamu šíri.

Objednávateľom reklamy je ten, kto si objedná u šíriteľa reklamy šírenie reklamy.

Zákon o reklame definuje aj sponzorstvo tabakového výrobku, čo súvisí so všeobecným zákazom reklamy tabakových výrobkov v zákone. Sponzorstvom tabakového výrobku sa rozumie finančný alebo vecný príspevok alebo iné plnenie pre fyzickú osobu alebo právnickú osobu, na podujatie alebo činnosť, ktorého účelom alebo vedľajším výsledkom je reklama tabakového výrobku. Sponzorstvom tabakového výrobku nie je plnenie, ktoré je poskytnuté ako odplata za tovar alebo službu. Zákon súčasne definuje tabakový výrobok ako výrobok určený na fajčenie, šnupanie, cmúľanie alebo žuvanie, ak je čo len čiastočne vyrobený z tabaku.

Reklama nesmie obsahovať čokoľvek čo znevažuje ľudskú dôstojnosť, uráža národnostné cítienie alebo náboženské cítienie, ako aj akúkoľvek diskrimináciu na základe pohlavia, rasy a sociálneho pôvodu. Reklama nesmie urážať národnostné cítienie alebo rasu napríklad odporúčaním nekupovať výrobky alebo služby od dodávateľa určitej národnosti alebo rasy. Naopak pozitívna reklama charakteru „Kupujte slovenské výrobky“ je dovolená (Kolembus, J., 2009).

Reklama nesmie propagovať násilie, vandalizmus alebo vulgárnosť a navádzať na protiprávne konanie alebo vyjadrovať s ním súhlas. Nesmie tiež prezentovať nahotu ľudského tela pohoršujúcim spôsobom.

Reklama nesmie prezentovať produkty poškodzujúce životné prostredie alebo produkty škodlivé životu alebo zdraviu ľudí, zvierat alebo rastlín, bez toho aby sa na škodlivosť výslovne a zreteľne neupozornilo. Nesmie ohrozovať fyzické zdravie ani psychické zdravie občana, prezentovať potraviny a výživové doplnky tak, akoby mali účinky liekov.

Reklama nesmie obsahovať osobné údaje, údaje o majetkových pomeroch osôb bez ich predchádzajúceho súhlasu, odvolávať sa na vyhlásenia iných osôb bez ich predchádzajúceho súhlasu a zasahovať do práv iných osôb bez ich súhlasu.

Reklama nesmie zneužívať dôveru maloletých osôb, najmä podnecovať na správanie, ktoré môže ohroziť ich zdravie, psychický vývin alebo morálny vývin, zobrazovať deti v nebezpečných situáciách.

Reklama musí spĺňať požiadavky na verejné rečové prejavy, dodržiavanie zásad jazykovej kultúry, gramatické a pravopisné pravidlá, pravidlá výslovnosti slovenského jazyka a ustálenú odbornú terminológiu.

Reklama sa nesmie šíriť automatickým telefonickým volacím systémom, telefaxom a elektronickou poštou bez predchádzajúceho súhlasu užívateľa, ktorý je príjemcom reklamy a zároveň sa nesmie šíriť adresne, ak adresát reklamy doručenie reklamy vopred odmieta.

Reklama sa nesmie šíriť ak je v rozpore s dobrými mravmi, prezentuje produkty, ktorých výroba, predaj, poskytovanie alebo používanie sú zakázané (napríklad drogy) alebo ak nespĺňa požiadavky podľa osobitného predpisu.

Od účinnosti Zákona o reklame (zákon č. 147/2001 Z.z.) je možné vnášať do konkurenčného boja medzi podnikateľmi aj prvky porovnávania. Za striktné daných podmienok je povolená aj porovnávacia reklama.

Porovnávacia reklama je reklama, ktorá priamo alebo nepriamo označuje iného súťažiteľa alebo jeho produkty. Porovnávacia reklama je prípustná ak:

1. porovnáva tovary, služby alebo nehnuteľnosti, ktoré uspokojujú potreby alebo sú určené na rovnaký účel,
2. objektívne porovnáva jednu alebo viac konkrétnych typických, podstatných a overiteľných vlastností tovarov, služieb alebo nehnuteľností, vrátane ich ceny (pri tovaroch s označením pôvodu porovnáva iba tovary s rovnakým označením),
3. nediskriminuje ani nehaní ochranné známky, obchodné mená, ďalšie rozlišovacie znaky, tovary, služby, činnosti alebo okolnosti súťažiteľa,
4. nevyužíva nečestne výhodu dobrého mena ochrannej známky, obchodného mena alebo iných rozlišujúcich znakov súťažiteľa alebo označenie pôvodu konkurenčných produktov,
5. nepredstavuje tovar alebo služby ako napodobeniny alebo kópie tovaru alebo služieb označených ochrannou známkou alebo obchodným menom,
6. nevyvoláva zámenu medzi obchodníkmi, medzi objednávateľom reklamy a súťažiteľom alebo medzi ochrannými známkami, obchodnými menami, inými rozlišujúcimi znakmi, tovarmi alebo službami objednávateľa reklamy a súťažiteľa,
7. nie je klamlivá,
8. jej súčasťou nie je nekalá obchodná praktika.
9. Splnenie všetkých kumulatívnych podmienok na to, aby sa mohla porovnávacia reklama uskutočniť je v praxi náročné, preto sa s porovnávacou reklamou, aj keď je dovoľená, v praxi stretujeme zriedkavo.
10. V zákone o reklame sú osobitné podmienky určené pre reklamu:
11. *alkoholických nápojov* – reklama alkoholických nápojov nesmie (1) dávať do súvislosti spotrebu alkoholu s priaznivým účinkom na telesnú výkonnosť alebo na duševnú výkonnosť, (2) tvrdiť, že alkoholické nápoje majú liečivé účinky, povzbudzujúci alebo upokojujúci účinok alebo že pomáhajú riešiť osobné problémy, (3) nabádať na nestriedme požívanie alkoholických nápojov alebo prezentovať abstinenciu alebo triezvosť ako nedostatok, (4) zdôrazňovať obsah alkoholu v nápojoch ako znak ich kvality, (5) zameriavať sa na maloleté deti,

12. *tabakových výrobkov* - reklama tabakových výrobkov je zakázaná (1) na všetkých druhoch informačných nosičov, (2) rozdávaním tabakového výrobku verejnosti, (3) na reklamných veciach, ktoré nesúvisia s fajčením a ktoré sa rozdávať verejnosti, okrem reklamných vecí, ktoré sa rozdávať na miestach predaja výrobkov, (4) prostredníctvom sponzorstva tabakového výrobku, (5) uvádzaním ochrannej známky, emblému, názvu alebo iného výrazného znaku tabakového výrobku okrem ich uvádzania na miestach predaja tabakových výrobkov,
13. *zbraní a streliva* - zákon zakazuje reklamu zbraní a streliva. Zakaz reklamy sa nevzťahuje na (1) informácie určené len pre odbornú verejnosť vo výrobe a v obchode so zbraňami a strelivom, (2) reklamu zbraní a streliva v obchodoch alebo na výstavách špecializovaných na predaj zbraní a streliva vrátane ich výkladov a priečelí alebo v častiach obchodov určených na predaj zbraní a streliva, (4) reklamu v odbornej literatúre a v odbornej periodickej tlači,
14. *liekov* - reklama liekov zahŕňa akúkoľvek formu podomového informovania, agitačnú činnosť alebo podnecovanie smerujúce k podpore predpisovania, vydávania, predaja alebo spotreby liekov. Zakazuje sa reklama liekov (1) ktoré nie sú v Slovenskej republike registrované, (2) ktoré obsahujú omamné látky, psychotropné látky a prípravky, (3) ktorých výdaj je viazaný na lekárske predpis alebo na veterinárny lekárske predpis, (4) ktorých výdaj nie je viazaný na lekárske predpis, avšak sa uhrádzajú na základe verejného zdravotného poistenia, nepredstavuje tovar alebo služby ako napodobeniny alebo kópie tovaru alebo služieb označených ochrannou známkou alebo obchodným menom,
15. *Dojčenských prípravkov a následných doplnkových prípravkov* je prípustná len v publikáciách zameraných na starostlivosť o dojčatá a malé deti a vo vedeckých publikáciách. Môže obsahovať iba vedecky overené a vecne správne údaje. Nesmie viesť k záveru, že dojčenské prípravky a následné doplnkové prípravky sú rovnocenné s materským mliekom alebo že sú lepšie ako materské mlieko. Reklama dojčenských prípravkov a následných doplnkových prípravkov musí obsahovať informácie o ich správnej príprave a ich správnom užití. Zákonom sa zakazuje v reklame na dojčenské výrobky a následné doplnkové prípravky používať slovné výrazy „humanizovaný“, „maternizovaný“ alebo obdobné výrazy. Reklama dojčenských prípravkov rozdávaním vzoriek, upozorňovaním na zľavu, pridaním ďalších výrobkov alebo osobitnou ponukou je zakázaná.

Dozor a kontrolu nad dodržiavaním zákona o reklame vykonávajú orgány úradnej kontroly potravín – napríklad Štátna veterinárna a potravinová správa Slovenskej republiky, ďalej Štátny ústav pre kontrolu liečiv nad reklamou liekov, Ústav štátnej kontroly veterinárnych biopreparátov a liečiv nad reklamou veterinárnych liečiv, Úrad verejného zdravotníctva Slovenskej republiky a regionálne úrady verejného zdravotníctva nad reklamou kozmetických výrobkov, potravín na osobitné výživové účely vrátane dojčenských prípravkov a následných doplnkových prípravkov, výživových doplnkov a spotrebiteľsky balených minerálnych, pramenitých a pitných vôd, a Slovenská obchodná inšpekcia nad reklamou tabakových výrobkov a ostatných výrobkov.

Zákon o reklame stanovuje osobitný systém sankcií, ktoré môžu byť uplatnené orgánmi dozoru. Pri zistení porušenia zákona orgán dozoru šírenie reklamy zakáže. V rozhodnutí o zákaze šírenia reklamy orgán dozoru môže uložiť povinnosť zverejnenia tohto

rozhodnutia alebo jeho časti a povinnosť zverejnenia opravného vyhlásenia v hromadných oznamovacích prostriedkoch. Okrem toho môže orgán dozoru za porušenie ustanovení Zákona o reklame zodpovednému subjektu uložiť pokutu. Pokuta sa môže uložiť do jedného roka odo dňa, keď sa orgán dozoru o porušení zákona o reklame dozvedel (ide o subjektívnu lehotu), najneskôr však do troch rokov od porušenia zákona o reklame (ide o objektívnu lehotu). Po uplynutí uvedenej lehoty dochádza k premlčaniu možnosti udelenia sankcie.

2.2 Právna úprava reklamy v niektorých ďalších právnych predpisoch

Právnym predpisom, ktorý sa dotýka problematiky reklamy je aj **Zákon o ochrane spotrebiteľa** č. 250/2007 Z.z. v znení neskorších predpisov. Tento zákon chápe reklamu ako jednu z obchodných praktík, pre ktoré platí, že nesmú byť nekalé, mať podobu klamlivého konania alebo klamlivého opomenutia alebo byť agresívne. Klamlivou obchodnou praktikou je napríklad využívanie redakčného priestoru v médiách na podporu produktu, keď predávajúci zaplatil za podporu predaja, bez toho, že by to bolo vysvetlené v obsahu alebo obrazom, alebo zvukom jasne identifikovateľné pre spotrebiteľa (skrytá reklama), či výzva na kúpu produktov za stanovenú cenu bez toho, že by predávajúci zverejnil akékoľvek rozumné dôvody, pre ktoré môže predpokladať, že nebude schopný dodať tieto produkty alebo rovnocenné produkty, alebo zariadiť, aby dodávku uskutočnil iný predávajúci za túto cenu, v čase a množstve, ktoré sú rozumné vzhľadom na produkt, rozsah reklamy produktu a ponúkanú cenu (vábivá reklama). Za agresívnu obchodnú praktiku sa považuje zahrnutie do reklamného materiálu faktúry alebo obdobného dokumentu, ktorý požaduje zaplatenie sumy a ktorý vzbudzuje u spotrebiteľa dojem, že si už objednal predávané produkty, pričom tomu tak nie je.

Medzi povinnosti predávajúceho patrí v zmysle § 4 ods. 1 písm. j) zákona č. 250/2007 Z.z. o ochrane spotrebiteľa uviesť v akejkoľvek obchodnej komunikácii vrátane reklamy a marketingu tovarov a služieb, ktorá od spotrebiteľa vyžaduje, aby na získanie tovaru alebo služby kontaktoval predávajúceho telefonicky na čísle služby so zvýšenou tarifou alebo krátkou textovou správou (SMS), pravdivý a úplný údaj o jednotkovej cene volania, jednotkovej cene krátkej textovej správy (SMS) alebo maximálnej možnej cene volania alebo krátkej textovej správy (SMS), ktorú je povinný spotrebiteľ za také volanie alebo krátku textovú správu (SMS) preskúmať.

Ak sa v reklame uvádza predajná cena výrobku, musí sa uviesť aj jednotková cena (§ 14a ods. 8 zák. č. 250/2007 Z.z.).

Obchodný zákonník č. 513/1991 Zb. v znení neskorších predpisov vymedzuje v § 45 klamlivú reklamu, ako jednu zo skutkových podstát nekalej súťaže. Klamlivou reklamou je reklama tovaru, služieb, nehnuteľnosti, obchodného mena, ochrannej známky, označenia pôvodu výrobkov a iných práv a záväzkov, ktorá uvádza do omylu alebo môže uviesť do omylu osoby, ktorým je určená alebo ku ktorým sa dostane, a ktorá v dôsledku klamlivosti môže ovplyvniť ekonomické správanie týchto osôb alebo ktorá poškodzuje alebo môže poškodiť iného súťažiteľa alebo spotrebiteľa (§ 45 ods. 1 zák. č. 513/1991 Z.z.). Klamlivá reklama je koncipovaná ako tzv. ohrozovací delikt, to znamená, že stačí možnosť, že by k oklamaniu mohlo dôjsť. Klamlivosť je vymedzená ako spôsobilosť uviesť do omylu.

Pri posudzovaní klamlivosti reklamy sa zohľadňujú všetky jej znaky, najmä informácie, ktoré obsahuje, o

- a) tovar a službách, ich dostupnosti, vyhotovení, zložení, spôsobe a dátume výroby alebo dodania, vhodnosti a spôsobe použitia, množstve, zemepisnom alebo obchodnom pôvode alebo o výsledkoch ich skúšok alebo kontrol,
- b) cene alebo spôsobe, akým je vypočítaná, a o podmienkach, za ktorých sa tovar a služby dodávajú alebo poskytujú,
- c) charakteristických znakov súťažiteľa reklamy, najmä jeho totožnosti, kvalifikovanosti, jeho chránenom priemyselnom práve, duševnom vlastníctve, ocenení alebo vyznamenaní (§ 45 ods. 2 zák. č. 513/2001 Z.z.).

Právne prostriedky ochrany proti nekalej súťaži sú upravené v ustanovení § 53 Obchodného zákonníka. Podľa uvedeného ustanovenia osoby, ktorých práva boli nekalou súťažou porušené alebo ohrozené, môžu sa proti rušiteľovi domáhať, aby sa tohto konania zdržal a odstránil závadný stav. Ďalej môžu požadovať primerané zadostučinenie, ktoré sa môže poskytnúť aj v peniazoch, náhradu škody a vydanie bezdôvodného obohatenia. Navyše má osoba dotknutá nekalou súťažou ešte možnosť domáhať sa ako úspešný účastník súdneho konania zverejnenia rozsudku podľa § 55 ods. 2 Obchodného zákonníka a za podmienok tam uvedených. Právo aby sa rušiteľ protiprávneho konania zdržal a odstránil závadný stav môže v prípade klamlivej reklamy uplatňovať aj združenie spotrebiteľov.

Osobitnú úpravu týkajúcu sa klamlivej reklamy potravín obsahuje **Zákon o potravinách** č. 152/1995 Z.z. v znení neskorších predpisov. Podľa § 18 ods. 1 písm. d) tohto zákona nad dodržiavaním zákazu klamlivej reklamy potravín sa vykonáva úradná kontrola. Právnickej osobe alebo fyzickej osobe, ktorá porušuje zákaz klamlivej reklamy potravín hrozí uloženie pokuty. Osobitný zákaz sa vzťahuje na uvádzanie do obehu potravín klamlivo označených alebo ponúkaných na spotrebu klamlivým spôsobom. Klamlivým spôsobom ponúkajú potravín na spotrebu sa pritom rozumie ústna alebo písomná informácia o potravinách oznamovaná spotrebiteľovi predávajúcim, ktorá je nepravdivá, zavádzajúca alebo skresľujúca.

Zákon č. 129/2010 Z.z. o spotrebiteľských úveroch a o iných úveroch a pôžičkách pre spotrebiteľov a o zmene a doplnení niektorých zákonov v znení neskorších predpisov predpisuje v § 3 ods. 1, aké informácie sa musia objaviť v reklame spotrebiteľského úveru. Iné ustanovenie tohto zákona, ktoré výslovne obsahuje pojem reklama (§ 22 ods. 1) ukladá finančnému agentovi povinnosť uviesť v reklame a dokumentoch určených pre spotrebiteľov rozsah svojich právomocí, najmä či pracuje výlučne s jedným alebo viacerými veriteľmi.

Zákon č. 308/2000 Z.z. o vysielaní a retransmisii a o zmene zákona č. 195/2000 Z.z. o telekomunikáciách v znení neskorších predpisov zaraďuje reklamu do tzv. doplnkového vysielania a na účely tohto zákona definuje jednak pojem reklama a jednak pojem telenákup, pričom obidva tieto pojmy spadajú pod širší pojem, a to pojem mediálna komerčná komunikácia. Na základe zákona o vysielaní a retransmisii tak existuje jednak všeobecnejšia regulácia, ktorá sa vzťahuje na celú oblasť mediálnej komerčnej komunikácie a jednak špecifická regulácia vzťahujúca sa iba na reklamu a telenákup. V rámci špecifickej regulácie reklamy a telenákupu zákon prikazuje vysielateľovi zabezpečiť, aby ním vysielaná reklama a telenákup boli čestné a slušné, nepoškodzovali zá-

ujmy spotrebiteľov a nezneužívali dôveru spotrebiteľov. Zákon tiež zakazuje alebo obmedzuje vysielanie reklamy a telenákupu (najmä formou obmedzenia vysielacieho času) na niektoré druhy výrobkov, služieb či reklamy súvisiacej s náboženským cítením. Zákon ďalej stanovuje požiadavky na formu a spôsob uvádzania reklamy a telenákupu vo vysielaní, požiadavky na zaradovanie reklamy a telenákupu do vysielania, na časový rozsah vysielanej reklamy a telenákupu vo vysielaní televíznej a rozhlasovej programovej služby a ustanovuje tiež určité obmedzenia sponzorovania programov alebo programovej služby tými subjektmi, reklama produktov ktorých sa zakazuje alebo obmedzuje.

Zákon o elektronickom obchode č. 22/2004 Z.z. v znení neskorších predpisov zahrnul reklamu pod širší pojem komerčná komunikácia. Pokiaľ ide o komerčnú komunikáciu má poskytovateľ služieb informačnej spoločnosti širšie informačné povinnosti týkajúce sa jeho identifikácie, ako aj povinnosť rozlíšiť všetky identifikačné informácie od komerčnej komunikácie. To platí aj v prípade, ak poskytovateľ služieb uskutočňuje komerčnú komunikáciu v mene alebo na účet inej osoby, musí byť táto osoba identifikovaná. Zákon tiež ustanovuje osobitné požiadavky na rozlíšenie osobitnej ponuky tovaru a služieb od základnej ponuky, ak sa tovar alebo služba ponúka v rámci komerčnej komunikácie. Poskytovateľ služieb informačnej spoločnosti nesmie doručovať informácie informačnej komunikácie elektronickou poštou, ak si ich príjemca služby vopred nevyžiadal.

Podľa § 8 ods. 6 **Zákona** č. 270/1995 Z.z. **o štátnom jazyku** Slovenskej republiky v znení neskorších predpisov všetky nápisy, reklamy a oznamy určené na informovanie verejnosti, najmä v predajniach, na športoviskách, v reštauračných zariadeniach, na uliciach, pri cestách a nad nimi, na letiskách, autobusových staniciach a železničných staniciach, vo vozidlách verejnej dopravy sa uvádzajú v štátnom jazyku. Ak obsahujú text v iných jazykoch, inojazyčné texty nasledujú až po texte v štátnom jazyku a musia byť obsahovo totožné s textom v štátnom jazyku. Inojazyčný text sa uvádza rovnakým alebo menším písmom ako text v štátnom jazyku. V nápisoch a oznamoch určených na informovanie verejnosti v jazyku národnostnej menšiny a v štátnom jazyku v obciach, kde sa v úradnom styku používa jazyk tejto národnostnej menšiny podľa osobitného predpisu, a v reklame sa poradie textov neurčuje.

Záver

Reklama je pre spotrebiteľa dôležitým zdrojom informácií pri rozhodovaní sa o kúpe produktu či služby. Právnu úpravu reklamy v slovenskom právnom poriadku obsahuje celý rad právnych predpisov súkromného i verejného práva. Verejnoprávna regulácia reklamy je obsiahnutá predovšetkým v Zákone o reklame, ktorý je lex generalis v oblasti reklamy. K právnym predpisom verejného práva, ktoré regulujú reklamu patria okrem iných aj Zákon o ochrane spotrebiteľa, Zákon o potravinách, Zákon o spotrebiteľských úveroch, Zákon o vysielaní a retransmisii, Zákon o elektronickom obchode či Zákon o štátnom jazyku. Dodržiavanie týchto zákonov kontrolujú štátne orgány, ktoré majú právomoc sankcionovať tých, ktorí stanovené pravidla porušujú. Súkromnoprávna ochrana pred klamlivou reklamou je obsiahnutá v Obchodnom zákonníku a spotrebiteľ sa môže domáhať ochrany proti porušiteľovi na súde.

Zoznam bibliografických odkazov

- DRGONCOVÁ, J. (2007): Spotrebiteľské právo v Slovenskej republike a v Európskej únii. 1. vydanie. Samorín: Heuréka.
- JAKAB, R. (2010): Porovnávacía reklama z pohľadu práva. 1. vydanie. Košice: Univerzita Pavla Jozefa Šafárika.
- KOLEMBUS, J. (2009): Zákon o reklame s komentárom. In Poradca. Žilina: Poradca 2009(3), 75-102.
- Zákon č. 147/2001 Z.z. o reklame a o zmene s doplnením niektorých zákonov v znení neskorších predpisov.
- Zákon č. 250/2007 Z.z. o ochrane spotrebiteľa a o zmene zákona č. 372/1990 Zb. o priestupkoch v znení neskorších predpisov.
- Zákon č. 513/1991 Zb. Obchodný zákonník v znení neskorších predpisov.
- Zákon č. 152/1995 Z.z. o potravinách v znení neskorších predpisov.
- Zákon č. 129/2010 o spotrebiteľských úveroch a o iných úveroch a pôžičkách pre spotrebiteľov a o zmene a doplnení niektorých zákonov v znení neskorších predpisov.
- Zákon č. 308/2000 Z.z. o vysielaní a retransmisii a o zmene zákona č. 195/2000 Z.z. o telekomunikáciách v znení neskorších predpisov.
- Zákon č. 22/2004 Z.z. o elektronickom obchode a o zmene a doplnení zákona č. 128/2002 Z.z. o štátnej kontrole vnútorného trhu vo veciach ochrany spotrebiteľa a o zmene a doplnení niektorých zákonov v znení zákona č. 284/2002 Z.z. v znení neskorších predpisov.
- Zákon č. 270/1995 Z.z. o štátnom jazyku Slovenskej republiky v znení neskorších predpisov.

Discover Central Europe and its target markets

Lenka Zemanová

Abstract

This study presents a brief overview of joint promotional activities in Visegrad region. The purpose of undertaking the study is to examine the development and diversification of target markets of Discover Central Europe initiative – China, USA, Japan, Russia, India and Brazil. Introduction deals with the description of Discover Central Europe initiative and summarises this initiative from the scientific point of view through the literature review. Next part focuses on Methodology of the study, which reveals the main goal, partial goals and calculations used to reach the results. The study continues with the Results which describe the development of international arrivals from target markets of examined initiative. The Results show that the highest number of arrivals of Discover Central Europe initiative throughout the years has been in Czech Republic. However, the highest increase of tourist arrivals from above mentioned target markets during the examined period was in Slovakia. Following this, the share of arrivals from target markets is calculated in each country of Visegrad and compares the diversification of tourists from these countries. For completing the results, an evaluation of marketing promotional program is calculated through cost per inquiry index. The last chapter explains the main findings and indicates the next research possibilities for this initiative.

Key words

Tourism, V4 countries, Discover Central Europe, target markets

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Introduction

The cooperation of V4 countries (Slovakia, Czech Republic, Hungary, Poland) can be referred as the most clearly profiled initiative in the Central Europe. Cooperation is an ongoing process which can be seen on both the political and experts' level in all possible domains of public administration whether it concerns infrastructure, preservations of endangered species, military issues, sports or tourism. Furthermore, cooperation is ensured through the number of joint projects implemented in different fields including culture, environment, internal security, science, education or transportation. In 2002 the cooperation has been extended to tourism (Meyer, Wanagos, Studzieniecki, 2018).

The objective of this paper is field of tourism, where V4 countries cooperate together in joint promotional initiative under the name „Discover Central Europe.“ Through this initiative V4 countries form one unique tourist destination. Visegrad countries do not compete in distant overseas markets. Instead of this thanks to joint promotional activities third country visitors travelling to Europe choose to visit a region rather than a specific country. The main goal of this initiative is to stimulate an inbound tourism, especially tourists from outside Europe. Common tourist promotion is primarily focused on distant and overseas countries – USA, China, Japan and China. Promotion has later extended to

countries such as Brazil, India and Latin America. Cross-border tourists products are the key elements of tourist brand. The Visegrad countries share historical roots, culture, traditions, common architecture, art, cuisine and landscape which make them as a region very special. (Discover Central Europe, 2016).

V4 countries cooperate in tourism marketing and in common promotional measures carried out primarily by their national tourist boards. The cooperation is based on marketing plan which is signed by representatives of these countries every year. The countries have been using several marketing tools to promote Discover Central Europe initiative such as roadshows, study tours for operators and travel agencies, industry workshops, presentations, e-learning platforms and promotional campaigns (Visegrad fund, 2020). The joint promotional activities are financed through the budget of Visegrad fund, which comes from equal contributions from the governments of V4 countries (8 million € a year). The product of common V4 marketing campaign are traditional themes such as Central European cities, culture and history, UNESCO heritage sites, spa tourism, health tourism, gastronomy, congress and incentive tourism, adventure and luxury holidays (Czech Tourism Annual Report, 2016).

To fully understand the problematics of this paper we need firstly to define the following terms. According to UNWTO (2015) destination is a unique place where a visitor spends at least one night and exhibits tourism products such as attractions, support services, and tourism resources complete with defined management, physical and administrative boundaries and a well-known image. A well-known image of destination is often linked with destination brand, which makes a destination seem appealing to tourists and build awareness in the mind of consumers. Tourism brand is a result of an organised effort to communicate a destination's unique selling point to potential visitors (Chandler, 2014). Cooperation between V4 countries and creation of destination partnerships bring a wide range of advantages such as access to new source tourist markets, enabling interconnections among stakeholders including tourists, local communities, and major-decision makers, increase of financial budget through the pooling of financial resources. Common cooperation strengthens the competitiveness of the destination on global market (Novacká, 2013).

Literature review

When studying the scientific publications related to tourism in V4 countries there are several authors who deal with these issues.

Bucher (2015) analyses the competitiveness of the V4 countries as a tourist destination. The author identifies the competitiveness indicators of V4 countries and also analyses the development of international tourist arrivals among these countries. The recommendation to increase the competitiveness of Visegrad region is to invest firstly into air and land infrastructure as well as infrastructure of tourism. As a comparative advantage of V4 countries the author considers the low prices of accommodation and hospitality services in comparison with western European countries.

Novacká (2016) through comparative analysis deals with economic impacts of tourism, competitiveness, social influence and digital transformation in V4 countries and Austria. Through the economic impacts such as direct and total GDP, direct and total

employment, visitors export and investment she highlights the significant power of travel and tourism in Austria. Furthermore, she explains the numerous advantages of Visegrad countries including safety, security, health and hygiene.

Matúšíková, Šambronská and Zegleň (2020) analyse the relation between income from active foreign tourism and number of foreign visitors in V4 countries. The statistically significant relationship between income from tourism and the number of international tourists has not been confirmed for one of the V4 countries – Hungary. The study results in recommendations also in Discover Central Europe initiative. The authors point out the new non-traditional forms of tourism that the V4 countries can offer to their main source markets should be included in this project. This includes creative tourism, glamping tourism or culinary tourism.

Hurajová and Majerská (2021) study tourism and its impact on economy of V4 countries. Through the multi-criteria analysis of tourism they identify the role of tourism through selected attributes such as GDP, employment, number of foreign tourists and the Travel and Tourism Competitiveness Index (TTCI). They sum up that Slovakia has a potential to increase its level of tourism which is currently at the tail of V4 countries. Their recommendation to the future is on the basis of the results of TTCI index to work on a infrastructure as a whole.

However, in connection with Discover Central Europe initiative there is a very limited number of scientific literature focused on this issue. Meyer, Wanagos, Studzieniecki (2018) delimit and visualise Central Europe in the academic and tourist approach. They also study the common and individual tourist products of Visegrad group. They summarise that the biggest beneficiary of common branding is the Czech republic and the smallest one is Poland.

Čechovičová (2007) focuses on cooperation of V4 countries in tourism. She provides a brief overview of principal realisers, marketing activities, main target markets and tourism products. The paper highlights the meaning of common marketing strategy and sums up that the brand predecessor of Discover Central Europe – European Quartet successfully fulfills its goals.

Apart from scientific literature is important to mention a web portal Discover Central Europe (<http://www.discover-ce.eu/>) focused on presentation of joint activities and projects as one of the results of tourism marketing strategy. However, the data available at the portal has not been updated since 2016 and the activities related to V4 common cooperation within Discover Central Europe are not published. Following this, we have tried to find out available information on marketing tourism national organisations in Visegrad region, however, there are limited sources informing about this initiative.

We can sum up there is a lack of studies specialized in the Discover Central Europe brand of Visegrad countries and specialized literature is still very limited. Moreover, the secondary data used for the analyse are very limited due to out of date data.

1 Methodology

The aim of the study is to analyse the target markets of V4 countries with focus on Discover Central Europe initiative – China, USA, Japan, Russia, India and Brazil. Since

the data related to Discover Central Europe brand has not been updated, in this study we are dealing with the time period of years 2010-2016. For the findings of the scientific papers dealing with V4 countries provided in the literature review we have used free and licensed databases such as ResearchGate or Web of Science for theoretical basis of this study. The basis for the analysis has been secondary data from Discover Central Europe reports and UNWTO Tourism Highlights. To achieve the main goal, we have set up several partial goals:

- quantify the share of tourist arrivals from the primary target markets of Discover Central Europe initiative on total international tourist arrivals throughout the years individually in V4 countries
- compare the development of tourist flows of target markets throughout the years in each V4 country
- identify the target markets in V4 countries of Discover Central Europe
- quantify the value of tourism marketing program through the selected conversion study ratio

To accomplish above mentioned goals, several scientific methods have been used including mathematical-statistical methods, analyse, and comparative method.

For own authors' calculations there have been used several ratios:

$$(1) \text{ share of target markets} = \frac{\Sigma \text{total tourist arrivals of target markets}}{\Sigma \text{total international tourist arrivals}} \times 100$$

Another ratio was used to determine the value of the tourism marketing program:

$$(2) \text{ cost per inquiry} = \frac{\text{total promotional program costs}}{\text{total inquiries received}},$$

while total inquiries received consists of calculation of sum of tourist arrivals of target markets.

2 Results

Before analysing the results of this study, it is important to understand that the target markets of Discover Central Europe has not been the same since the very beginning. Since the tourism is a sensitive sector to violent events, political instabilities, natural disasters and calamities as well as economic meltdown it could be argued that tourism is also highly responsive to dynamics in the tourism market place.

Following this, the identification of target markets of Discover Central Europe initiative has been changing from geographic point of view. Therefore, the traditional source markets such as USA, China, Russia, India and Brasil has been throughout the year enlarged in new source territories with good access potential such as South East Asia, Latin America, South Korea and CIS region.

However, the recent events such as global pandemic COVID-19 caused that the joint promotional activities of Visegrad region has moved the geographic location to closer European markets due to faster response of opening the national borders and independence from air connections. Therefore, the main target markets has been the

new territories such as Scandinavia region, Netherlands or Israel (Czech Tourism,2021). The questionnaire is also Russia as a original target market of this initiative since the start of current Ukrainian – Russia conflict. However, due to unavailability of recent data, this study is aimed at the original target markets of Discover Central Europe initiative. To determine the importance of Discover Central Europe initiative we have firstly identified the number of tourist arrivals in V4 countries and the number of tourist arrivals from target markets of this initiative. In Table 1 there are processed the input data corresponding to the time period 2010-2016. The results show that the year on year increase of total international tourist arrivals can be seen in every year of examined time period. Year on year increase can be observed also in tourist international arrivals from target markets of Discover Central Europe initiative with exception of 2 years (2014, 2015). Hungary as the only country from Visegrad region recorded the year-on-year increase of international tourists from target markets. Hungary attracts tourists mainly with its water attractions, areas of wine and typical food.

Tab. 1 International tourist arrivals in V4 countries

Year	ΣTourist arrivals of target markets of Discover Central Europe (China, USA, Russia, Japan, India, Brasil,)						ΣTourist international arrivals	
	Slova- kia	Czech Repub- lic	Hun- gary	Poland	Σ V4	Year- on year increase	Σ V4	Year- on year incre- ase
2010	72 533	998 170	412 765	477 841	1 802 232		31 936 000	
2011	88 172	1 168 678	453 188	543 572	2 041 556	+13,28 %	34 079 000	+6,71 %
2012	103 719	1 501 786	518 187	694 699	2 541 487	+24,49 %	36 182 000	+6,17 %
2013	124 459	1 621 056	597 111	780 451	2 818 704	+10,91 %	37 177 000	+2,75 %
2014	98 570	1 574 465	627 884	717 099	2 654 455	-5,83%	38 757 475	+4,25 %
2015	115 573	1 475 554	662 857	630 034	2 380 852	-10,31%	44 384 000	+14,52 %
2016	142 271	1 498 836	701 309	706 337	2 399 639	+0,79 %	46 836 000	+5,52 %

Source: UNWTO, 2017; Discover Central Europe, 2016

For more in-depth analyses we decided to examine the total share of tourist flows from target markets of Discover Central Europe initiative on total international tourist arrivals. In the following table (Table 2) we can observe the results which show that the highest share of tourists from China, USA, Japan, Brazil, India and Russia has recorded in the examined time period Czech republic. The capital city Prague belongs to the most visited cities in the whole Europe, while the number of tourists in Prague is several times higher than in the rest of the country. Prague is also easily accessible for tourists from distant markets thanks to its accessibility and reputation of a safe city and direct flights connections (Vanicek, 2020). Following this, the Czech Republic was also the initiator of the whole initiative of Discover Central Europe. The year 2013 has been the most successful when it comes to the share of target markets of Discover Central Europe initiative.

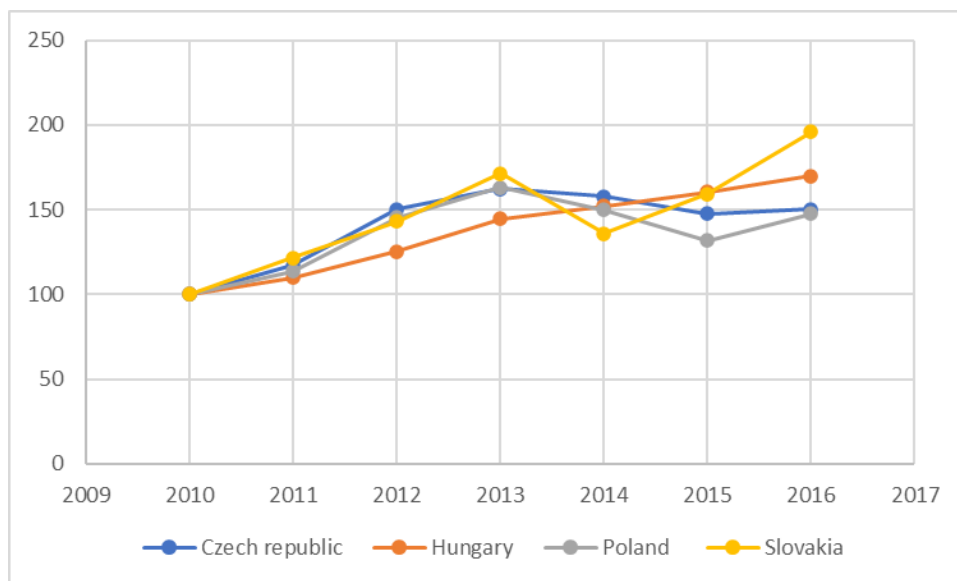
Tab. 2 The share of tourist arrivals from target markets on international arrivals

Year	Slovakia	Czech Republic	Hungary	Poland	V4 countries
2010	5,47%	11,57%	4,34%	3,83%	6,14%
2011	6,04%	12,96%	4,42%	4,07%	6,61%
2012	6,79%	15,87%	5,01%	4,68%	7,79%
2013	7,53%	18,00%	5,59%	4,93%	8,40%
2014	6,68%	14,83%	5,17%	4,48%	7,79%
2015	6,72%	12,70%	4,63%	3,77%	6,50%
2016	7,02%	12,40%	4,60%	4,04%	6,71%

Source: own calculations based on Discover Central Europe, UNWTO

From the overall point of view is important to examine the development of target markets. The following Graph 1 shows how the tourist flows from target markets has been changing over the years with comparison 2010.

Graph 1 Development of target markets in V4 countries (2010-2016)



Source: own calculations on Discover Central Europe, 2016

As can be seen from Graph 1 the development of tourists from tourists markets of Discover Central Europe initiative has been changing over the years. The significant drop can be seen in 2014 in Slovakia, during which the number of tourists from target markets decreased over 6% in comparison with 2013. From overall point of view the international

tourist arrivals has been increasing over the years with exception of two years (2014, 2015).

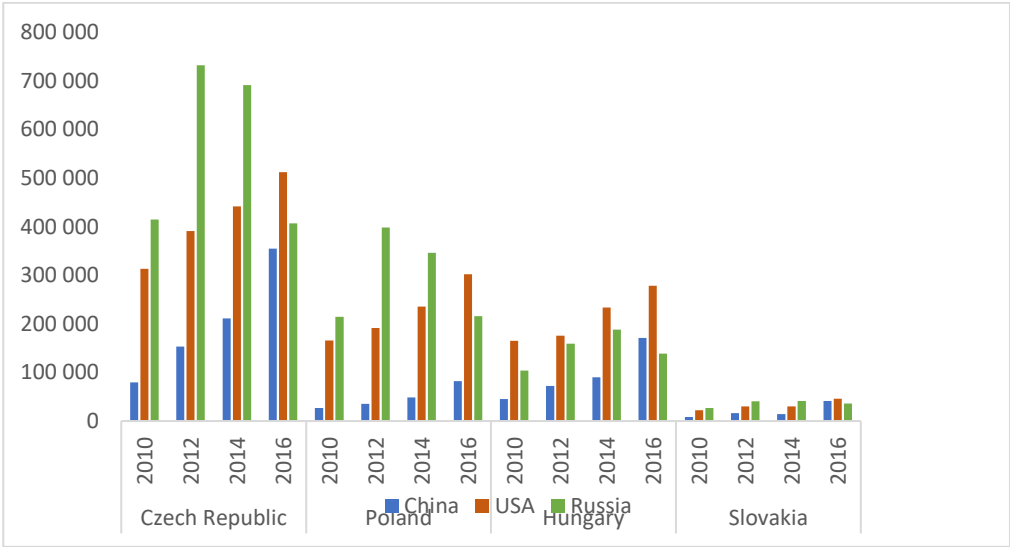
The highest percentage of increase of tourists in comparison with the first base year can be observed in Slovakia. The increase between 2010 and 2016 together makes 96% which means that Discover Central Europe initiative is for Slovakia important in terms of attracting foreign tourists from overseas markets.

2.1 Diversification of source markets of Discover Central Europe

Since the tourism is a vulnerable and highly sensitive economic sector, the identification of target markets has not been the same over the years.. In the following analyse we are going to examine the TOP target markets of Discover Central Europe initiative. Apart from primary target markets, the cooperation has been expanded into other countries such as Germany or Austria. Countries geografically closer to Visegrad region became priority during COVID-19 pandemic.

Graph 2 aims at the most important target markets in terms of tourist arrivals – USA, China and Russia. As mentioned before, the highest number of tourist inflows generates the Czech Republic. However, the tourist flows differ from country to country regarding the target markets. The leading country in Czech Republic, and Poland has been Russia. However, in 2016 the USA market has the leading position not only in these countries, but also in Hungary and Slovakia.

Graph 1 Target markets of Discover Central Europe initiative in V4 countries



Source: Discover Central Europe, 2016

There are a few reasons why the number of tourist inflows from target markets are different in each country. First of all, the statistical data show that target markets in

general are in most cases neighbouring countries. Following this, there can be observed that the highest number of tourist arrivals in Poland are Russia tourists. Other reasons can be direct flight connections between the countries. For example, in Czech Republic can be seen the increase of Chinese tourists in 2016. The reasons for this development are direct flights between Prague and the Chinese cities of Beijing, Shanghai and Chengdu. Another important factor is also the number of foreign offices of national tourist offices of V4 countries in target markets. Another reasons for attracting the tourists from target markets are safety situation in the country or visa requirements (Czech Annual Tourism Report, 2016).

Slovakia is the smallest country of the compared countries, so its number of tourist inflows is naturally the lowest in absolute terms. However, based on Graph 2, we can sum up that in comparison with the rest of Visegrad countries the growth of tourist arrivals from the target markets of Discover Central Europe initiative in the examined period of time is the highest. The increase of tourists in 2016 in comparison with 2010 has raised in 96,14%. The second highest growth can be seen in Hungary (69,91%), Czech Republic (50,16%) and Poland (47,81%). From above mentioned results we can conclude that the Discover Central Europe initiative increased the number of tourists from its target markets.

2.2 Evaluation of tourism marketing campaign

Evaluation of the marketing promotional programs is required in terms of making informed decisions whether the entire program should be continued, modified or eliminated. The amount of total promotional costs of V4 countries differs from year to year. There are different numbers of ratios commonly used to determine the value of the tourism marketing program. One of the most typical ratio used among tourism businesses, organisations and agencies is the traditional cost per inquiry (CPI) to determine the effectiveness in generating inquiries of the promotional campaign (Burke, 1989).

Due to the lack of available data related to total promotional costs of Discover Central Europe initiative we examine these ratios in limited time period from 2014 until 2016. In the Table 3 there are processed data related to the total promotional costs of each year with calculated the ratio of CPI index.

Tab. 3 Evaluation of Discover Central Europe marketing campaign

<i>Year</i>	Total promotional costs	Total inquiry received	CPI index
2014	367 900 €	2 654 455	0,138
2015	305 000 €	2 380 852	0,128
2016	307 000 €	2 399 639	1,279

Source: Discover Central Europe, 2016

As can be seen from Table 3, the highest average cost of generating an inquiry was measured in 2016. However, CPI index does not provide any information about the relationship between the expenditures and inquiries. To sum up, from Table 3 can be observed that the higher amount of financial budget generates the higher number of tourist arrivals (total inquiry received). However, for more in-depth analysis of this evaluation we will need more detailed data for longer period of time.

Conclusion

As was pointed out in the beginning of this paper, the research study dealt with the analyse Discover Central initiative of V4 countries with focus on its primary target markets related to initiative. Since there is a research gap in scientific literature aimed at joint promotional activities of Visegrad countries, this study seeks also to make a contribution to the disproportionate in extant literature on this topic. Through the available statistical data we can sum up several conclusions. As can be seen from the results of this study, the Discover Central Europe initiative plays an important role in the development of tourism in Visegrad region. However, it is important to manage this initiative in a proper way. Tourism management and tourism policy of joint promotional activities should be perceived as priority initiative by responsible decisionmakers and authorities. We highly recommend the responsible stakeholders to update web portal of Discover Central Europe initiative, because tourism promotion is important when it comes to attracting the potential visitors and the update of this portal has not been done for the last past years. Moreover, the latest statistical data are not available since 2016, however the monitoring of incoming foreign visitors is necessary.

The potential of Discover Central Europe initiative can be seen in the number of tourists from its target markets. Firstly, we have calculated the share of international tourist arrivals from target markets in total tourist arrivals in time period 2010-2016. As can be seen from authors' calculations, the highest share of tourists from target markets occurs in Czech Republic with the average of 16,4%. The second biggest share of these tourists can be seen in Slovakia. Despite the fact, that in comparison with the rest of Visegrad countries Slovakia has the lowest number of incoming tourists from target markets of Discover Central Europe initiative, the role of this cooperation in Slovak area is important. In comparison with 2010, the number of tourists from examined tourist markets has raised in 96% in 2016, which puts Slovakia in the first place in terms of increase of tourist flows during the examined time period. In the other Visegrad countries the number of tourists has been increasing gradually.

Another important findings which needs to be pointed out is that the diversification of target markets of this initiative in V4 countries differs from country to country. The highest number of tourists from USA can be seen in Hungary and Czech Republic. However, the highest share of tourists from Russia can be observed in Poland and partially in Slovakia. However, in recent years a significant increase of tourists from China can be observed in Slovakia.

However, when analysing this initiative, is important to consider the fact that tourism is a sector sensitive to a wide range of diverse factors and its development is fundamentally influenced by various global and regional events. As mentioned before, the

number of tourists from target markets has been changing over the years and also the different nationalities prevails in each year in every country of Visegrad region. However, there are more reasons for this. The change of tourists inflows in terms of nationality can be caused by different number of joint promotional activities of V4 countries. The reason for this is that the focus on attracting the tourists from a given country differs from year to year depending on presidency program in which the main priorities of Discover Central Europe initiative are defined. Another point is that, the number of tourists inflows from a given country depends also on direct flights between the countries, visa requirements, safety situation of the country or the exchange rates of the country. In relation with the sensitiveness of tourism as a sector, is important to mention that the definition of tourist target markets is changing over the time. Visegrad countries has been also focusing on attracting the new potential target markets. However, due to recent global pandemic situation COVID-19 the Discover Central Europe initiative has aimed at geographically closer countries to Visegrad region since the direct flights and the health restrictions has been very limited in primary target markets. Therefore, the countries like Germany, Austria or countries of Scandinavia region became a priority in terms of target markets. In terms of joint promotion activities the amount of financial budget is a key factor. From available data that can be seen, that the higher financial budget for joint activities tends to attract more tourists from target markets. Recommendation for the responsible stakeholders of Discover Central Europe initiative is to measure and monitor in detail statistical data and financial budget for joint marketing activities so the successfulness of this initiative can be analysed more precisely.

References

- Bucher, S. (2015). Konkurencieschopnosť krajín Vyšehradskej štvorky ako turistickej destinácie na európskom trhu cestovného ruchu. XVIII. Mezinárodní Kolokvium o Regionálních Vědách. Sborník Příspěvků. Sborník Příspěvků. 18th International Colloquium on Regional Sciences. Conference Proceedings.
<https://doi.org/10.5817/CZ.MUNI.P210-7861-2015-85>
- Burke, J. F., & Lindblom, L. A. (1989). Strategies for evaluating direct response tourism marketing. *Journal of Travel Research*, 28(2), 33-37.
- Coroničová Hurajová, J., & Majerská, M. (2021). V4 Countries - Analysis of Tourism: Krajiny V4 - Analýza cestovného ruchu. *Acta Oeconomica Cassoviensia: Scientific Journal*, 14(1), 5-12.
- CzechTourism (2021). Společné aktivity zemí V4 v Rusku v roce 2021. Retrieved March, 20, 2022, from: <https://www.czechtourism.cz/cs-CZ/Novinky/Archiv/2021/11/Spolecne-aktivity-zemi-V4-v-Rusku-v-roce-2021>
- Čechovičová, A. (2007). Medzinárodná spolupráca krajín V4 v oblasti propagácie cestovného ruchu. *Merkúr 2007: výsledky vedeckej práce mladých vedeckých pracovníkov*, 147-153.
- Discover Central Europe (2016). Facts and Figures. Retrieved April, 3, 2022, from: <http://www.discover-ce.eu/facts-figures/>

- European Commission (2017). Member states' Annual Tourism Report. Czech Republic. Retrieved March, 20, 2022, from: <https://ec.europa.eu/docsroom/documents/24882/attachments/1/translations/en/renditions/native>
- Leah G. Chandler (2014). Destination Brand Building. Retrieved March, 30, 2022, from: https://tiak.org/wp-content/uploads/2015/09/CDME-Final_LeahChandler5_30_14.pdf
- Matušíková, D., Šambronská, K., & Žegleň, P. (2020). The relation between income from active foreign tourism and the number of foreign visitors: a case study of the four Visegrad Countries. *Nierówności społeczne a wzrost gospodarczy*, (62), 294-308.
- Novacká, Ľ. (2016). Aktuálne témy cestovného ruchu v stredoeurópskom priestore: Contemporary issues of the travel and tourism in the Central European area. *Geografické informácie: príspevky z 24. medzinárodnej geografickej konferencie "Geografické aspekty stredoeurópskeho priestoru - nové výzvy pre rozvoj": 12. - 13.10.2016, Nitra, Slovenská republika, 20(2)*, 263-273.
- Studzieniecki, T., Meyer, B., & Wanagos, M. (2018). 'Discover Central Europe' – Promotion of the visegrad group's cross-border tourist products. In Sborník příspěvků XXI. mezinárodním kolokviu o regionálních vědách, Masarykova Univerzita. pp. 489-490. ISBN 978-80-210-8969-3
- UNWTO. Tourism Highlights (2017). Retrieved March, 20, 2022, from: <https://www.e-unwto.org/doi/pdf/10.18111/9789284418145>
- Vanicek, J. (2019). Position of Prague on the International Tourism Market. *International Journal of Innovation and Economic Development*, 5(6), 36-42.
- Visegrad Group (2021). Presidency Programs. Retrieved March, 15, 2022, from: <https://www.visegradgroup.eu/documents/presidency-programs>

RECENZIA / BOOK REVIEW

KORDOŠ, M. 2019. EU and Slovak Cluster Policies Interactions within the Regional Development Enhancement. Centre of Sociological Research in Szczecin, 207 p.

Ladislav Mura ¹

The business environment currently wishes business active and dynamic business units. As competition continues to gain momentum, businesses need to find ever more effective means of competition. Slovakia is highly differential regionalized. Many businesses operate in regions and microregions where they interact with many other economic operators. The demand for survival and business success is becoming a priority in the current business environment. Therefore, we can increasingly observe the efforts of businesses to engage in cluster initiatives. Cluster policy in Slovakia is not a highly developed thematic area.

The academic area of the Faculty of Social and Economic Relations of the Alexander Dubček University of Trenčín is one of the few that systematically through its experts deals not only with cluster politics, cluster initiatives, but also with the development of regions in this context. It is therefore welcome that in 2019, in response to the need to examine these thematic areas, the scientific monograph was created from the pen of Marcel Kordoš, PhD., assistant professor of the Department of Public Administration and Regional Economy of the above university workplace.

The title of the scientific monograph "EU and Slovak Cluster Policies Interactions within the Regional Development Enhancement" appropriately describes the content focus of the scientific work. Reader it has the opportunity to orientate in the area to which the monothematic work is oriented. The title also describes partial parts of the work, which can only be appreciated. The author focuses mainly on three problem areas: perspectives, challenges, issues. The monothematic scientific work was published in the renowned Scientific Publishing House Centre of Sociological Research in Szczecin and has a range of 207 pages (10.35 Author's Sheet). I consider the scope of the scientific work to be adequate in relation to the problem addressed. The scope of the individual chapters corresponds to the relevant partial part of the scientific monograph.

Due to the monothematic nature, sufficient scope, clear structure and difficulty of processing, the publication fulfils the essence, features and essentials of original monothematic work of a scientific nature from a particular field of science. The author of the scientific monograph in each chapter makes appropriate use, analyses and synthesizes knowledge on the topic under examination, enriching it with new perspectives, knowledge and approaches resulting from his own scientific research activities, the result of research in the framework of solving the research projects VEGA and Institutional Internal Grant, as well as specifically oriented research in the field of clusters, cluster initiatives and cluster and regional policy of the European Union.

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The scientific monograph is divided into three larger chapters. In the first chapter, the author of monothematic scientific work focused on theoretical evaluation and defined professional terminology related to clustering, cluster typology, regional policy, regional policy tools and their implementation, as well as the objectives, tools and importance of regional development. The author also deals with a closer analysis of cluster typology, limits and conditions for cluster cooperation. In the second chapter, there is a space devoted to the scientific discussion of the European Union cluster policy, its implementation, synergistic effects in the context of sustainable economic development. Knowledge and control of the entire demanding system of the legislative framework in the field of regional development is not only interesting, but also quite demanding. In this context, it is necessary to appreciate the efforts of the author of the scientific monograph to bring this thematic area closer to readers in an appropriate yet highly professional way. The third comprehensive chapter focuses on cluster policy in the conditions of Slovakia and the possibilities of its implementation. The cluster environment is analysed by the author in relation to regional development and cluster typology. The second part of the third chapter is devoted to the Slovak concept of cluster politics and its detailed evaluation. It is clear that these initiatives actively contribute to increasing the competitiveness of the regions of Slovakia.

The chosen methodology can be assessed as appropriate. Methodological approaches to the problem it can be found in different parts of the work. The author used standard qualitative and partially quantitative scientific methods that are characteristic of scientific works of this nature. The textual part of the monograph is supplemented by schematic representations, tables that increase the comprehensibility of the scientific text.

The monograph is a welcome current scientific literature covering the latest trends in the field of clusters and cluster policy, in particular reflecting trends on the part of the European Union. The main benefit of the monograph is the identification of responses to key cluster problems EU policy on the establishment and functioning of clusters in relation to regional development. Formal word processing is very good. The publication is written in a professional language style; stylistic and grammatical level is at the required level. With this work, too, the author proves his erudite in foreign-language (English) competence. The author correctly and carefully list the paraphrased and cited sources in the context of citation standard ISO 690-692.

The problem is optimally divided into several problem areas, in particular three supporting chapters, thereby increasing clarity and logical arrangement for the perceptive. The chapters of the monograph logically follow each other, complemented by numerous graphical apparatus in the form of tables and graphs. The required professional level of text was reached by the author combining theory and practice. At the end of the scientific monograph, the author summarized the most important findings from his research. He also outlined other challenges and challenges facing cluster policy and regional development. The EU stands in relation to the future.

The scientific monograph relies on a sufficient number of domestic and especially foreign bibliographic Resources. The author used not only book, but also magazine and other scientific literary sources, including Anglo-Saxon literature. I consider the assessed scientific monograph to be adequately processed, beneficial and criteria of the original scientific work. The manuscript is processed at the appropriate level according to requirements for this type of scientific work. From a professional point of view, I evaluate

scientific work as a quality publication documenting professional erudite and scientific professionalism of the author. I draw the attention of academics, but also experts from practice or other interested parties, to this peer-reviewed work as a suitable literary source of knowledge.