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RELATIONSHIP BETWEEN INDEXES OF GCI AND EFI IN THE CASE OF EU-27 COUNTRIES

VZŤAH MEDZI INDEXMI GCI A EFI V PRÍPADE KRAJÍN EÚ-27

Abstract: *One of the main determinants of competitiveness of a country is definitely a certain degree of economic freedom. This presumption leads us to believe there should be a provable correlation with direct dependence not only between these two factors but also between indexes which are used as means to measure them. Therefore in this article, we focus on the correlation between Index of Economic Freedom (EFI) which is uniquely focused on measuring economic freedom and Global Competitiveness Index (GCI) which is the most comprehensive index when it comes to measurement of international competitiveness of a country. Spearman's rank correlation coefficient is used to calculate the dependence between GCI and EFI within EU-27 countries during the period from 2006 to 2015. Results show that progress in the GCI ranking means the drop in EFI ranking and vice versa.*

Key words: *Index of Economic Freedom, Global Competitiveness Index, Correlation*

Kľúčové slová: *Index ekonomickej slobody, Globálny index konkurencieschopnosti, korelácia*

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Introduction

Index of Economic Freedom (EFI) is a result of cooperation between Wall Street Journal and Heritage Foundation. The index is internally structured into four main components defined as to capture government instruments impact on the economic environment. The components are regulatory efficiency, rule of law, market openness and government size. "Some of the aspects that are evaluated, are concerned with a country's interactions with the rest of the world (for example, the extent of an economy's openness to global investment or trade)" [4]. These main components consist of ten sub-areas of economic freedom, which are evaluated by averaging and assigning weight to the scores of individual sub-area. Finally, these are assigned to a point scale from 0 to 100.

This type of measurement allows two or more countries gain the same number of points thus sharing the same spot in the overall index. Therefore the result isn't a precise position-based rank of countries, but rather a list of point score including 178 countries in 2015 [4].

Global Competitiveness Index (GCI), which is considered as the most comprehensive index of competitiveness because it includes 114 various indicators grouped into 12 main categories, the so-called pillars covering 144 economies (2015). The pillars are macroeconomic environment, market size, labor market efficiency, goods market efficiency, financial market development, infrastructure, institutions, innovation, business sophistication, technological readiness, health and primary education and higher education and training. These are further divided into three subindexes which represent the three stages of development of main driving factors of competitiveness as defined by Michael Porter [5], the factor driven basic requirements subindex, efficiency enhancers subindex driven by the efficiency of economic production and innovation and sophistication factors subindex driven by innovation. World economic forum as the organization overriding this index on yearly basis defines term “competitiveness” as: “set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can earn” [6]. And this we consider an interesting collision point between these two indexes because one of the factors of country's productivity is also affected by foreign direct investments in the most positive way. Although it should be also noted that this effect was proven dependent on the level of educational attainment as Borensztein et al. pointed out [1]. We do not consider this a problem because as we mentioned earlier GCI covers primary and higher education within its internal structure. An important factor for attracting foreign direct investments besides factors like tax incentives, transportation infrastructure etc. is the factor of market openness [2], or in other words, openness to global investment and trade as it is also described in a citation from Heritage Foundation's description of economic freedom. This leads us to our theory that level of economic freedom positively affects its competitiveness in a proportional fashion. The higher level of economic freedom should contribute to the higher competitiveness of a country. Based on this presumption we decided to test this seemingly logical relationship by evaluating results of correlation analysis of indexes aforementioned.

Data and Methodology

The motivation of this paper is to answer the question whether ranking of a given country in GCI index and EFI index have something in common. Therefore, the aim of this paper is to find out whether the progress in the GCI ranking means the progress or drop in EFI ranking and vice versa.

Data

The analysis was provided for 27 EU countries in the period from 2006 to 2015. From the original ranking of all countries which were reported in analyzed indexes, we have created a ranking only for 27 EU countries. In this way, we have removed the impact of a different number of countries on the position of a given country in

mentioned indexes from year-to-year. The reason for specificity choosing EU 27 countries was the openness of internal market of European Union and the approximation tendencies in various fields within. It should be noted that in EFI ranking, more than one country could be on the same position due to a fact that EFI is not providing ranking in the usual form, but as a point score, without assigning ranking from first to the last country included in the index, after point score calculation. Therefore countries sharing the same point score are also sharing the same rank. Our dataset was obtained from Heritage Foundation and World Economic Forum database.

For interest, we present the ranking in GCI and EFI index of the EU countries in the year 2014 and 2015. Tab. 1 shows country ranking within the entire index, country ranking within the EU countries, and year-on-year change of order (Δ).

Tab 1: Ranking of EU countries in GCI and EFI index

Country	GCI			GCI - EU			EFI			EFI-EU		
	2014	2015	Δ	2014	2015	Δ	2014	2015	Δ	2014	2015	Δ
Finland	4	36	-32	1	15	-14	73	75	-2	10	13	-3
Germany	5	5	0	2	2	0	73	74	-1	10	12	-2
Netherlands	8	38	-30	3	16	-13	74	65	9	11	5	6
United Kingdom	9	33	-24	4	14	-10	75	68	7	12	7	5
Sweden	10	44	-34	5	19	-14	73	70	3	10	9	1
Denmark	13	59	-46	6	23	-17	76	60	16	13	2	11
Belgium	18	8	10	7	3	4	70	73	-3	8	11	-3
Luxembourg	19	48	-29	8	20	-12	74	67	7	11	6	5
Austria	21	43	-22	9	18	-9	72	62	10	9	2	7
France	23	67	-44	10	26	-16	64	67	-3	4	6	-2
Ireland	25	10	15	11	5	6	76	76	0	13	14	-1
Estonia	29	9	20	12	4	8	76	73	3	13	11	2
Spain	35	22	13	13	9	4	67	63	4	6	4	2
Portugal	36	23	13	14	10	4	64	71	-7	4	10	-6
Czech Republic	37	20	17	15	8	7	72	73	-1	9	11	-2
Lithuania	41	53	-12	16	21	-5	73	67	6	10	6	4
Latvia	42	24	18	17	11	6	69	77	-8	7	15	-8
Poland	43	81	-38	18	27	-9	67	54	13	6	1	5
Malta	47	12	35	19	6	13	66	76	-10	5	14	-9
Italy	49	41	8	20	17	3	61	69	-8	2	8	-6
Bulgary	54	54	0	21	22	-1	66	67	-1	5	6	-1
Cyprus	58	4	54	22	1	21	68	74	-6	7	12	-5
Romania	59	19	40	23	7	16	66	69	-3	5	8	-3
Hungary	60	65	-5	24	25	-1	67	68	-1	6	7	-1
Slovenia	70	63	7	25	24	1	63	67	-4	3	6	-3
Slovakia	75	30	45	26	12	14	66	77	-11	5	15	-10
Greece	81	31	50	27	13	14	56	73	-17	1	11	-10

Source: own calculation based on Heritage Foundation and World Economic Forum

Methodology

In this paper, Spearman's rank correlation coefficient (r_s) is used to calculate the dependence between GCI and EFI index. We calculated this coefficient for every year from 2006 to 2015. If p -value (<0.05) confirms statistically significance of Spearman's rank correlation coefficient in each year, we will generalize the argument that the progress in the GCI ranking means the progress, or drop in EFI ranking, and vice versa on the entire dataset. If overall Spearman's rank correlation coefficient is significant, we will predict the position in the GCI, if we have a given position in the EFI, and vice versa. In this case, we use simple linear regression model mentioned in [3], which is given as $y_i = \beta_0 - \beta_1 \cdot x_i + \varepsilon_i$, where y_i is the dependent variable, x_i is the independent variable, β_0 denotes intercept, β_1 is regression coefficient, and ε_i is the error term. Models for our analysis are specifically given by:

$$GCI_{ranking} = \beta_0 - \beta_1 \cdot EFI_{ranking} + \varepsilon \quad (1)$$

$$EFI_{ranking} = \beta_0 - \beta_1 \cdot GCI_{ranking} + \varepsilon \quad (2)$$

Results

To determine the dependence between GCI and EFI index, we calculate Spearman's rank correlation coefficient. First, we calculate it for each year separately. Results are shown in Tab. 2.

Tab 2: Correlation analysis between GCI and EFI index on normalized ranking of EU countries

Correlation between GCI - EU and EFI – EU		
Year	Spearman's rank correlation coefficient	p-value
2006	-0.6758	0.0001
2007	-0.6581	0.0002
2008	-0.7269	0.0000
2009	-0.6797	0.0001
2010	-0.7025	0.0000
2011	-0.6462	0.0003
2012	-0.6212	0.0005
2013	-0.7061	0.0000
2014	-0.7218	0.0000
2015	-0.6866	0.0001

Source: own calculation using Gretl

Spearman's rank correlation coefficient was significant in each year, which confirmed p -value that was less than 0.05 for each r_s . It means that there is the dependence between GCI and EFI ranking of a given country in each year.

The negative values of r_s tell about indirect dependence. Thus, if the position of a country in GCI ranking increases, its position in EFI ranking is decreasing. And vice versa, if the position of a country in EFI ranking increases, its position in GCI ranking is decreasing.

Now, we generalize the argument on the entire dataset. Overall Spearman's rank correlation coefficient is $r_s = -0.6217$. Corresponding p -value = 0.0000 confirms the significance of r_s , and we can say, in general, that progress in the GCI ranking means the drop in EFI ranking and vice versa.

Finally, we predict the position in the GCI, if we have a given position in the EFI, and vice versa. In this case, we obtained resulting simple linear regression models given by:

$$GCIranking = 23.0549 - 1.0386 \cdot EFIranking \quad (1)$$

$$EFIranking = 13.9279 - 0.3721 \cdot GCIranking \quad (2)$$

Both coefficients β_0 and β_1 were significant at significance level $\alpha = 0.05$.

Summary

Our initial motivation for designing and executing the analysis included was a presumption of interrelation in between indexes GCI and EFI based on the fact that freedom of the economy, or better to say market openness positively contributes to the level of productivity of an economy. Given the fact that the creators of GCI index judge the level of economy's competitiveness by the level of productivity of the economy we believed that there should be a provable correlation with direct dependence between these two indexes. First, we had to eliminate the negative influence of changes in the range of countries included in both indexes, as more and more countries are included in both indexes during the period of time. We decided to focus on 27 countries of European Union due to its internal market openness and various approximation tendencies, in the time period starting in 2006 and ending in 2015.

We also had to normalize the ranking data because of different ranking ways of both indexes so we could apply Spearman's rank correlation test. This method proved that the progress in the GCI ranking means the progress, or drop in EFI ranking, and vice versa on the entire dataset.

The significance of Spearman's rank correlation confirmed that is possible to predict the position in the GCI if we have a given position in the EFI, and vice versa if we

apply simple linear regression. We can say, in general, that progress in the GCI ranking means the drop in EFI ranking, and vice versa which was proven by negative values of r_s indicating the indirect dependence. This result could be the consequence of the fact that open market and economically free economies still represent competition to each other thus trying to protect themselves from competition in a way that negatively affects the economic freedom. For statistical confirmation of this logical conclusion, further research is needed.

Súhrn

Naša počiatočná motivácia pre návrh a realizáciu analýzy zahŕňala domnienku vzájomného vzťahu medzi indexmi GCI a EFI, ktorá je založená na skutočnosti, že sloboda ekonomiky, alebo lepšie povedané otvorenosť trhu, pozitívne prispieva k úrovni produktivity ekonomiky. Vzhľadom na to, že tvorcovia indexu GCI posudzujú úroveň konkurencieschopnosti ekonomiky podľa úrovne jej produktivity, verili sme, že medzi týmito dvomi indexmi by mala existovať preukázateľná korelácia s priamou závislosťou. Než sme mohli začať s analýzou museli sme odstrániť negatívny vplyv zmien v rozmedzí krajín zahrnutých do oboch indexov, keďže v priebehu času sú do oboch indexov zahrňané ďalšie a ďalšie krajiny. Rozhodli sme sa zamerať sa na 27 krajín Európskej únie kvôli otvorenosti vnútorného trhu a rôznym aproximačným tendenciám v časovom období od roku 2006 do roku 2015.

Taktiež sme museli normalizovať údaje rebríčkov kvôli rôznym spôsobom hodnotenia oboch indexov, aby bolo možné použiť Spearmanov korelačný test. Táto metóda dokázala, že pokrok v klasifikácii GCI znamená pokles hodnotenia EFI a naopak, v celom súbore údajov. Významnosť Spearmanovho korelačného koeficientu potvrdila, že je možné predpovedať pozíciu v GCI, ak máme danú pozíciu v EFI, a naopak, ak použijeme jednoduchú lineárnu regresiu.

Vo všeobecnosti môžeme povedať, že pokrok v klasifikácii GCI znamená pokles rebríčka EFI a naopak, čo bolo preukázané zápornými hodnotami r_s indikujúcimi nepriamu závislosť. Tento výsledok by mohol byť dôsledkom skutočnosti, že otvorené a ekonomicky slobodné krajiny stále predstavujú konkurenciu medzi sebou, a tak sa snažia chrániť sa pred konkurenciou spôsobom, ktorý negatívne ovplyvňuje hospodársku slobodu. Pre štatistické potvrdenie tohto logického záveru je potrebný ďalší výskum.

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MULTI-LEVEL GOVERNANCE CONCEPT – COMPLEMENTARY ROLE OF STATE IN THE EUROPEAN UNION ECONOMIES OF THE 21ST CENTURY

KONCEPT VIACÚROVNŔOVÉHO RIADENIA – KOMPLEMENTÁRNA ÚLOHA ŠTÁTU V EKONOMIKÁCH EURÓPSKEJ ÚNIE V 21. STOROČÍ

Abstract:

Purpose - the aim of proposed article is to present the multi-level governance concept and attempt to determine the role of public authorities in the Economies. The issues concerning the role of State in the Economies of the 21st Century and what is more also local government, its location in the external environment, with particular emphasis on the decentralization processes and the ongoing European integration is a very interesting subject of economic and social research.

Design/methodology/approach - there has been an extensive literature review on complementary role of State in Economy and EU regional policy, multi-level and territorial governance concept. Elements of the Polish approach were used as well.

Findings - The application of ITI and CLLD mechanisms in European policy is an example of the MLG model in the management and spending of EU funds on the regional level. The example goes to show that the move towards coordinated action and decision-making that involves not only local and regional authorities but also local action groups, social and non-governmental organizations, is irreversible.

Research limitation/ implications - the proposed topic contributes to the debate on the future of the European Union role of State in Economy and on the cohesion policy in the ongoing programming period. The objectives which are necessary to complement the ongoing research include: identifying barriers and key instruments to support local economic and social development, identifying the role of local authorities and areas of cooperation between the different actors i.e. State, NGO's, entrepreneurs and others market participants.

Originality/value – The new challenges faced by the countries of the European Union: globalization, demographic problems and the aging population, migration of people, as well as the latest economic crisis and the problems of public finance imbalance in many Member States, raise questions about the long-term future of the European Union. One of these questions is the place and role of State and local authorities in the implementation of strategic goals.

Key words: governance, self-government, public sector, authorities, local development

Kľúčové slová: governance, self-government, public sector, authorities, local development

JEL: H77, R58, P25

Introduction

To meet all requirements posed by the progress of civilization and increased competition in the economic, social and cultural spheres, calls for selecting appropriate - territorial - policy aimed also at attaining the objectives of the Europe 2020 strategy. The need for development policy territorialisation was indicated in the Territorial Agenda adopted in 2011 in Gödöllő, where it was pointed out that the successful implementation of the Europe 2020 strategy depended on taking into account its territorial dimension. The territorialisation in such terms can be understood in two ways: the first is the coordination of policies and differentiation in space, the second is the use of specific, territory-relevant capital, which according to the concept of R. Camagni, should be stimulated by local authorities. This justifies the need to present Multi-level governance concept as a possible way to define the role of State (or wider: public authorities) in the Economies of the 21st Century.

What is more the proposed topic includes attempt to define the role of local authorities in local Economies. In connection with the change of approach pursued at the European regional policy level, local governments have become an essential element of effective regional policy. The concept of public authorities departs from linear hierarchies, based on the leading role of national (central) authorities, towards horizontal co-operation and networking, both at the institutional level, as well as at the economic and social level. Local action groups, NGOs, local governments, have become important actors that constitute an important link in the cohesion policy. Their successful connection and inclusion in the achievement of the Europe 2020 strategy objectives have become the basis for a new approach to regional policy aimed at stimulating the inner potential - both economic, social and cultural. Cooperation between such many market participants is core meaning of multi-level governance concept.

Complementary role of State in the European Union Regional Policy

One of the most marked changes in the approach to regional politics has been the move away from the dominant role of the state; as noted by I. Pietrzyk, the latter has lost its undivided monopoly on power and become a partner for territorial governments, social and economic entities, and other institutions, including those with an international reach (Pietrzyk, 2000). I. Pietrzyk quotes a vivid formulation by R. Prud'homme (1995), who argues that the state is no longer a soloist but a conductor, responsible for stimulating and coordinating the activity of other players.

In the wake of administrative decentralization and the emergence of territorial government interventionism, claims Pietrzyk (2000), a key role in regional politics is now being played by territorial authorities; these seem to be the best placed to channel local energy and define the place of the region in the national and European context. As remarked by A. Jewtuchowicz (2005), local economy is an open economy and the state can only have a complementary role to play in this area: it initiates a number of mechanisms necessary to mobilize local communities. European integration is a complex process that involves member states with

separate, often very distinct organizational structures and literature on the subject has long debated the role and place of the nation-state in the political, economic, social, and cultural system. The prophets of globalization, as noted by M. Keating (2004), tend to put an emphasis on the decline of the nation-state due to the mobility of capital and technology, the rise of transnational corporations, trade, and the emergence of international regimes. Others, such as F. Fukuyama (1992), maintain that there is no single binding economic model or political organization in the world today and prefer to speak of the end of history. M. Keating (2004) observes that globalization has given a new meaning to all these ideas, since it involves a change in the role of the state. States seem to be losing authority to supranational regimes, and, at the same time, are being undermined by new cultural, social, and political movements, both at the local and the regional level. According to some, these tendencies stand in stark contradiction to each other, relying on radically distinct forms of regulation and spatial scale; nowadays, however, they are also increasingly thought of as complementary.

Europe has been locked in a debate over its community management model, because the multiplicity of legal regulations, customs laws, decision-making procedures, and the institutional system require adequate cooperation mechanisms, organized in such a way as to bring maximum effects consistent with declared objectives. This outcome could be achieved, for instance, if the EU chose to communitarize all its activities within the integration process and discard the intergovernmental model, which would basically imply full integration within a political union. While such a solution may seem attractive in terms of decision-making and efficiency of action, it is unlikely to ever be accepted by member states. A more realistic solution is to be found in the *multi-level governance (MLG)* model, based on a basic assumption that the EU is composed of multiple centers and decision-making entities that form a “management network” and need to cooperate with one another. The MLG approach does not exclude the nation-state from the decision-making process, nor does it threaten its role; rather, it calls for the cooperation between individual levels of public authority, recognizing the state as the fundamental actor in the integration process.

Multi-level and territorial governance – discussion and implications

Literature on territorial development frequently brings up the concept of multi-level governance, first laid out in the White Paper of the European Commission on European Governance released in 2001 (COM, 2001).

The fact that the White Paper of the Committee of the Regions published eight years later and the subsequent special opinion of the Committee (CoR, 2011) continue to mention the idea as a postulate illustrates how difficult it is to put into practice (CoR, 2009). On 3 April 2014, to advance this goal, the Committee of the Regions adopted (in the form of a resolution) a Charter For Multi-Level Governance in Europe, in which it proposes and encourages various levels of administration to implement the MLG model (CoR, 2014).

While the term “multi-level” is easily understood, “governance” seems difficult to interpret in an unambiguous way. It derives its origin from the word “government”, which automatically suggest that we are dealing with an attribute of power, but in a broader sense than its etymology would suggest. In a definition proposed by J. Kooiman (1993), the concept is understood as a model of action or a structure that emerges within the sociopolitical system as a result or consequence of the interacting interventions undertaken by all its active participants. In contrast to *government*, *governance* is thus by its very nature interactive and cannot remain the sole province of a government or sovereign power broadly understood. *Governance* implies power-sharing between a number of various entities. However, because the author of the above definition gives *governance* a markedly social tinge, the concept also seems to approximate that of *coordination* (Hausner, 2008). *Governance*, as noted by A. Jewtuchowicz (2005), is related to intermediary forms of regulation, neither purely public, nor purely market-based. It encompasses all the aspects of the activity of involved actors in the economic, social, and political realm, and contributes to articulating private interestes as well as the essence of the public good. The participation of institutions, and in particular local public institutions, guarantees a balance between economic efficiency and the sense of social justice. Literature on the subject has discussed this concept extensively both in the context of public power and enterprise management (Jewtuchowicz, 2005; Hausner, 2008; Rudolf, 2010; Frederickson and Smith, 2002; Heinrich and Lynn 2000); the idea of an *open method of coordination* in EU politics is also often brought up, as discussed by A. Benz (2007) and A. Faludi (2004).

The present article approaches the concept of multi-level governance (MLG) from the perspective of territorial cohesion policy. As noted by A. Faludi (2012), the notion first emerged during a gradual turn towards governance that occurred in European scholarship in the 1980s. Scholars realized that practice does not fit the formal relationships between various levels posited by integration theory. The observation was also supported by research into European spatial planning, where the term *multi-level territorial governance* first appeared. Faludi notes, importantly, that the qualification “territorial” is redundant in this case since the MLG model is such by its very nature, as evidenced by official EU documents: the adjective appears in the “Green Paper on Territorial Cohesion”, but is markedly absent from the “Territorial Agenda of the European Union 2020”.

In the “White Paper on Multi-Level Governance” (CoR, 2009) published by the Committee of the Regions, the concept is defined as the coordination of actions taken by the European Union (or its institutions), member states, and local and regional authorities, based on the principle of partnership and aimed at creating and implementing EU policies. Such co-governance requires a division of powers among various levels of public authority and their participation in the process of formulating EU law and policy through various mechanisms such as consultations, territorial impact analyses, etc. Further sections of the White Paper specify that multi-level governance is a dynamic process both in the horizontal and the vertical dimension, and in no way aims to diffuse responsibility; to the contrary, it means to

help improve policy implementation and increase the sense of co-ownership, provided, however, that all mechanisms and instruments are employed in an appropriate manner. Such mechanisms, according to the Committee, include subsuming local and regional government objectives under a broader EU strategy, strengthening the prerogatives of local and regional governments at the national level, and encouraging them to participate in the coordination of community policies. As noted by A. Faludi (2012), there is nothing wrong with such an approach, especially that the chief role of the Committee of Regions is to defend the rights of local and regional governments; he wonders, however, whether the term should be restricted to multi-level political governance or whether it could also be applied, as suggested by M. Bevir, to the social sphere and existing norms and paradigms, as well as practices and dilemmas that put a lesser emphasis on hierarchy and statehood. In his reflections, A. Faludi (2012) quotes L. Hooghe and G. Marks (2010), who discuss two distinct types of *Multi-Level Governance*:

- MLG Type 1 refers to decentralized governance,
- MLG Type 2 relies on crucial agreements and jurisdictions of various entities.

The first type refers to the governance level, since, as noted by L. Hooghe and G. Marks, formal authority is being delegated from the central level both upwards, to supranational bodies, and downwards, to local and regional authorities. The concept does not account for the important role of non-governmental actors and the boundaries of authority between various levels do not overlap. This is why this MLG model has been compared to a Russian matryoshka doll, in which each little doll can be considered independent but continues to occupy a strictly defined position in the hierarchy (Faludi, 2012).

The second MLG type refers to overlapping *specialised jurisdictions* that obtain on a broad scale and are potentially high in number. Jurisdictions discussed by L. Hooghe and G. Marks are generally thin and flexible and relate to specific cases, while the boundaries between involved entities often intersect. Relevant sectors include, for instance, transport, education, and healthcare, where it is often necessary to arrive at crucial agreements. Even though there is a greater emphasis on the relationship between specialized agencies than on the involvement of civil society in the decision-making process, it is clear that the relationships between them are less formalized than in the case of the “Russian matryoshka”. This form of multi-level governance is thus related to the diffusion of decision-making, which is a more characteristic feature of *governance* (Faludi, 2012).

The best example of multi-level governance in practice, according to S. Piattoni (2009), is the empowerment of European regions and their active involvement in cohesion policy. However, until the latter have emancipated themselves from the

supervision of central authority and gained complete freedom to act, there can be no real talk of “Europe of the regions”. At this juncture, S. Piattoni quotes L. Hooghe and G. Marks, who explain that the MLG model does not lend support to the scenario of “Europe *of* the regions” but rather to that of “Europe *with* the regions”. She maintains that the concept is sufficiently flexible to contain various national legal orders, institutional practices, and political cultures, but also sufficiently remote to create problems for all of those. In sum, however, she takes a positive view of multi-level governance as a way to democratize the European Union and lists the following advantages of the model: 1) including peripheral regions in decision-making processes that directly affect them; 2) creating loose connections to avoid stalemates related to the exercise of veto power in the last phase of decision-making; 3) supporting the creation of more relationships between territorial authorities and their constituencies (Piattoni, 2009).

In an attempt to transplant the MLG approach onto the Polish soil, M.W. Kozak (2013) notes that principal factors favoring the MLG model include those related to growth and the demands on public policy under the twin conditions of internationalization and globalization. On the one hand, the demands on administration grow, on the other, we witness a diffusion of models borrowed from other countries and the development of both public functions and social expectations expressed by ever more diverse communities. This creates a certain pressure on public administration; its nature and reception, however, can vary depending on the wealth and competences of individual local, regional, and national areas. In an attempt to determine whether the MLG model can be implemented in the Polish context, M.W.

Kozak lists a number of important trends that favor changes in administrative structure and organization, including:

- 1) deregulation and freeing up social and economic reserves;
- 2) supporting the processes of cooperation and partnership in carrying out public functions on the local, regional, national, and supranational level;
- 3) changes in the structures of the redistributive role of the state;
- 4) digitization of the administration and facilitating the contact of citizens and companies with public officials (Kozak, 2013).

While the concept of *multi-level governance* refers to the macro-level and is understood by many scholars as multi-level government, on the micro-scale, it is also possible to discuss *territorial governance* or, in the case of city politics, *urban governance*. Both of these concepts refer to management on local and regional levels. *Territorial governance*, understood as territorial co-governance, and *urban*

governance, interpreted as urban co-governance, meet the criteria of the second MLG type, as outlined in the approach proposed by L. Hooghe and G. Marks.

A broader view of *governance* requires that the decision-making process should bring together participants or players with heterogeneous interests and preferences, representatives of various interest groups and associations or organizations with different views and objectives. As noted by A. Torre (2014), this has become the central element of local development processes, focused on benefits from coordination, interaction, joint action, empowerment, and mutual learning, with a special emphasis on participation and consultation. Territorial co-governance can thus be defined as a set of processes and mechanisms employed by diverse parties or actors (the production sector, associations, public personalities, representatives of public or local authorities, etc.) in order to contribute, through dialogue or conflict, to joint projects aimed at the future development of their respective territories (Torre and Traversac, 2011). *Territorial co-governance* in this sense makes it possible to argue that an important role in regional development is now played by local authorities and that their ability to rise to the challenge will determine the final outcome of the process, i.e. decide if local capital will be tapped successfully or the region in question will fall into the underdevelopment trap.

The role of self-government in development policy

As suggested by our discussion thus far, there is a broad consensus on the important role of local and regional authorities in achieving the strategic objectives of economic development. The same holds true for community goals, as evidenced by the *Europe 2020* strategy (COM, 2010), which argues that the ongoing dialogue between various levels of national administration helps bring EU priorities closer to the people and increases involvement levels necessary for the successful implementation of strategic objectives.

As noted by M. Guderjan (2012), however, even though territorial authorities have great ambitions in this respect, there has been little practical effort to implement the goals in question in the framework of cooperation between national, regional, and local authorities. Both the Lisbon Strategy and *Europe 2020* have come under fire for their top-down character and failure to account for the role of territorial governments. The latter's involvement in achieving strategic EU objectives primarily requires cooperation on the national level, which, as noted by the Committee of the Regions (and the CEMR), has had a checkered track record. The Committee has thus called on member state governments to increase cooperation and form a permanent partnership. Accordingly, it is no longer merely the question of Europeanizing territorial governments; EU policies also need to be municipalized.

Multi-level governance in the practice of European cohesion policy

In December 2013, the Council of the European Union approved new laws and provisions concerning the next round of investment in the framework of the EU cohesion policy for 2014-2020, meant, for the first time, to apply to all funds. A

Regulation of the Council of the European Union (EU, 2013, Art. 32, Ch. 2) reaffirmed the territorial dimension of cohesion policy by introducing a new instrument, *Integrated Territorial Investment (ITI)*, and the concept of *Community Led Local Development (CLLD)*. *ITI* is designed to help implement territorial strategies in an integrated manner. It is neither an action, nor a subpriority, of any single operational program, but allows member states to implement operational programs across the board and receive funding from various priority axes, which ensures well-integrated strategy implementation throughout a given territory. It must be emphasized that ITI can only be used effectively if a given geographical area has formulated an integrated intersectoral territorial strategy. The basic elements of ITI include:

- defining the territory and an integrated strategy of territorial development,
- a set of measures to be implemented,
- the principles of ITI.

In turn, as defined by art. 32 of the Regulation, community-led local development should take account of local needs and potential, as well as crucial social and cultural features. The responsibility for drafting and implementing CLLD rests with local action groups (LAGs) that represent various community interests (EU, 2013, art. 31). The CEMR judged it to be a good step forward, and ITI and CLLD have become an important element in the territorialization of cohesion policy (CEMR, 2013).

Partnership Agreements that member states sign with the European Commission, explicitly mention CLLD and ITI as instruments of territorial development. CLLD allows local communities to initiate and implement development measures in a participatory manner, through local action groups active in a given territory, as well as to draft and realize local development strategies. CLLD is a new instrument within cohesion policy and it is not obligatory. It does, however, merit particular attention due to its participatory nature, reflected in the involvement of local communities and partners (governments, businesses, and the NGO sector) in creating and carrying out local development strategies. Partnership Agreements typically provide for solutions to support the implementation of CLLD within the framework of cohesion policy. According to the provisions of the Polish PA, CLLD is designed to improve social and territorial cohesion, enhance the mobilization of potential on the local level, and increase social participation and active citizenship in the country. It is worth noting that actions taken in the framework of CLLD should complement, rather than replace, those taken by local authorities, and the scope of support should be specified within individual programs based on relevant analyses and evaluations.

On the other hand, the Polish agreement defines ITI as an instrument intended to realize specific territorial strategies. In Poland, it is specifically designed to integrate actions aimed at developing urban centers and their associated functional areas; this requirement is obligatory for voivodeship towns, and discretionary for regional and sub-regional centers. In accordance with the Polish partnership agreement, integrated territorial investment serves to:

- promote a partnership-based model of cooperation between various administrative bodies in urban functional areas,
- increase the effectiveness of interventions by realizing integrated projects that comprehensively address the needs and issues of towns and associated functional areas,
- boost the influence of town centers and associated functional areas on the kind and implementation method of supporting actions in the framework of cohesion policy in their respective territory.

Findings

ITI funds can be mobilized subject to two important conditions: the presence of an institutionalized partnership (establishment of ITI associations) and the development of an ITI strategy. The former can include associations between communes and provinces; associations formed by territorial government bodies; as well as agreements between communes or companies established by territorial government bodies.

A Noworól (2013) argues that these instruments designed to support local development in rural and urban areas illustrate a new approach to regional policy. They will require programming and analysis on a scale that cannot be mapped to traditional administrative borders and their management model will require the interaction of public, economic, and social factors. As a consequence of the new, territorial approach and the “imposed co-existence” of various local actors, there has emerged a new model of territorial planning within a structure of partnership networks between hybrid public, social, and private entities (Noworól 2013). The application of ITI and CLLD mechanisms in European policy is an example of the MLG model in the management and spending of EU funds on the regional level. The example goes to show that the move towards coordinated action and decision-making that involves not only local and regional authorities but also local action groups, social and non-governmental organizations, is irreversible. It proves the changing role of the state in 21st-century economy and development policy. As indicated earlier, the state is no longer a soloist, but a conductor, as well as coordinator and animator, of actions taken on the local and regional level, responsible for creating networks and tapping the local potential for the purposes of a better development policy.

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THE CRIMEAN BRIDGE: AN EXPENDITURE OR AN ADVANTAGE FOR RUSSIA?

KRYMSKÝ MOST: VÝDAVOK ALEBO VÝHODA PRE RUSKO?

***Abstract:** For every country of the World, the most important is to guarantee a good life style and to try to improve it year by year, so for this reason, every national government decides to invest public resources in services and infrastructure. The essay studies one of actual main important investment of the Russian Federation: the Crimean bridge; moreover, it shows not only expenditures but also future economic, social, touristic and strategic advantages that Russian will receive from this investment.*

***Key Words:** Crimean bridge, Kerch Strait, Russia, integration, the Republic of Crimea, Sevastopol*

***Kľúčové slová:** Krymský most, Kerčský prieliv, Rusko, integrácia, Krymská republika, Sevastopol'*

JEL: R11, R42, R58, O18

Introduction

March 18, 2014 is an important day for every person from Crimea, as well as for Russian, Ukrainian and Crimean history; indeed happened an important historic event that has radically changed the regional geo-political equilibrium.

After the revolution of Maidan that sanctioned the end of Yanukovych's government and its pro-Russian policy, for Ukrainian has started conducting a new kind of international policy pro-Europe, the new government has declared to refuse any Russian influence in politics as in economy. In this context of radical political change and instability, in that day happened an event that also today is not resolved: the annexation of the Crimea to Russia, or the entry of the territory of the Crimean Peninsula (with the Republic of Crimea and the hero city of Sevastopol) to the Russian Federation (Ford E., 2014). On March 16, 2014 after a referendum, that it is not recognized by almost all nations of the World, with a percentage of almost 95%, people voted to enter in the Russian Federation and to stop to be a region of Ukraine (BBC, 2014).

After the integration of Crimea and Russia, there was an aggravation of relations between Russia and Ukraine, with the United States and the EU, the threat of an economic blockade of Russia due to sanctions, as well as the threat of stopping the railway and auto communication of Russia with the Crimea through Ukraine.

After more than three years, political situation in this region does not change as international relationship between Ukraine and the Russian Federation. Who is

suffering more from this situation are people of the Donetsk and Lugansk Republics, but also Crimean people had hard times after the referendum. Since April 26, 2017 Ukrainian authorities had closed tube of water from Dnepr to Crimea; the Ukrainian government has unveiled a dam that actually cuts the water supply of more than 85%, anyway Crimean authorities have already said that this will not influence the agriculture as well as life of Crimean people (Paromniy, 2017). More Russian and international journals, writers and politics started to increase their interest about the region, and in this way, the most important question was how to resolve the geographical connection between Crimea and Russia. For example, E. Ford, in 2014 wrote the book "Putin-Crimea. What's next?"; moreover, also journalists wrote about this problem, K. Latukhina wrote in 2016 that President Putin was thinking about how to connect Crimea and Russia, and the best idea was to create a bridge that could help the transport network of the region with the Russian Federation (Latukhina, 2016).

The problem concerning the Crimea arises in the Russian history not for the first time. Indeed, in past times, during the Russian Empire and in the Soviet Union until the Second World War, Crimea was a part of Russian Empire before, and of Socialist Republic of Russia after 1917. Only in 1954, for a direct decision of the Secretary-General of the CPSU, N.S. Khrushchev Crimea passed from the jurisdiction of the RSFSR to the jurisdiction of the Ukrainian SSR and becomes a region of Ukraine (Vetroukhov, 2014). Today the problem connect with the Crimean region is not only political but also sociological, because the main culture in this region is Russian, 54% of people are Russian and many of them have parents in Russia (BBC, 2014). Moreover, the peninsula is a strategic place for the control of the Black Sea-Azov basin. Crimea today is giving to Russia the access to the Middle East markets, so today for the Russian Federation is very important not only to maintain the control of the region, but also to develop the connection with all Russia, as strategic point for Russian export. The problem of connection Crimea and Russia is not so "young", also in the Russian Empire there was the same problem; during Soviet times, authorities created the first main transport "Southern Railway", which was established in 1934. It was formed by the main lines put into operation during the periods of the first and second "huge" elevator of the railway construction. Ukraine can block a corridor transporting natural infrastructure through Orel and Belgorod. Therefore, it is the direction of Kerch, which is an alternative for today.

The Crimean Bridge

On March 19, 2014 the Russian President V.V. Putin set the task to build the Crimean bridge across the Kerch Strait for road and rail communication of continental Russia and Crimea peninsula (Latukhina K., 2016).

He took such decision, considering the political and economic situation that has happened in the Region and considering the necessity to connect Crimea directly to Russia and not through Ukraine.

Because the communication with the Crimea was possible either through two borders or through the Kerch Strait, where, while there is no bridge, the ferry to the Crimea, but many kilometres accumulate, and the load on the airport of Simferopol has become colossal, the prices for tickets have grown. Therefore, the commissioning of the Crimean Bridge will improve railway and auto traffic and tourist accessibility.

The Table 1 shows to the reader main positive and negative factors connected with the annexation of Crimea by the Russian Federation:

Tab 1 – positive and negative factors of the annexation of the Crimea by the Russian Federation

Positive Factors	Negative Factors
	Problems with energy supply that hamper the normal life and work of the local population
Getting a strategically important base in Sevastopol for the Russian fleet. More investment and more export/import from and to the peninsula.	The need for serious irrevocable financial injections into the economy of the Crimea, which by two thirds is a subsidized region
Possibility to increase internal Russian tourism and international too	Escalation of relation with USA and European Union
Getting a large recreational region	Because of the annexation of Crimea, Russia is living a new “economic cold war” against Western countries
Getting an important chemical and industrial zone in the north of Crimea	Problems with water supply in the region
Development of national economy	Crimea was in a "technological blockade"
The peninsula is located in an advantageous geographical position because it is the intersection of transport between Europe and Asia	Transport accessibility of Crimea for Russians has considerably worsened Communication with the island
Increasing of agriculture, especially about the production of wine and grapes, fruits and vegetables that cannot grow up in the north of Russia	The promised growth of the economy and the improvement of the living standards of the population are still only in the plans

Source: Own processing

After integration, Russia has faced a number of problems that it has tried to eliminate or minimize over the years. It is clear that as an integral part of Russia, the Crimea also feels the economic crisis.

One of the main problems is the deterioration of relations with the US and the European Union. Moreover, also the President of Turkey does not recognize the entry of the Crimea in Russia. Because the Crimea was considered an occupied territory, and the Russian Federation, by conducting a referendum, violated the norms of international law, then the EU countries and the US introduced anti-Russian sanctions.

The problem is that even though the Crimea is not yet a top tourist destination, the level of service with a mentality that has settled for decades, still leaves much to be desired. Russia is implementing a program to turn the resort of Crimea into the most popular and attractive tourist destination for recreation. And in order to compete with the resorts of the Krasnodar Territory and the Stavropol Territory, it is necessary to establish transport accessibility of the peninsula, modernize morally and materially outdated hotels and hotels, and raise a very low level of service.

The problem is that even though the Crimea is not yet a top tourist destination, the level of service with a mentality that has settled for decades, still leaves much to be desired. Russia is implementing a program to turn the resort of Crimea into the most popular and attractive tourist destination for recreation. The problem is that in order to compete with the resorts of the Krasnodar Territory and the Stavropol Territory, it is necessary to establish transport accessibility of the peninsula, modernize morally and materially outdated hotels and hotels, and raise a very low level of service. Immediately after the accession of the peninsula, Crimea experienced enormous problems with power supply, which was conducted from the Ukrainian energy service.

The energy blockade and sabotage greatly hampered the normal life and work of the Crimeans. The problem at the first stage was solved with the help of the “Kamysh-Burunskaya” energy bridge, the second stage of the electrification of the Crimea is the commissioning of the Sevastopol and Simferopol TPPs. In addition, it was necessary to quickly solve the issue of water supply with fresh water, especially for the development of agriculture and tourism in the region. The actual regime of sanctions does not give the possibility to Western investors to open and create new companies, so more work places and a general economic development of the region as it is in other part of the Russian Federation. For example, Microsoft disabled Google Play, as well as many others (Shamil, 2014). Internet services are limited for the Crimeans; international payment systems have stopped serving: for example Visa and MasterCard. But, since Russia in all supports the Crimea, it immediately designed and replaced them with the Russian national payment system MIR. Anyway is clear that this national pay system cannot cover all needs as MasterCard or Visa.

We can say that the construction of the Crimean bridge will give an opportunity to continue a confident course for the growth of the economy of the Crimea (Yatsko, 2016).

For example, the transportation of goods along the Kerch crossing increases the cost of goods, and with the help of the Crimean bridge cargoes from the M4 highway

will be directly delivered to the Crimea; moreover, the bridge will cancel the additional financial burden from the Crimeans, as well as the well-being of the population.

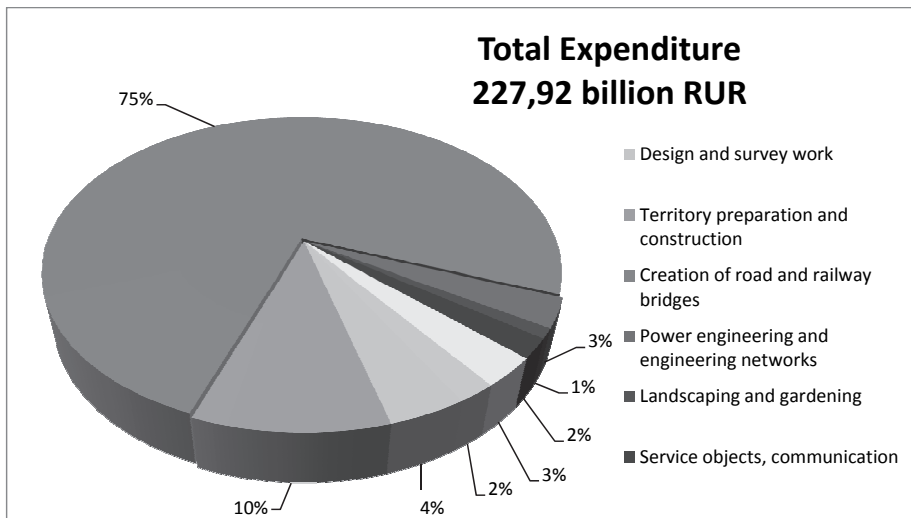
In general, the development of the social and economic sphere of the Crimea is proceeding slowly but surely. So, with the accession of the Crimea we received a lot of positive aspects; a very important aspect related to the annexation of the Crimea, Russia received a strategically significant Sevastopol naval base of the Black Sea Navy of the Russian Navy, which we rented at \$ 120 million a year. Now, the peninsula is the controlling strategic territorial entity of Russia in the Azov-Black Sea basin (Vetoukhov, 2013).

This is also the way to enter the markets of the Middle East, for example, the largest consumer of Russian grain - Iran (Belochkina, 2014). Still Russia has received large recreational territories for domestic and international tourism. Russia received 3,000 hectares of vineyards and the largest wineries of such famous brands as Koktebel, Novyi Svet, Massandra (Belochkina, 2014.). In the north of Crimea, Russia received large chemical plants for the production of components for fertilizers and reagents for the refinery industry. Therefore, the accession of Crimea to Russia has become a catalyst for major investment in a lot of different projects in the Crimea.

Moreover, is possible to say that after reunification with Russia, the inhabitants of Crimea also receive extensive positive directions for social and social development. For example, three languages are considered public in this territory: Russian, Crimean Tatar and Ukrainian. The Crimean Tatars, who were recognized as repressed by the people, received not only special rights, but also benefits. Also, residents of this region have the opportunity to enter the higher educational institutions of Russia. For the adult population of Crimea, labour migration across the entire territory of the Russian Federation has become much simpler.

In connection with the aggravated political situation, sabotage is possible. There are threats from land, air, and water. Therefore, during the construction of the Crimean bridge, special anti-terrorist measures of protection were adopted. In addition to commissioning the facility, you must also enter all necessary infrastructure. The Figure 1 shows how much costs the construction of the Crimean Bridge and how resources are used (Sharia, 2016).

Figure 1 – Total expenditure for the construction of the Crimean Bridge



Source: Own processing

Conclusion

The Crimean Bridge can be an opportunity for the Russian Federation to improve in the region the political stability, develop infrastructure, open trade routes, develop domestic tourism and guarantee the country's geographical integrity as well as the political. The Crimean bridge is a strategically important aspect in the integration process, moreover it can be an economically effective investment in order to improve the stability, prosperity and economic stability of the Crimean region but also for Russia. So is possible to conclude that the Crimean Bridge may be an important investment that will give more and more benefits than the actual expenditure.

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OPTIMIZATION OF EMPLOYEES' SELECTION BY COMPETENCY MODEL

OPTIMALIZÁCIA VÝBERU ZAMESTNANCOV PODĽA KOMPETENČNÉHO MODELU

***Abstract:** Based on a practical example, the goal of this paper is to propose methodology of generation "Methodology of requested professional and psychosocial competencies" for a specific working function as well as an optimal way of selection of an employee who fills it. As a method the factor analysis (calculation of own figures and vectors of aggregate matrix) was used. The result of this paper is a proposal of methodology for generation the Model of requested professional and psychosocial competencies for a working function "Human resources manager" and an optimum way of an employee selection for this working function. Above mentioned methodology may be used for any working function.*

***Key words:** competence, competency model, degree of conformity, future competencies*

***Kľúčové slová:** kompetencie, kompetenčný model, miera zhody, budúcnosť kompetencií*

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JEL: D70, M19

Introduction

Execution of managerial functions at all levels of management is really demanding. If managers want to be successful they need to have adequate characteristics, abilities and skills. Under these circumstances managers are often asked to find solutions especially in the areas of seeking and finding new ways, solutions and instructions how to improve position of their organization. Based on new approaches try find new solutions especially in strategy determination, planning, recovery processes, increasing goodwill effectiveness, logistics improvement and last but not least also in the process of employees' selection ([1], p.170).

Material and methods

Competitive advantage is a key for company prosperity (survival on the market). People present a key tool to get and keep this advantage. They dispose with knowledge, experience which result to abilities and last but not least people – as the

only source of any organization – can be capitalized. A finding that organizations employing properly motivated staff achieve permanently better results in comparison to their competitors is very important. Their motivation is especially quality of their management, so we can conclude that quality of management leads to organization success or failure. Relations among people, means for work and working subjects considerably influence performance and quality of working place in the transformation process ([2], p.35).

Companies' owners, managers and researchers support the idea that people present a critical factor of organization success. This factor contains knowledge, abilities, skills, loyalty and commitment. This phenomenon is called "competencies". Questions concerning work with people become one of the most important tasks of managerial work at all levels of company management ([3], p.8).

Competencies of people are relatively stable. It means that if we know the level of competencies development we are able to predict reliably the quality of people behaviour in different situations including working performance. The effort to understand behaviour of people and to respond to it adequately is closely connected to managers' and other workers' success in organization ([4]). Identification of competencies usually leads to generation of competency model which is characteristic for a particular working function.

Competency models – types, creation and utilization

Competency models describe and present a specific combination of knowledge, abilities, skills and other characteristics of a person which are necessary to fulfil tasks in an organization effectively. There are several types of competency models which depend on goals which an organization wants to achieve.

Competency models types

- A. Model of central competencies – contains common and essential or inevitable competencies for all employees of an organization regardless of their working function. In case of a service organization a usual and typical key competence is orientation on customers. If an organization needs to redesign its culture, they must lay stress on engagement of all its employees in this process. In this case competencies like engagement, interactivity, communicability of all employees will be needed.
- B. Working place competency model – contains competencies presenting an assumption to perform a specific working function successfully. It usually concerns an accurate description of requested working performance and behaviour.
For example, the competency model of a regional manager of an organization with rapidly selling goods will include type of customers, the way how to deal with them, the way how to manage sales representatives, etc.
- C. Generic competence model – in an organization where most problems arise due to a contact with clients the following competencies are necessary – ability to

hear a client, to find out the substance of the problem, to compare client's version with the reality of the organization, to report the attitude of the organization clearly and tactfully, based on needs and typology of a customer and with the aim not to lose him – choose the most suitable way to solve a problem. In an organization where mostly technical problems are solved, higher importance will be given to analytical abilities, work with facts, looking for detailed information and suggesting alternative solutions.

Competency models present an effort to simplify application of competency approach. They offer a well-established list of competencies, proved by a previous long-term research, respectively it benefits from practical experience of professionals. That is why its validity is considered as relatively high.

Competency model generation

It is suitable to use the following process to generate a competency model [5]:

- A. To make a project goal clear – necessary to be done before competency model generation. If the need and goal of the project are clear the effort of all people participating in the project is simplified. As an example we can mention a necessity of organization to respond to growing threats from competition promptly and identify what type of behaviour will be requested due to the changes on the market.
- B. Scope of the project and target group – as soon as a key motive of application of competency model in organization is specified, it is not difficult to determine which groups of workers the model concerns. If the motive is equal to a change of a parameter of company culture, e.g. higher proactivity of all employees, it will be necessary to generate a model which describes competencies which are necessary for every worker regardless of the working function he performs.
- C. Selection of approach to model generation. The simplest way is to use existing competency model, if it is available. If this is not the case, it is necessary to generate a new model for the target group. In this situation it is proper to follow this process:

Project team formation – it is important to involve people who will be responsible for model implementation and utilization. Important managers of divisions which are concerned by the project should not miss. Project leader must be able to state the procedure and obtain support inside the organization. One of the first tasks of the project team will be determination of output parameters and detailed way of its implementation with measurable criteria of success.

Identification of various levels of performance in a specific function - its aim is to find out the level of the performance of the employees who are concerned by the project.

Data collection and their analysis – this phase presents the generation of the model. Following sources of getting information can be used in this phase: interview or the method of critical situations, experience (opinions) of experts, surveys, databases of competency models, and analysis of working functions/tasks and direct observation. The process of analysis and data classification influences the aim of the project, its scope and applied data collection techniques. Analytical methods try to determine the basis of competences due to some generic qualities of a human and consequently measure them. Tests of abilities, especially of mental ones, questionnaires finding out the level of temperament, motivation tests and questionnaires of all interests belong to typical analytical methods.

Validation of competency model – means practical verification if the model described such behaviour, based on which the respondents achieve expected results.

Competency models utilization

A reliable area of competency model utilization is human resources selection. This area brings good results within relatively short period. Selection process requires generation of validated competency model for this specific working function. The following situations are suitable for selection based on competency model:

High fluctuation – there are of course professions where higher fluctuation is normal. Selection of unsuitable people and their training results in higher costs. Utilization of competency model increases selection quality and lowers fluctuation, because people who identify with organization culture and requirements are recruited.

Procedure planning – developing new production or employees who retire make the organization look for and look after development of people who replaced them.

Working function demands a longer training period – selection of workers based on competency model shortens the process of training to a fully productive state by 33% to 50%.

Organizational change – requires rearrangement or shift of people at various functions so that they are able to perform their work even in changed conditions.

The next area of competency model utilization is employees' growth and development. In competence approach development of employees is understood as a dialog among a worker and his superior.

It is not enough to fill in a form, but the manager needs to analyse and document all progress and failures. Each working function requires a man to dispose with several competencies developed at high level. Then the development is aimed at decrease and balancing the difference between an actual and ideal state.

Another area of competency model utilization is career growth and procedure planning. Organizations often proactively prepare and plan career of their workers in advance. The aim is, however, to have a “ready man” prepared to fill a vacancy

immediately when somebody leaves the organization. Utilization of competencies in career planning plays an important role especially in the following situations:

- A. Organizations merge and go through organizational changes. After a merger almost all the working functions are double and it is necessary to decide what should be done with redundant workers. Decisions made on basis of reviewing the rate of competencies development may ensure successful operation of organization in the future.
- B. Stagnating organization needs to identify key competencies of its employees to increase its chances to survive. It often happens that after privatization the organization needs to ensure higher performance with a lower number of employees.
- C. Results of promoted managers are insufficient. After some time in a higher position these managers leave or do not manage their tasks.

Processes concerning workers' growth should be directed towards a position or function in which workers should start working in two, three or five years.

Methods

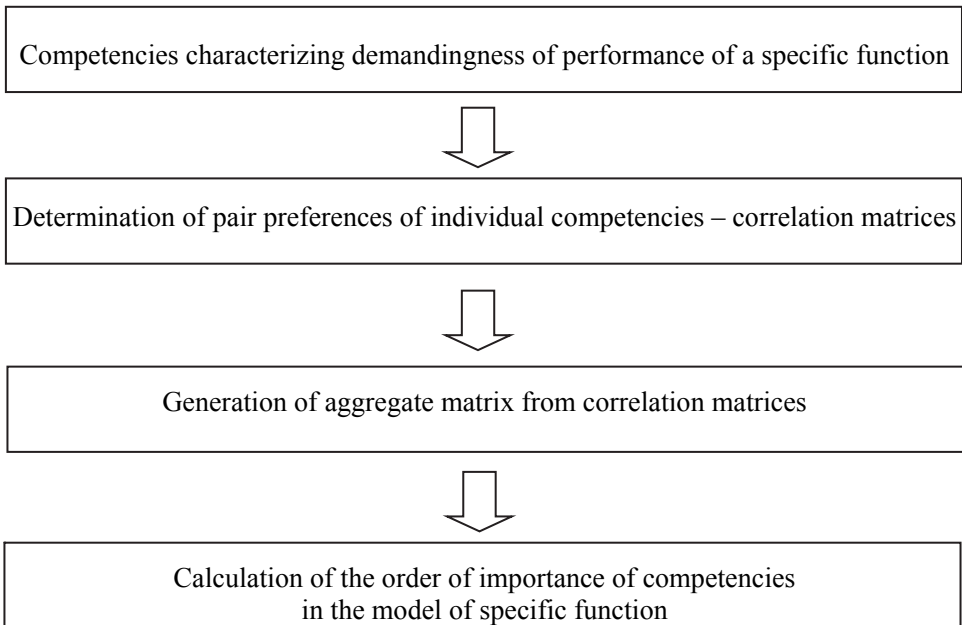
Factor analysis was used (calculation of own figures and own vector of aggregate matrix) with utilization of Mathematica program. Importance (weights) of individual competencies ($\mu_1 - \mu_{10}$) is found out based on calculation of own figures and own vectors of the aggregate matrix. Program Mathematica was used to calculate own figures and own vectors.

(Program is available at <http://www.wolfram.com/products/mathematica/index.html>.)

Results

Generation of the competency model for a working function "Human resources manager" based on experience (opinions) of experts and consequential selection of the most suitable candidate for this function (using factor analysis) is in the picture 1.

Picture 1 Generation of a competency model for working function “Human resources manager”



Source: [6], p.170

Selection of competencies for a specific working function

Following competencies were selected for this specific working function by three experts:

- X1: assertiveness,
- X2: ability to cope with stress,
- X3: thinking and conclusion,
- X4: selective attention,
- X5: empathy,
- X6: team work,
- X7: ability to solve conflicts,
- X8: constructive thinking,
- X9: creativity,
- X10: numerical competencies.

Generation of correlation matrices

Table 1 contains the correlation matrix created by an expert number 1. The number of correlation matrices corresponds with the number of experts. Values in the table express correlation relation between two competencies.

Table 1 Correlation matrix 1

	X 1	X 2	X 3	X 4	X5	X 6	X 7	X8	X 9	X 10
X1	1.000	0.355	0.605	0.255	0.705	0.455	-0.29	0.675	0.590	0.550
X 2	0.355	1.000	0.595	0.600	0.450	0.745	0.105	-0.015	0.255	0.400
X 3	0.605	0.595	1.000	-0.050	0.350	0.295	0.410	0.480	0.745	0.450
X 4	0.255	0.600	-0.050	1.000	0.645	0.545	-0.985	0.405	0.895	0.395
X 5	0.705	0.450	0.350	0.645	1.000	-0.705	0.325	0.745	-0.725	0.600
X 6	0.455	0.745	0.295	0.545	-0.705	1.000	0.115	0.150	0.175	0.950
X 7	- 0.295	0.105	0.410	-0.985	0.325	0.115	1.000	0.550	0.600	0.650
X 8	0.675	-0.015	0.480	0.405	0.745	0.150	0.550	1.000	0.950	0.970
X 9	0.590	0.255	0.745	0.895	-0.725	0.175	0.600	0.950	1.000	0.950
X 10	0.550	0.400	0.450	0.395	0.600	0.950	0.650	0.970	0.950	1.000

Source: expert no. 1

Generation of aggregate matrix

Elements of aggregate matrix are determined from maximum values of correlation matrices elements. Aggregate matrix is contained in Table 2.

Table 2 Aggregation matrix

	X 1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	-0.950	0.605	0.635	0.705	0.555	0.350	0.675	0.590	0.650
X2	-0.950	1.000	0.705	0.600	0.450	0.745	0.570	0.830	0.600	0.594
X3	0.605	0.705	1.000	0.410	0.350	0.750	0.410	0.705	0.745	0.705
X4	0.635	0.600	0.410	1.000	0.645	0.795	-0.990	-0.983	0.895	0.395
X5	0.705	0.450	0.350	0.645	1.000	-0.705	-0.650	0.885	-0.725	-0.975
X6	0.555	0.745	0.750	0.795	-0.705	1.000	0.400	0.895	0.550	0.950
X7	0.350	0.570	0.410	-0.990	-0.650	0.400	1.000	0.725	0.915	0.660
X8	0.675	0.830	0.705	-0.983	0.885	0.895	0.725	1.000	0.950	0.970
X9	0.590	0.600	0.745	0.895	-0.725	0.550	0.915	0.950	1.000	0.950
X10	0.650	0.594	0.705	0.395	-0.975	0.950	0.660	0.970	0.950	1.000

Source: own processing

Calculation of competencies importance (weights)

Importance of individual competencies:

$$\mu_1 = -12.81138\%,$$

$$\mu_2 = 7.0137707\%,$$

$$\mu_3 = 33.542218\%,$$

$$\mu_4 = 24.056797\%,$$

$$\mu_5 = 18.461109\%,$$

$$\mu_6 = 5.8463551\%,$$

$$\mu_7 = 20.678895\%,$$

$$\mu_8 = 23.319638\%,$$

$$\mu_9 = 11.509523\%,$$

$$\mu_{10} = -31.616929\%.$$

Weights and the order of importance of the model of working function “Human resources manager” are contained in Table 3.

Table 3 Weights and the order of importance of competencies of a specific working function

Competencies	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
Weights (%)	-12.81	7.01	33.54	24.06	18.46	5.85	20.68	23.32	11.51	-31.62
Order	9.	7.	1.	2.	5.	8.	4.	3.	6.	10.

Source: results according to Mathematica

Generation of the Model of professional and psychosocial competencies of a working function

Model for a specific working function is generated by configuration of competencies depending on values of percentiles, which were calculated for individual competencies and are shown in table 4.

To find out real structures of candidates' competencies relevant batteries of psychodiagnostic tests were used.

The values of competencies in the model and structures of candidates are shown in table 5.

Table 4 Model of working function “Human resources manager”

Order	Competencies	Competency title	Weight (%)
1.	X3	Thinking and conclusion	33.54
2.	X4	Selective attention	24.06
3.	X8	Constructive thinking	23.32
4.	X7	Ability to solve conflicts	20.68
5.	X5	Empathy	18.46
6.	X9	Creativity	11.51
7.	X2	Ability to cope with stress	7.01
8.	X6	Team work	5.85
9.	X1	Assertiveness	-12.81
10.	X10	Numerical competencies	-31.62

Source: own processing

Table 5 Values of competencies in the Model and candidates' structures

Competencies of Model and structures of candidates	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
Model (%)	-12.81	7.01	33.54	24.06	18.46	5.85	20.68	23.32	11.51	-31.62
ŠU1 (%)	4.00	8.00	13.00	12.00	10.00	7.00	11.00	13.00	8.00	3.00
ŠU2 (%)	7.00	9.00	10.00	14.00	10.00	6.00	9.00	12.00	6.00	8.00
ŠU3 (%)	5.00	7.00	14.00	12.00	9.00	8.00	11.00	14.00	7.00	4.00

Source: results by Mathematica and Psycho-net

Selection of the most suitable candidate for a specific working function

Table 6 contains the values of difference between the Model and candidates' structure. The lowest value of the difference (the highest level of compatibility) was achieved by the candidate no. 1 $H1 = 121.14$ point, the highest level of difference (the lowest level of compatibility) was achieved by the candidate no. 2 $H2 = 132.14$ point. The value of difference for the candidate no. 3 $H3 = 124.16$ point.

In selection of the most suitable candidate for a specific working function fulfilment of all conditions is evaluated. The first condition: Achievement of maximum level of rate of compatibility between a real structure of candidate's competencies and the model of competencies of working function. The second condition: Achieved values of percentiles of the first three competencies of the model (X3, X4, X8) must be minimum 12% and for next two competencies (X7, X5) must be minimum 9%.

Table 6 Values of difference of competencies weights between the Model and candidates' structures

Competencies of model and structures of candidates	Model (%)	Structure of candidate no. 1 (%)	Difference $ M - CS1 $ 10 $ \Delta_{i1} $ $i=1$	Structure of candidate no. 2 (%)	Difference $ M - CS2 $ 10 $ \Delta_{i2} $ $i=1$	Structure of candidate no. 3 (%)	Difference $ M - CS3 $ 10 $ \Delta_{i3} $ $i=1$
X1	-12.81	4.00	16.81	7.00	19.81	5.00	17.81
X2	7.01	8.00	0.99	9.00	1.99	5.00	2.01
X3	33.54	13.00 min. 12%	20.54	10.00 min. 12%	23.54	14.00 min. 12%	19.54
X4	24.06	11.00 min. 12%	13.06	14.00 min. 12%	10.06	12.00 min. 12%	12.06
X5	18.46	10.00 min 9%	8.46	10.00 min 9%	8.46	9.00 min 9%	9.46
X6	5.85	7.00	1.15	6.00	0.15	8.00	2.15
X7	20.68	11.00 min 9%	9.68	9.00 min 9%	11.68	11.00 min 9%	9.68
X8	23.32	11.00 min. 12%	12.32	12.00 min. 12%	11.32	14.00 min. 12%	9.32
X9	11.51	8.00	3.51	6.00	5.51	5.00	6.51
X10	-31.62	3.00	34.62	8.00	39.62	4.00	35.62
			$\sum_{i=1}^{10} \Delta_{i1} = 121.14$		$\sum_{i=1}^{10} \Delta_{i2} = 132.14$		$\sum_{i=1}^{10} \Delta_{i3} = 124.16$
			H1=121.14 point		H2 = 132.14 point		H3 = 124.16 point

Source: own processing

Third condition: Not to exceed the limit of tolerance equal to 7 points (difference of value of variation of a reviewed candidate and a candidate with the highest level of compatibility, if he did not fulfil condition number 2). The first condition was fulfilled by a candidate number 1. The second condition was fulfilled only by a candidate number 3. The third condition was fulfilled by the candidate number 3 (the difference of variation value of candidate number 3 and number 1 = 3.02 point). The most suitable candidate for the working function "Human resource manager" is the candidate number 3. As the only one he fulfilled conditions defined by experts.

Discussion

Within the frame of the topic we focus on, there are a few important open questions to be dealt with in the future.

At first it is the problem of the level of reliability of generated "Model of requested professional and psycho-social competencies" for a specific working function, for which the optimal candidate is selected. As the most suitable seems to be the generation of the Model by a group of experts, which should include people who have both theoretical and practical experience with the performance or management of this specific working function and are considered as real experts by skilled public.

The second important question is the quality of diagnostic tools of structure and level of expert and psycho-social competencies of a candidate for specific working function. These tools should ensure a complex look on a candidate but with an accent on these professional and psycho-social competencies which are included in the Model.

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HEALTH TOURISM FROM AN ECONOMIC PERSPECTIVE

ZDRAVOTNÁ TURISTIKA ZEKONOMICKEJ PERSPEKTÍVY

Abstract: *Traveling for health and wellness purposes known as health tourism is becoming increasingly important nowadays. According to surveys, health tourism is one of the fastest growing sectors (due to its ability to generate economic returns). Health tourism has a positive economic and developmental impact on the (supplying) countries. The aim of the article is to quantify health tourism and point to its economic benefits for both - the tourism sector and the health sector.*

Key words: *healthcare, health tourism, tourism, travel*

Kľúčové slová: *zdravotníctvo, zdravotná turistika, turizmus, cestovanie*

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VEGA No. 1/0470/18 Economic activity of tourism in the European area

JEL: Z32, I15

Introduction

Nowadays, in addition to traveling for work, leisure or new experiences, people also travel for healthcare. Traveling for health or health tourism is a fast-growing sector that provides services to patients traveling abroad for medical treatment. The treatment may include cosmetic surgery, treatment by specialist or special treatment such as chemotherapy, dental care, as well as routine medical examination. Patients are often provided with packages that also include relaxation activities.

The key factors contributing to patients' decision to use the health tourism services include correct information, motivation and taking into account the risks. Other factors include: the language (i.e., the ability to communicate), the cultural and religious customs in the destination, the political situation in the area or country. Last but not least, the decisive motivational factors are: performance, country and costs.

However, skeptical views on health tourism also appear. The sceptics are concerned about patient safety, ethical issues, especially in reproductive and transplant surgery.

Increase in the number of private facilities and the growth of private market in the supplying country causes the draining of resources from inadequately secured (equipped) and underfunded public facilities [5], [8].

Health tourism

The sector of health tourism is basically nothing new, but only in recent years the sector has become global. In this respect, the Loh [7] notes that health tourism is undergoing a global rising trend, but there is no well-grounded empirical evidence of such a claim in the literature which is due the lack of reliable data regarding health tourism. According [6, p. 230] “health tourism is one of prominent sectors within tourism sector, which achieves significant growth with regard to investment and tourist number annually across the globe.” This phenomenon is significantly supported by many internet providers that connect patients and facilities. Interactive websites allow users to arrange a service, contract surgeons or specialists, book a ticket and accommodation, and possibly also arrange hiking trips or excursions [5]. Several factors “have been signed” on the boom of health tourism. [7] believes that one of the crucial factors leading to the expansion of health tourism is The General Agreement on Trade in Services (GATS), introduced by the World Trade Organization (WTO) in 1995 attempting to liberalize trade in services including health care and education, that may have accelerated the opening up of health service sectors. GATS categorizes the supply of services into four modes, while health tourism falls into mode 2 (consumption of services abroad).

Hall [3] defines *health tourism* as “commercial phenomena of industrial society which involves a person travelling overnight away from the normal home environment for the express benefit of maintaining or improving health, and the supply and promotion of facilities and destinations which seek to provide such benefits”. Relatively well known and widespread is the Kaspar's definition, according to which the health tourism is the “totality of the relationships and phenomena resulting from the change of location and residence of individuals to promote, stabilise and possibly restore physical, mental and social well-being through use of healthcare services for which the location of the stay is neither the main nor permanent residence or workplace” Kaspar (1996) in [4, p. 63].

When clarifying the concept of health tourism, it is also necessary to emphasize the connection with the notion of *medical tourism*, which is described by Carrera and Bridges in [4, p. 63] as a subset of health tourism. Authors define medical tourism as following: „the organized travel outside one’s natural healthcare jurisdiction for the enhancement or restoration of the individual’s health through medical intervention”. It can be simply defined as “foreign travel for the purpose of seeking medical treatment” (Balaban & Marano 2010), in [3].

According Cook in [4] both terms (health and medical tourism) differ through the level of surgical and physical intervention in the tourist’s body. *Medical travel* is on

the raise and United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) describes it as “the international phenomenon of individuals travelling, often great distances, to access health-care services that are otherwise not available due to high costs, long waiting lists or limited health-care capacity in the country of origin”, ESCAP (2009) in [3].

From the perspective of travelers' health motives, a distinction can be made between those seeking services to maintain their well-being (e.g., spa services for relaxation) referred to as wellness tourists, and those seeking treatment for a specific medical condition (e.g., hip replacement). referred to as medical tourists (Erfurt-Cooper & Cooper 2009, in [7]. “However, such a distinction can be blurry and less practical in some cases as the true health motive of a consumer is not always clear. For that matter, health tourism is considered a much broader term that encompasses both wellness tourism and medical tourism” [7, p. 760].

Health tourism has become a way of doing business all over the world. Reliable services are provided by top hospitals that have undergone sophisticated audits, are equipped with the latest technology and employing experienced physicians who have acquired education in developed countries. Top destinations for foreigners are Spain, France, Costa Rica, India, Israel, Malaysia, Mexico, Singapore, South Korea, Taiwan, Thailand, Turkey and the USA. Paradoxically, while many Americans are going abroad for treatment (most often they use the services of dentists, surgeons, eye surgeons, gynecologists as well as oncologists, or even for transplantation of organs including kidneys and heart), people from abroad are going to the USA to heal. Most often they go to foreign dentists, surgeons, ophthalmologists, gynecologists and oncologists, as well as organ transplants, including kidneys and heart [2].

The main *reasons for health traveling/health tourism* are:

- *Saving money* i.e. seeking lower-cost medical treatment. The rising cost of healthcare in developed countries force people to look for (less expensive) quality healthcare facilities in Asian, South American or Eastern European countries.
- *Quality (of medical services) or specialized treatment*. Trying to find a clinic for a specific operation, or simply better care.
- *Saving time*. Trying to avoid wait times for medical treatment or surgery.
- *Availability*. Looking for services that are not available in one's own country.

In addition to the location, price, cultural or natural wealth of the country, another decisive factor when choosing a vacation destination is the diagnosis [9]. Health tourism can be divided into two basic groups (according reasons that lead to it):

1. the first group of healthcare/medical travellers is made up of people from backward countries who travel for health(care) that is unavailable in their country or is available in significantly lower quality;
2. the second group consists of people from developed countries looking for high-quality healthcare at affordable prices in Third World countries. Currently, there is a consensus and it is assumed that patients from richer countries will continue to flow to developing countries to obtain cheaper treatment [8], [1].

In the field of health tourism, 15,000 foreigners were enrolled in Czech medical institutions in 2016 and the state earned more than half a billion Czech crowns. In Slovakia, spa industry, plastic surgery, ophthalmology (laser eye surgery) and dental services (teeth whitening, orthodontics or full mouth reconstruction) are particularly emphasized. Foreign clients are mainly Austrians and Germans.

In terms of Slovak citizens' health tourism Juraj Karpiš of the INESS Institute notes that health tourism in Slovakia does not only concern people who can afford it i.e. have the money to pay for the higher quality of healthcare in the Western European countries. It also includes people with diagnoses (e.g. transplantation of liver, pancreas, lung or less invasive heart surgery) for which there is no other option just to travel abroad [1].

Disadvantages and shortcomings of health tourism

According to [8], one of the major shortcomings of medical tourism is the fact that the private providers depletes specialists from the public (health) system. Health(care) tourists also limit the availability of services for the domestic population - if limited conditions (Thailand). The risks for patients traveling for health (health tourists) include the lack of standardization of the quality of the services provided. Although many service providers report high percentages of success (e.g. 99% in cardiac surgery results) the results are difficult to compare. Another risk is the lack of legal standards to protect from misconduct in treatment. The low cost of insurance for mistakes, along with low payments to physicians, allows to offer low prices for performance/service.

In this context, [5] emphasize that there is a growing concern about patient safety, ethics of specific care (notably “reproductive tourism” or “transplant tourism”), and growth of private markets in developing countries at the expense of adequately staffed and resourced public systems.

As regards health tourism, the World Health Organization criticizes in particular the following facts [8]:

- insufficient quality of healthcare staff and poor-quality standards of care,
- mutual recognition of the qualifications of healthcare professionals,

- the non-transferability of health insurance,
- lack of standards in electronic medical records,
- concerns about the protection of personal information and the privacy of patients in the provision of healthcare,
- differences and problems in handling complaints and litigation in case of misconduct in treatment.

“Some economists argue that a combination of importing foreign trained health workers and of exporting patients to developing countries is the simplest and most cost-efficient solution to its health-care problems” [5]. However, health tourism cannot eliminate the problem of healthcare availability, as many patients are unable to obtain sufficient funding (money) and get enough free time to get out of work for treatment abroad.

Health tourism in Slovakia

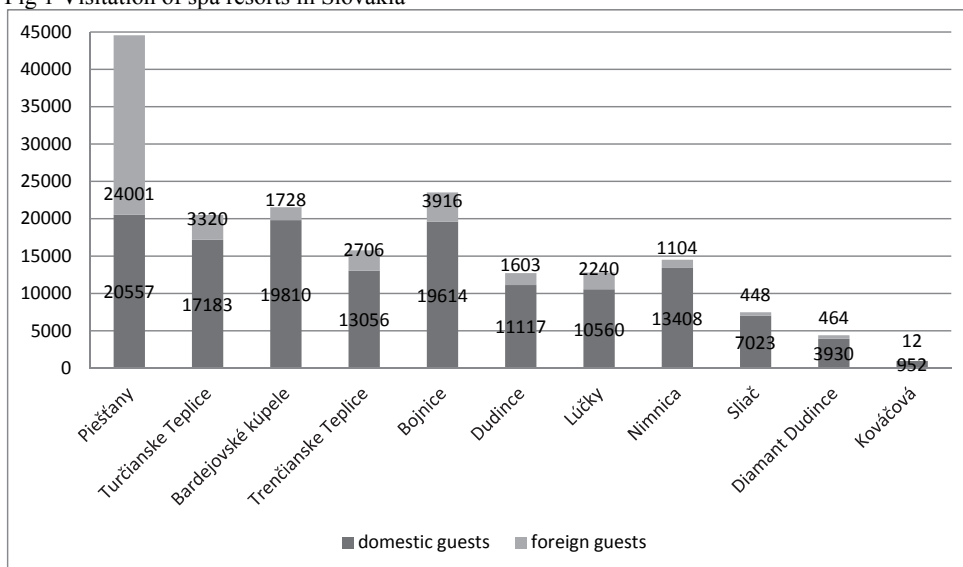
As aptly states [10, p. 743] “during the last decade, the medical travel movement has accelerated sharply. More than 130 countries around the world are competing for a pie of this global business medical tourism became more important due to increasing attention on importance of health.” Slovakia is also one of the countries that seeks to use its undeniable potential and succeed in this field. Tourism in Slovakia has the potential for further development. The average occupancy rate of accommodation facilities is 30%, where hotel guests bring 80% of sales (revenues) in tourism. There is a great potential in Slovakia for growth in tourism sales or increase the number of visitors.

Tab 1: Spa companies according to revenues

	Spa companies	Revenues EUR	Added value EUR	EAT EUR
1	Slovenské liečebné kúpele Piešťany, Inc.	36 408 837	23 027 412	2 682 265
2	Slovenské liečebné kúpele Turčianske Teplice, Inc.	11 498 837	5 194 234	417 044
3	Bardejovské kúpele, Inc.	10 322 003	6 377 382	897 989
4	Kúpele Trenčianske Teplice, Inc.	10 284 104	5 610 930	185 285
5	Slovenské liečebné kúpele Rajecké Teplice, Inc..	9 664 357	4 335 142	917 720
6	Kúpele Bojnice, Inc.	9 363 666	6 443 594	2 840 503
7	Kúpele Dudince, Inc.	7 268 433	4 517 140	874 661
8	Kúpele Lúčky, Inc.	5 288 496	3 449 697	774 908
9	Kúpele Nimnica, Inc.	4 958 672	2 224 390	-36 372
10	Kúpele Sliač, Inc.	3 074 614	1 572 058	-460 965
11	Kúpele Vyšné Ružbachy, Inc.	2 955 398	1 635 932	-162 819
12	Slovthermae Kúpele Diamant, Dudince	2 896 050	1 873 061	16 280
13	Kúpele Štós, Inc.	1 849 577	1 124 454	37 405
14	Prírodné jódové kúpele Číž, Inc.	1 833 849	1 050 498	-71 840
15	Kúpele Kováčová, Ltd.	849 672	579 184	-54 266

Source: Own processing

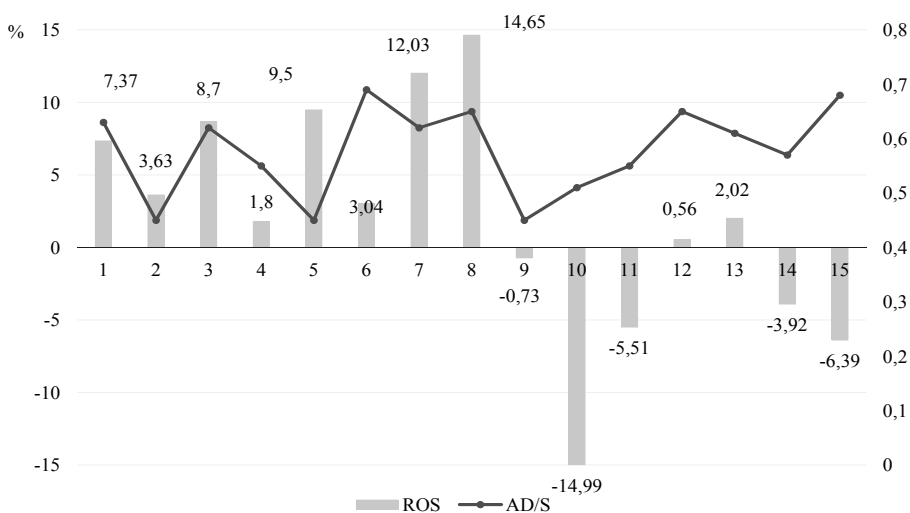
Fig 1 Visitation of spa resorts in Slovakia



Source: Own processing

For tourism was the year 2015 the best in the history of independent Slovakia. Records have been reached in the field of visits where the number of overnights was 4.3 million bringing the Slovak Republic to the top of the European Union. The operation of destination management - Regional tourism organizations has been and still are very positively evaluated.

Fig 2 Return on Sales (ROS), Share of Value Added in Sales (AD/S)



Source: Own processing

Conclusion

The contribution pointed out that health tourism can record significant economic benefits for the tourism and health sector in the supplying country. According [9] health tourism is becoming increasingly popular and various agencies offer opportunities to combine pleasant with useful (“combine business with pleasure”) - so on the way abroad you can both relax and simultaneously solve the health or aesthetic problem. Several countries have made a profitable business from health tourism.

Specialized (travel) agencies offer complete packages including fees for surgery, preoperative examinations, accommodation, airport pick-ups, etc. Health tourism brings millions of patients annually to the EU. In this sector, Slovakia has a great potential. Slovakia – according [9] – is the ideal place for spa care with up to 94 places with thermal and healing springs. Long-term tradition and experienced specialists, well-equipped clinics and highly competitive prices in dental medicine and plastic surgery make Slovakia one of the most promising destinations for health tourism.

According to [8], sources of professional literature are qualitatively different and provide very mixed information about the health tourism sector, therefore national and international registers should be established in the future to record statistical data on the various aspects of health tourism so that they can be compared

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ANALYSIS OF THE IMPACT OF SELECTED INDICATORS ON CROSS-BORDER MERGERS AND ACQUISITIONS IN THE CONTEXT OF INTEGRATION ISSUES

ANALÝZA VPLYVU VYBRANÝCH INDIKÁTOROV NA CEZHRAŇIČNÉ FÚZIE A AKVIZÍCIE V RÁMCI INTEGRAČNEJ PROBLEMATIKY

***Abstract:** The main objective of this paper is to identify the impact of selected indicators on the volume of completed cross-border mergers and acquisitions between selected countries of the European territory from 1998 to 2015 and the post-crisis period from 2012 to 2015. The data were used for regression analysis was structured based on the primary attribute, a time factor. Based on an analysis of regression was assessed knowledge concerning certain determinants influencing the size of cross-border mergers and acquisitions. The analysis carried out it was found that the subjects in the sample countries prefer investments that lead to the strengthening of its market position in the economy. We also focused on the analysis of the determinant of civil liberty and its influence on the investment rate in the surveyed sample of countries.*

***Key words:** Cross-border mergers and acquisitions, market capitalization, civil liberty*

***Kľúčové slová:** cezhraničné fúzie a akvizície, trhovú kapitalizáciu, občianska sloboda*

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JEL: F15, F21, F23

Introduction

Increasing volatility and complexity of the business environment lead companies to reduce their vulnerability to adverse changes and consequently to increase their competitiveness on the market [1].

Therefore, business companies are often pursuing growth, in particular in the form of external mergers and acquisitions (furthermore M&As) as they provide faster changes compared to internal growth opportunities. There are a number of classifications of motives for merger and acquisition activity [2].

Brakman et al. (2013) provides a broad view of mergers and acquisitions. He summarized the reasons and objectives for mergers and acquisitions in five groups: (1) the exploitation of synergies growth opportunities, (2) interest managers of the acquisition, (3) dispersion of risk, (4) strengthening of market power and (5) changes in the business environment. As business companies are forced to keep pace with local and foreign competition, mergers and acquisitions as a form of investment can involve both local and foreign companies. If a company decides to place its products on foreign markets, it has a choice between export and local production through (FDI) [4]. If a business company decides to locally produce, it can build its own green-field investment facility or acquire an existing enterprise through a cross-border mergers and acquisitions [5]. In order for an enterprise to profit on foreign markets, it must have a competitive advantage compared to local competitors. Otherwise, local business companies would be forced out of the market [6].

Unlike domestic mergers and acquisitions, cross-border mergers and acquisitions mean growth focused on foreign markets, giving access to business opportunities that domestic businesses do not yet understand or are unable to use [7]. In addition, cross-border mergers and acquisitions act as a tool for geographic diversification, helping to overcome the risk of home-specific shocks. [8] (2008) have classified systematized factors that influence the choice of cross-border mergers and acquisitions as a way of entering the foreign market as follows: (1) company-level factors such as multinational experience, local experience, product diversity and international strategy; (3) Country-level factors such as market size and growth in the host country, cultural differences between home and host countries, and specific culture in the country of origin of the acquiring company (in particular, in terms of avoiding uncertainty and risk-leap). Business and sector level factors could also be applied to domestic mergers and acquisitions, but country-specific factors are a feature of cross-border mergers and acquisitions [9]. Foreign capital in the form of mergers and acquisitions can help domestic business companies to overcome constraints such as: (1) difficult and unfavorable sources of funding, (2) obsolete technology and enterprise organization, (3) a saturated or inadequate domestic market, a slow adaptation to market conditions etc. On the other hand, companies that offer opportunities for cross-border mergers and acquisitions do not necessarily have to mean long-term objectives, which means that short-term speculative motives are also considered the reason for carrying out mergers and acquisitions [10]. The negative impact of cross-border mergers and acquisitions on target business companies may be reflected in: (1) "deprivation of assets", (2) reduction of employment and lower wages, (3) bad business results due to insufficiently prepared integration process, (4) slower modernization of domestic technological capacities and others [11].

Nevertheless, the effects of cross-border mergers and acquisitions on companies and their home countries may be different and the final outcome cannot be assessed without considering the possibility for the company to proceed without mergers and acquisitions [12]. Foreign direct investment can positively influence the economic development of the country either through a direct or indirect channel such as technology transfer, knowledge transfer and knowledge monitoring [13]. Therefore, policy makers in most countries are attempting to develop incentives to attract foreign investment while encouraging domestic firms to investing abroad for the purpose of developing the target industry [14]. The positive impact of FDI (inflow and outflow) is expected for the participating companies and their home countries. However, every investment involves risks, so caution is needed when assessing the impact of foreign direct investment. Cross-border mergers and acquisitions may involve a number of risks, but sometimes, as in the case of the financial and economic crisis, cross-border mergers and acquisitions can play a role that FDI (in its organic form) may not be able to play [15]. If companies face intense pressure of competition and do not have access to financial and non-financial resources to enable them to survive the effects of competition in times of economic crisis, cross-border mergers and acquisitions can fairly restructure existing capacities and increase competitiveness while boosting the competitiveness of the whole economy [5].

Methodology

The main objective of the thesis is the identification of the impact of the selected macroeconomic and other additional factors affecting the size of realized mergers and acquisitions in an expanded database that records developments over the period of time from 1998 onwards and ends in 2015. In general, we assume the strong impact of market conditions in the source country and the substantial impact of the target market capitalization. Another objective of the thesis is to identified as the impact on civil liberties issues under consideration, with growth of oppression should lead to a decline in investments, thus their subsets - mergers and acquisitions. We assume that the volume of mergers and acquisitions significantly affect the economic conditions of the target and source country, i.e. the direct relationship between the growth of aggregate output in both countries and the market capitalization of the target country. In addition, we assume that the increasing distance between the two markets increases the investment tendency as its volume grows, due to penetration into new markets, or gaining a competitive advantage, respectively. due to the diversification of risk. It is in our opinion an important factor considered the country's membership in the EU, which is related to the significant development of these markets and thus to increase the market value of the company. While this effect is further increased if the two countries at the same time members of the EMU. The last postulate concerns the impact of the level of civil liberties, where we assume that the number of M&A executions is decreasing with increasing liberty.

Based on the above-described intentions, we have compiled the following hypotheses:

- H1:** Growth in volume of mergers and acquisitions depends on the market conditions of the target and source country.
- H2:** The growing distance of the target and source market of investments (M&A) contributes to the growth of M&A volume.
- H3:** Membership of both countries (source and target) in the EU brings M&A volume growth.
- H4:** If countries are additionally members of the monetary union, the potential for investment is growing.
- H5:** The declining level of civil liberties reduces the amount of M&A investment.

The work was to determine the intensity of the impact of market conditions, distances, country membership in the European Community or in the monetary union, respectively. of civil liberties on the size of the mergers and acquisitions used, the regression model based on the least squares (OLS) model. This led to the compilation of the following equation for the source country i , the target country j in the sector s and at time t :

$$\begin{aligned} \log(M\&A_{ijst}) &= \beta_0 + \beta_1 \log(GDP_{ist}GDP_{jst}) + \beta_2 \log\left(\frac{MC_{jst}}{GDP_{jst}}\right) + \beta_3 \log(Dist_{ij}) \\ &+ \beta_4 bor_{ij} + \beta_5 ComL_{ij} + \beta_6 EU_{it}EU_{jt} + \beta_7 EMU_{it}EMU_{jt} \\ &+ \beta_8 EMU_{it}nonEMU_{jt} + \beta_9 CL_{it} + CL_{jt} \end{aligned}$$

where $M\&A$ is the size of the merger and acquisition realized, GDP is characterized by the level of aggregate country production, MC describes market capitalization in the country, $Dist$ is identified as the distance of the target and source country, $ComL$ records the use of the same or related language, EU is a member country of the EU , EMU represents the countries paying the common European currency, $nonEMU$ then characterizes the countries not paying the euro, and CL is an indicator of civil liberties in the country.

Data and Results

Used data are structured by primary attribute, which represents change over the time. In addition, we follow up the previous paper about this topic [16] by extend evaluation of mix indicators impact on the amount of cross-border M&A. The whole dataset contains all entries during selected timeframe (1998-2015), while extension of dataset started by 2012. The database consists of 111 024 records of completed investments, however only 47 110 of them was dedicated to M&A. The research

sample was also reduced by absence of at least one independent variables in some cases. So, the total range of useable data during selected timeframe represents 46 822 observations. The list of used dependant and independent variables can be found in table 1.

Tab 1: The list and description of used variables

Variable	Description
$\log (M\&A)_{inset}$	Mergers and acquisitions. The variable is characterised by logarithm of completed mergers and acquisitions flowing from country i (source country) to country j (target country) in sector s during timeframe t . (dependant variable)
$\log (GDP_{ist} * GDP_{jst})$	Amount of aggregated production in both countries. The variable is described as logarithm of combined GDP produced by source country i in sector s during time t and GDP produced by target country j in sector s during time t . (independent variable)
$\log \left(\frac{MC_{jst}}{GDP_{jst}} \right)$	Market capitalization. The variable is defined as logarithm of market capitalization in target country's sector in specific time to aggregated production of this county's sector in same time. (independent variable)
$\log (Dist_{ij})$	Distance. The variable is characterised by logarithm of distance between country i and country j in kilometres, where the number is identified as the shortest distance. (independent variable)
Bor_{ij}	Existence of common border. The dummy variable, which is set as value 1 in case, where both countries shared common border. (independent variable)
$ComL_{ij}$	Common Language. The dummy variable, which is set as value 1, when citizens of target country and source country used common language. (independent variable)
$EU_{it} EU_{jt}$	The European Union membership. The dummy variable, which is set as value 1 in case, where both countries are members of European Union. The referent value represents situations, where at least one of the countries isn't European Union member. (independent variable)

$EMU_{it} EMU_{jt}$	The European Monetary Union membership. The dummy variable is set as value 1, when both countries are members of European Monetary Union. The referent value represents situations, where none of the countries is member of European monetary Union. (independent variable)
$EMU_{it} NonEMU_{jt}$	The European Monetary Union membership. The dummy variable is set as value 1, when just one of the countries is member of European Monetary Union. The referent value represents situations, where none of the countries is member of European monetary Union. (independent variable)
$CL (medium)_{it}$	Medium level of civil liberty in source country. The dummy variable is set as value 1 in case, where Index of civil liberty (index describes status of political democracy, personal liberty and good government practices) in source country i achieves value 2 or 3 in time t . The referent value (high level) consists of cases, where value of this index is set as value 1. (independent variable)
$CL (medium)_{jt}$	Medium level of civil liberty in target country. The dummy variable is set as value 1 in case, where Index of civil liberty (index describes status of political democracy, personal liberty and good government practices) in target country j achieves value 2 in time t . The referent value (high level) consists of cases, where value of this index is set as value 1. (independent variable)
$CL (low)_{jt}$	Low level of civil liberty in target country. The dummy variable is set as value 1 in case, where Index of civil liberty (index describes status of political democracy, personal liberty and good government practices) in target country j achieves value 3, 4 or 5 in time t . The referent value (high level) consists of cases, where value of this index is set as value 1. (independent variable)

Source: Own processing

The civil liberty index values 2 and 3 reached in source country was combined to one category, due to lack of entries with value equals 3. Index levels 3, 4 and 5 in target countries was also combined to one category, because of similar reasons. We were capable to prepare a functional equation based on model described above. The equation reflects regularities between dependant variable and other used factors in period framed by years 1998 and 2015. These relationships described by regression model are located in table 2.

Tab 2: Regression model for realized cross-border M&A

	coefficient	Robust Stand. Error
	p-value of t-test	
constant	-0,385276 [1,25e-024] ***	0,0375873
log (GDP _{ist} GDP _{jst})	0,501747 [0,0000] ***	0,00150178
log (MC _{jst} / GDP _{jst})	0,973198 [0,0000] ***	0,00132681
log (Dist _{ij})	-0,0180292 [0,0398] **	0,00876747
Bor _{ij}	0,0562482 [2,24e-05] ***	0,0132653
ComL _{ij}	-0,0556693 [0,0406] **	0,0271863
EU _{it} EU _{jt}	0,346913 [1,79e-046] ***	0,0242096
EMU _{it} EMU _{jt}	0,0247747 [3,04e-041] ***	0,00184008
EMU _{it} NonEMU _{jt}	-0,0252295 [0,0259] **	0,0113235
CL (medium) _{it}	-0,0452547 [6,62e-05] ***	0,0113426
CL (medium) _{jt}	0,0365114 [0,0015] ***	0,0115215
CL (low) _{jt}	0,493457 [3,32e-015] ***	0,0626141
Adjusted R ² / R ²	0,966765 / 0,966773	

*, ** or *** - variable is statistical significant on level 10%, 5% and 1% respectively

Source: Own processing based on Zephyr database

The results of analysis, which can be founded above, uncovers fact, that the most intense impact (in the absolute evaluation based on the variables range and standard deviation characteristics) achieves logarithm of economy aggregated product, where capital inflows and source economy GDP composition. This status results from

primary postulate, that mainly in the economy, which is in growing phase, subjects are capable to accumulate higher amount of capital by rising profits. The rising profits can emerge from higher consumption of local market subjects, or higher demand on other markets (better competitiveness).

The ratio of market capitalization brings by investment (M&A) and amount of specific sector aggregated production of target country also can be assign to variables with intense impact. This relative expression of the capitalization change (where range of this determinant is given by value $<0.01\%$ and value $227,80\%$) defines what kind of impact has characteristics of local economy in given market segment to M&A amount. The proportional relationship between amount of investment and market capitalization pointing out to fact, that during observed timeframe in countries of European area was investing by M&A the best option to achieve significant market position (in some specifically cases even monopoly position) for enterprises, where actual production of fused company is substantially lower level than its market value. So, amount of M&A is higher with companies, which must be restructured. This relationship correlates with sample specificity, where first 6 years (1998-2004) represents aftermath of post-communist countries transformation era to market-based economy and this leads to intense merging companies, which can be potential competition in future (but still with no restructure and no streamline of producing processes) and have relatively low market value compare to source countries conditions. In some cases, process (described above) points to enormous market capitalization to GDP of target country sector ratio. Based on these circumstances we are capable accept hypothesis H1. Distance of both countries, which are concerned in M&A, reaches negative influence to amount of M&A.

This indicates tendency of enterprises to rising up their market position in local market and other markets, where subject already be in business and marginalisation of access to new markets. Reason of this status consist of characteristics of sample, where most of entries are connected with EU member countries or common European market. Because of that, companies aren't disposed to invest in farther (more different, for example culturally, historical etc.) countries, where still haven't capable to reach appropriate market position (or company isn't interested in market, for example due to lack of purchasing power). Another option is about less developed eastern EU countries, which leads to lower market value of companies in comparison to local market (or another near markets). Because of that, we aren't capable to accept hypothesis H2. Although the common language is specificity, which signify, that in these kind of countries inflows lower level of M&A, while countries are considerable culturally similar, where subject also achieve certain level of goodwill, so there is lower tendency of company to make investment, which leads to increase market position. The last two mentioned factors (distance and common language) have opposite impact on amount of M&A, but influence of common border existence boosted distance effect. In neighbouring countries, where exists assumption of more connected markets, any additional competitive advantage plays crucial task and because of that circumstance we expect higher amount of M&A,

whereby companies try to get stronger position in local markets. The tendency of companies to invest capital by M&A in European Union responds to ambitions of position improvement in gargantuan common market.

These preferences are bonded with unification of standards, with compatibility of countries permissions or with better information about substantial term, etc. This effect is boosted by condition, where both countries are members of EMU, which results from absence of floating exchange rates volatility and uniform monetary policy or financial liberalization. So, we can accept hypothesis H3. Interesting status becomes when M&A was realised by EMU member and non-member country (but this county is member of EU). We notice reduction of impact against reference group (both countries are EMU non-members), which is caused by two determinants. First deals with higher fluctuation of exchange rate, which have potential to increase nominal amount of investment. While second determinant represents rigidity of EMU, where monetary policy tries to reflect specificity of every member. In short term conditions this effect may negatively affects EMU performance. Also, higher flexibility of EMU non-member country in comparison with effect describes above leads to additional impact to amount of M&A.

Because of that, we accepted hypothesis H4. The last evaluated factor can be described as level of civil liberty. Based on analysis results we consider civil liberty of source and target country separately. In source country conditions we expect, that by raising of liberty is amount and number of M&A, as one of the investment form, getting lower. Although the lower business risk in this kind of countries doesn't stimulate companies to portfolio diversification in same way as in countries with higher risk, but in these conditions participated to optimization of costs or profits. Also, countries with higher level of civil liberty reach better economical results, which lead to growing investment tendencies. The opposite effect is present in inflow capital (target) countries. Lower level of civil liberty is correlated with corruption (at lower level) and therefore with higher chance of company (which came to economy with capital) to didn't get all appropriate documents or lower market value of purchased company to real value ratio. This effect became weaker if countries reach middle level of civil liberty, while reference value is defined as higher civil liberty. Besides the corruption we consider also with development of economies (in comparison with higher level civil liberty economics development), which can lead to growing of needed capital to successfully realisation of this investment form (M&A). Because of analysis results we aren't capable to accept hypothesis H5. The compiled model describes and forecasts 96,68% of variability of dependant variable, which is represent by logarithm of M&A amount.

Discussion and conclusion

Based on the results of the analysis, we were able to draw insights into some of the determinants affecting the size of cross-border mergers and acquisitions as one of the forms of investment. Development, respectively given phase of the economy contributes significantly to the ability of enterprises to accumulate free capital that the entity trying to recover some form of investment (M&A).

The ability of macroeconomic indicators to help accrue funds to firms looking to invest, among other things [17], which also confirmed the importance of factors such as aggregate country production or market capitalization. While the market conditions we consider it important to mention the extremely large share of market capitalization to GDP in some of the sample (especially in 2006), which follows the transformation period of post-communist economies.

Analysis, we not only found that investments resulting from the European space have focused mainly on the economy relatively close to each other are culturally and linguistically close. In addition, the amount of mergers and acquisitions made increases when neighboring countries are involved. This state of affairs clearly leads to the conclusion that the subjects in the survey examined more strongly the investments that led to the strengthening of their market position within the economies than the investments aimed at gaining new markets. Due to the work [18] regarding the choice of local, cross-border market, we have come to the conclusion that, despite the further inclusion and expansion of EU countries, entry costs have not been reduced to a sufficient extent to strengthen investment trends in remote countries due to the profitability of these markets.

Simple access, greater awareness or unity of standards, standards and European market rules have contributed to increased M&A investment among member countries (EU). This phenomenon is further strengthened if both countries are simultaneously members of the EMU, which is also associated with lower entry costs and profitability resulting from same-currency investment. However, if one of the countries is a member of the EMU, the volume of M&A is lower, resulting precisely from the fluctuation of other currency pairs with a rigid euro taking into account developments in all EMU countries, thus contributing to uncertainty about the real profitability of the investment.

The analysis we were interested and civil liberties. In the case of a target country, it turns out that the lower the freedom, the greater the degree of investment. This is mainly related to civic maturity, we understand the less willingness of our employees to strike. This determinant is then also related to the cost of the labor factor in the comparison with productivity or the factor utilization. This then leads to an increased competitive advantage through lower production costs. In addition, a higher level of corruption (also one of the aspects of low civil liberties) may, in the case of privatization of state-owned enterprises, lead to an underestimation of the price of the business sold, any other advantageous condition of the merging firm, which we consider to be another reason for such impact of this determinant. In addition, they are better able to absorb M&A within the chosen sample of an economy with fewer civil liberties, which then leads to a variety of subsidies or tax breaks for entrants, ergo cost reductions.

Diskusia a záver

Na základe výsledkov analýzy sme boli schopný vyvodit' poznatky týkajúce sa niektorých determinantov ovplyvňujúcich veľkosť cezhraničných fúzií a akvizícií ako jednej z foriem investovania. Vývoj, resp. daná fáza vývoja ekonomiky výrazne

prispieva k schopnosti podnikov akumulovať voľný kapitál, ktorý sa subjekt snaží zhodnocovať niektorou formou investovania (napríklad M&A). Schopnosťou makroekonomických indikátorov napomáhajúcich akumulovať finančné prostriedky podnikom spejúcim k investíciám sa okrem iných venovali aj [17], ktorý takisto potvrdili dôležitosť faktorov akými sú agregovaná produkcia krajiny, či trhová kapitalizácia. Pričom v rámci trhových podmienok považujeme za dôležité zmieniť aj extrémne veľký podiel trhovej kapitalizácie na HDP v určitej časti vzorky (najmä do roku 2006), ktorý vyplýva transformačného obdobia postkomunistických ekonomík.

Analýzou sme okrem iného zistili, že investície plynúce z krajín európskeho priestoru sa sústreďovali najmä na relatívne blízke ekonomiky, ktoré sú si navzájom kultúrne a jazykovo blízke.

Okrem toho sa výška realizovaných fúzií a akvizícií zvyšuje v prípade, že sa jedná o susediace krajiny. Tento stav jednoznačne vedie k záveru, že subjekty v skúmanej vzorke výraznejšie preferovali investície, ktoré viedli k posilňovaniu ich trhového postavenia v rámci ekonomík, než investície spejúce k získavaniu nových trhov. Vzhľadom na prácu [18] ohľadom výberu lokálneho, resp. cezhraničného trhu, sme dospeli k záveru, že aj napriek ďalšej inklúzii a rozširovaniu krajín Európskej únie sa vstupné náklady neznížili v dostatočnej miere na posilnenie investičných tendencií do vzdialenejších krajín vzhľadom na ziskovosť týchto trhov.

Jednoduchosť prístupu, väčšia miera informovanosti, či jednota štandardov, noriem a pravidiel európskeho trhu prispela k zvýšeným tendenciám investovania formou M&A práve medzi členskými krajinami Únie. Tento jav sa ešte viac posilňuje v prípade, že sú obe krajiny súčasne členmi Európskej menovej únie, čo súvisí aj s nižšími vstupnými nákladmi a ziskovosťou vyplývajúcou z investovania v rámci rovnakej meny. Avšak v prípade, že práve jedna z krajín je členom Európskej menovej únie je objem M&A nižší, čo vyplýva práve z fluktuácie iných menových párov s rigidným eurom zohľadňujúcim vývoj situácie v rámci všetkých krajín Európskej menovej únie, čo potom prispieva k neistote ohľadom reálnej ziskovosti danej investície.

V rámci analýzy nás zaujímali aj občianske slobody. V prípade ak sa jednalo o cieľovú krajinu sa ukazuje, že čím nižšia sloboda, tým väčšia miera investícií. To súvisí najmä s občianskou vyspelosťou. Tento determinant potom súvisí aj s výškou nákladov na faktor práce v komparácii s produktivitou, či vyťažovaním faktoru. To potom vedie ku zvyšovaniu konkurenčnej výhody skrze nižšie produkčné náklady. Okrem toho vyššia miera korupcie (tiež jeden z aspektov nízkych občianskych slobôd) môže v prípade privatizácie štátnych podnikov viesť k podhodnoteniu ceny predávaného podniku, resp. nejakej inej zvýhodňujúcej podmienke fúzujúceho podniku, čo považujeme za ďalší dôvod takéhoto dopadu tohto determinantu.

Okrem toho sú v rámci zvolenej vzorky ekonomiky s nižšími občianskymi slobodami schopné vo väčšej miere absorbovať M&A, čo potom vedie k rôznym dotáciám, či daňovým prázdninám pre vstupujúce podniky, ergo znižovaniu nákladov.

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PSYCHOLOGICAL CHARACTERISTICS OF (NON-)SAFE DRIVERS

REVIEW

Ľubica ZIBRÍNOVÁ, Gabriel BANÍK: Psychologické charakteristiky (ne)bezpečných vodičov. Prešov: Bookman, s. r. o., 2016. ISBN 978-80-8165-178-6.

In the reviewed monograph titled "Psychological Characteristics of (Non-) Safe Drivers", the authors bring closer the topics that are important from the perspective of psychology in the field of road safety. Their aim was to highlight some of the links relating to drivers and thus to contribute to the improvement of accident statistics in Slovakia.

The research studies presented in the monograph point out the importance of the psychological variables of drivers which inseparably enter the road traffic. Road transport is a major challenge today. When looking for a solution to its fluidity and safety, it is almost impossible to find it without taking into account the psychological characteristics of the drivers. Research findings on the driver psychology are therefore beneficial but the research in this area is relatively new and still cannot be considered systematic in our country. Any results from the driver psychology are therefore not just a stimulus to further research but, above all, they open up the scope for application of these results into practice.

It is possible to claim that the peer-reviewed publication will enrich the already existing knowledge and stimulate further research as well as suggestions for various considerations on the possibility and necessity of involving human factor assessment and analysis in various projects aimed at improving the transport situation. The monograph will represent a benefit for the psychologists who can favorably affect the accident statistics in Slovakia.

The texts are presented very clearly, in a meaningful and understandable way. The language is at an excellent level, taking into account the current state and needs in the given area. The monograph will be appreciated not only by the professional public and students, but also by experts in the field of psychology, sociology, management, pedagogy and other related disciplines. The publication "Psychological Characteristics of (Non-) Safe Drivers" is an interesting reading and a useful aid for practice.

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