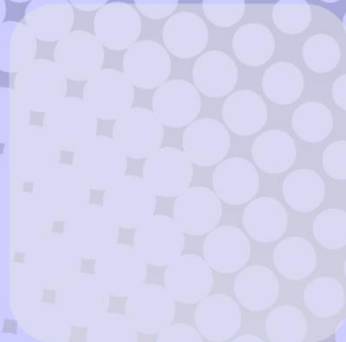


# DETUROPE



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## **EX-POST EVALUATION OF LOCAL ACTION GROUPS IN LEADER PROGRAMME (VISEGRÁD COUNTRIES)**

### **EX-POST HODNOCENÍ MÍSTNÍCH AKČNÍCH SKUPIN V PROGRAMU LEADER (ZEMĚ VISEGRÁDSKÉ ČTYŘKY)**

**Zuzana DVOŘÁKOVÁ LÍŠKOVÁ<sup>a</sup>, Renata KLUFOVÁ<sup>a</sup>, Michael ROST<sup>a</sup>**

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#### **Abstract**

The LEADER approach has prompted the EU to become more interested in its ability to address development issues through new forms of partnership. One of the examples of these partnerships is a "local action group" (LAG), which emerges as an institutionalized partnership between the public and private sectors. The aim of the contribution is the ex-post evaluation of the LEADER implementation mechanism at LAGs in the V4 countries (2007-2013). The first step was to obtain the statistical data, the theoretical knowledge and the legislative framework for implementing LEADER in all V4 countries. Subsequently, a comparison of the quantitative aspects of LEADER implementation in the V4 states was carried out at the end of the programming period 2007-2013 with the planned status in the Rural Development Programs. The second step was to design an evaluation framework for the LEADER approach implementation mechanism based on the Tvrdňová methodology (2014). An important methodical step was to define the seven basic functions of the program and to assign so-called benchmarks. Their presence represents the optimal state of implementation of the program. By linking the functions with the individual boot steps, the implementation matrix was created. Benchmarking was conducted in the form of skype interviews at the national level of the LAG (management of the national networks of LAGs in the V4 countries). Ex-post evaluation subsequently led to the formulation of conclusions and recommendations.

Keywords: local action groups, implementation, program LEADER, Visegrad countries

#### **Abstrakt**

Přístup LEADER vyvolal v EU velký zájem pro svou schopnost zabývat se problémy rozvoje prostřednictvím nových forem partnerství. Jeden z příkladů těchto partnerství představuje "místní akční skupina" (MAS), jež vzniká jako institucionalizované partnerství veřejného a soukromého sektoru. Cílem příspěvku je ex-post hodnocení implementačního mechanismu programu LEADER na MAS ve státech V4 (v období 2007-2013). Prvním krokem bylo získání statistických údajů, teoretických poznatků a legislativního rámce o implementaci LEADER ve všech státech V4. Následně byla realizována komparace kvantitativních aspektů implementace mechanismu LEADER ve státech V4 na konci programového období 2007-2013 s plánovaným stavem v Programech rozvoje venkova. Druhým krokem bylo vytvoření evaluačního rámce pro mechanismus realizace přístupu LEADER, vycházejícího z metodiky Tvrdňová (2014). Důležitým metodickým krokem bylo definování sedmi základních funkcí programu a přiřazení tzv. benchmarks (kritérií úspěchu). Jejich přítomnost představuje optimální stav implementace programu. Propojením funkcí s jednotlivými kroky zavádění programu vedlo k vytvoření implementační matice. Hodnocení kritérií úspěchu (benchmarks) probíhalo formou skypových rozhovorů na národní úrovni MAS (management národní sítě MAS ve státech V4). Ex-post hodnocení následně vedlo k formulování závěrů a doporučení.

Keywords: místní akční skupiny, implementace, program LEADER, země Visegrádské čtyřky

## **INTRODUCTION**

A view of European rural areas shows a situation full of contrasts, where some areas are developing and others are lagging behind. Rural areas on the outskirts of big cities offer their natural resources. Peripheral rural areas suffer from long distance from global markets and low population density makes access to public services more difficult. Most rural areas are within these extremes, trying, more or less successfully, to fulfil social and economic needs of their populations. Where they are successful, there is new optimism, and innovative public administration or self-government supporting decentralization. Local initiative and authorization of citizens to govern and exercise power is a model of the future. Effective self-government is today open to the public-private sector partnerships based on partner networking. Rural areas showing this inclination are exactly those applying the bottom-up approach. Responsibility for the definition of objectives, procedures, measures, and projects as well as for their implementation is the preferred approach of those policies which OECD generally qualifies as “place-based” (Navarro, & Cejudo, 2015).

## **THEORETICAL BACKGROUND**

### **History of LEADER Approach in Europe and LAG**

The main concept of the approach called Links between Actions for the Development of the Rural Economy (LEADER) says that thanks to the diversity of the European rural areas the development strategies are more effective if they are decided about and implemented by local players on the local level by clear and transparent procedures. According to Pollermann, Raue, and Schnaut (2014), the LEADER approach developed from the initiative of the European Commission of the early 1990s as a pilot project for support or integrated activities and/or development schemes programmed and implemented exclusively on the local level. One of the new Community initiatives was called LEADER I. The initiative was launched in 1991 with the aim to improve the development potential of rural areas by encouraging local initiatives, support for acquisition of the “know-how” for regional development, and extension of the “know-how” across the rural areas (Thelen, 1999). Many national programmes of rural development at that time did not consider wider rural interests yet, with the exception of the traditional primary economic areas, and were mainly managed by the up-to-bottom approach (Bache, 2004). That is why LEADER began to combine local actors and resources and answer various local questions (known as the integrated development approach) (High & Nemes, 2007). The necessary local focus on development was achieved through local action groups

(LAGs), consisting of representatives of the public, the private and the voluntary sector for the purpose of surveillance over the local approach (LEADER) implementation. In 1991, the “initiation” stage of the LEADER approach was implemented, working with 217 LAGs in the underdeveloped rural areas. That provided an opportunity for networking and idea and experience exchange. Total EU investment amounted to ECU 417 million, representing circa 1% of the overall Community framework support in this period. Before 1994 the LEADER II programme advanced to the “generalization” stage with nearly 1,000 LAGs (Copus, Shucksmith, Dax, & Meredith, 2011).

As a much broader programme, LEADER II added cooperation and innovation as extraordinary programme dimensions, and together with networking permitted cross-border good practice sharing. In that period, a pilot LEADER was launched to test some new ideas. The initiative called LEADER + was launched in 2000 as one of the four initiatives together with URBAN, INTERREG, and EQUAL financed from the EU structural funds, and accessible in all rural areas, unlike LEADER I and II (Fałkowski, 2013).

The main and the basic functional unit in the context of the LEADER approach is the local action group (LAG), a grouping of the private and the public sector on the local level, which, for the partnership decision-making purpose, must include at least 50% of the private sector representatives including the civic and the non-profit sector, and maximum 50% of the public sector representatives (Teilmann & Thuesen, 2014). LAG is a legal entity with compulsory management bodies able to administer public funds and manage LAG activity. The population of the territory managed by a LAG must be higher than 10,000 and lower than 150,000 citizens. The support excludes municipalities with the population over 20,000. The area to which the strategy is to be applied must cover a continuous rural area including cadastral areas of all included municipalities within the territory applying for the subsidy, formed on the basis of the common interest principle. The territory must operate a local action group and have an integrated strategy of territorial development with clearly formulated priorities, measures, and activities. The strategy must at the same time include innovative approaches, i.e. stimulation and novelty approaches to territorial development (Kovács, 2004).

### **Origins of LEADER programme in Visegrad countries**

The LEADER programme has been implemented in the Visegrad countries since early 2007. What must, however, be emphasized is that Visegrad countries had already possessed some experience in implementation of rural development policies. This experience was obtained in connection with the implementation of LEADER+ in the years 2004-2006 (except Slovakia)

and other programmes and initiatives based on this approach, implemented before EU accession. All Visegrad countries had implemented pilot programmes before EU accession. In the Czech Republic this was the Rural Renewal Programme (2001-2003), financed from SAPARD3, and in Poland, there were several programmes and initiatives existing since mid-nineties, already implementing the bottom-up principle. The Foundation for Partnership in Environment Protection (Fundacja Partnerstwo dla Środowiska), has supported development and maintenance of partner groups since 1999. Partnership development in Poland has also been significantly supported by the Forum for Activation of Rural Areas (Forum Aktywizacji Obszarów Wiejskich), the Foundation of the Cooperation Fund (Fundacja Fundusz Współpracy) and the Agroline programme (2003-2006), which have prepared the rural communities for implementation of programmes of the LEADER type. The Agroline programme (since 2004) has been allocated small grants for training and information activities for potential LAG (Zajda, 2014).

In the case of pre-accession Slovakia, there were three programmes supporting the LEADER approach there. The first was represented by the Rural Development Fund (1999 - 2002), financed from PHARE4. The funds obtained within this initiative were used for multi-sectoral partnerships for development and implementation of local development strategies. The second pilot programme called "Support for Regional Development of the Banskobystrický Region" (2002-2003) was financed by the UK Government (Brković & Hamada, 2013). The purpose was to develop suitable development strategies for the LEADER approach. In the years 2003-2004, thanks to the support of the UN development programme (UNDP), Slovakia could launch the Local Agenda 21 project. Its goal was also to support LEADER-like local development strategies (Milotová, 2011).

In pre-accession Hungary, there were two programmes preparing the country for the LEADER approach implementation. They were micro-regional programmes, financed from national funds and implemented in the period 1999 - 2002. The support focused not only on the preparation of local development plans and initiatives but also on the strengthening of partnerships and improvement of management capacities. The second project was the target rural development programme: The pilot LEADER programme (2001 - 2004) also excluded from the state budget. Measures implemented in the context of this initiative (regional situation analysis and local development plan implementation) were to prepare the country for implementation of LEADER + in future.



The period 2007-2013 was the first programme period in which the V4 countries were engaged in the implementation of European policies from the very beginning (including the LEADER programme) on the same level as the other EU Member States.

As a consequence of differences between the individual EU countries and specific development conditions (including administrative, legal, social, economic and spatial conditions) these countries are modified in the sense of the particular objectives and implemented programme solutions in the context of LEADER (such as the expected results, LAG creation criteria, fund allocations, adopted implementation system etc.) (Oedl-Wieser, Strahl, & Dax, 2010).

In Hungary, LEADER appeared to be a useful tool for the development of municipal infrastructure and public services (Póla, Chevalier, & Maurel, 2015).

The LEADER approach implementation and its results must be related to the rural development programme development stage in the individual Visegrad Group countries. The necessary steps included national modification of EU regulations concerning populations in the tri-sectoral partnerships on the basis of the specifics of the rural areas in each country (Pollermann et al., 2014).

## **DATA AND METHODS**

The purpose hereof is an ex-post evaluation of the implementation mechanism of LEADER on the level of local action groups in V4 countries (in the programme period 2007-2013). The evaluation focuses on the extent to which compliance with the seven basic functions of the programme was supported. The first step was obtaining statistical data, theoretical knowledge and legislative framework on the implementation of LEADER in all V4 countries. After that, a comparison was performed.

The subject of the comparison was quantitative aspects of the implementation of the LEADER mechanism in V4 countries at the end of the programme period 2007-2013 compared to the planned stage of the Rural Development Programmes.

The second step was the development of an evaluation framework for the mechanism of the LEADER approach implementation, based on the methodology developed by Tvrdoňová (2014). Another important methodological step was the definition of the seven basic functions of LEADER and allocation of success criteria (benchmarks) to them.

Basic programme functions:

- 1) Integrated approach: benchmarks: - local development strategy supports the synergies of interests and needs of different sectors operating in the territory (geographical, social and economic);
- 2) Cooperation: benchmarks: - coordination among actors leads to effective and optimal allocation of resources, mutual communication of all partners within a transparent environment;
- 3) Innovation: benchmarks: - innovative management of local resources, decision-making process in LAG is free and flexible;
- 4) Networking: benchmarks: - actors at all three levels are clearly identified, active communication and awareness among individual actors;
- 5) Bottom-up approach: benchmarks: - local actors with adequate training hold leading positions, rate of usage of local resources;
- 6) Partnership approach (partnership between three sectors) among Visegrad countries: benchmarks: - partnership consists maximum 50% of public sector and minimum 50% of private and civic sector, representatives of all three sectors are involved in the decision-making process;
- 7) The regional strategy of local development: benchmarks: - strong identity of local inhabitants, territorial homogeneity regarding natural conditions, common history, cooperation, definition and achievement of common objectives.

Their presence represents the optimum status of the programme implementation. Evaluation of success criteria – benchmarks in the form of Skype interviews on the national level of LAGs (management of the national LAGs network in Poland, Hungary, the Czech Republic and Slovakia). The evaluation was performed on the basis of a scale from 1 to 5 points. The ex-post evaluation then generated conclusions and recommendations.

## **RESULTS AND DISCUSSION**

### **MAS in V4 countries**

The LEADER system mechanism is based on local action groups operating in all EU Member States. They implement tasks in the area of rural development policies. The main purpose of the trilateral partnerships is to develop and implement (apply) Local Development strategies (LDS) in the given area (especially selection of projects eligible for funding support). Local

action groups in V4 countries are not unified in respect of the area size, population and number of members involved in their activities. This diversity is manifested on the inland and international level.

LAG area, see Fig. 1, 2, 3 and 4, maybe a relevant factor affecting its activity. The big distances between partners within a group may prevent interactions, especially by personal contact, which are key for LEADER approach implementation. On the other hand, geographical closeness connected with smaller LAG areas may contribute to frequent meetings and contacts among the partnership members. In Hungary, the mean area of a partnership is the highest (908.1 km<sup>2</sup>). In Poland, the mean area per partnership is 804.5 km<sup>2</sup>. LAGs in the Czech Republic are considerably smaller in comparison to these countries. The mean area of a LAG is 469.1 km<sup>2</sup> in the Czech Republic and 310,2 km<sup>2</sup> in Slovakia. Big partnership areas exceeding 1,500 km<sup>2</sup> are typical of Poland and Hungary. In the Czech Republic there is only a single group whose area exceeds 1,500 km<sup>2</sup>, while in Poland there are 41 and in Hungary 8 such areas. In Slovakia, where most LAG areas are below 500 km<sup>2</sup>, there is no partnership that is that big. In the case of this country, only 5 of the 29 functioning LAGs are bigger than 500 km<sup>2</sup>. The area covered by the largest Slovak partnership (LAG Horný Liptov) is 766.2 km<sup>2</sup>.

The Czech Republic is clearly dominated by small tri-sectoral partnerships, but unlike Slovakia, there are also partnerships here whose area exceeds 1,000 km<sup>2</sup>. In the Czech Republic, there are 7 such partnerships. The area of the largest (LAG Vladař) is 1,757.0 km<sup>2</sup>. In Poland and in Hungary the largest, albeit not dominant, group ranges between 500 and 1,000 km<sup>2</sup>. Hungary shows the lowest proportion of small partnerships of all V4 countries. Hungarian LAGs covering areas smaller than 500 km<sup>2</sup> only represent 17.9% of all existing tri-sectoral partnerships. At the same time, this country has 5 LAG partnerships exceeding the area of 2,000 km<sup>2</sup>. The largest Hungarian partnership (MAG Bükk-Térségi) has the area of 2,551.3 km<sup>2</sup>. The largest LAG in Poland also covers more than 2,000 km<sup>2</sup> each (there are 19 such groups). Most of the largest partnerships can be found in the northern part of the country (Zachodniopomorskie, Pomorskie, WarmiaMazury, Podlasie), for their regions and not too densely populated. The largest Polish group (LAG Partnerstwo Dorzecze Słupi) covers the area of 4,184.1 km<sup>2</sup>. In all V4 countries, the smallest LAG areas cover about 100 km<sup>2</sup> (72.6 km<sup>2</sup> in Slovakia and 134.7 km<sup>2</sup> in the Czech Republic).

The tri-sectoral partnerships existing in Visegrad countries also differ in the number of municipalities forming the LAGs. This difference is however mainly caused by the different

administrative structure of each of the countries. Polish municipalities are much bigger than municipalities in the other three countries. This means the lowest mean number of municipalities per LAG in Poland. In Poland, there are 6 self-governing units per LAG on average, while in the Czech Republic and in Hungary these numbers are 36 and 32, respectively. In Slovakia, there are usually 18 self-governing units per LAG. In Poland, there are also LAGs covering a single municipality. Although these partnerships are not common, their very existence should be seen as a negative. In the case of such LAG, there is an increased risk of their activities depending on the public sector.

In addition, a tri-sectoral partnership limited to the territory of a single municipality does not fully permit implementation of the LEADER programme in the correct and effective manner. On the other hand, it needs to be noted that in the programme period (2014 - 2020) it is no longer possible to form a partnership consisting of a single municipality only. In harmony with the objectives of the Rural Development Programme (DRP) for 2014-2020 every LAG in Poland must now include at least two self-governing units.

LAGs existing in the Visegrad group countries also differ significantly in their populations. The highest mean population can be seen in Poland (50.5 thousand) and in Hungary (47.2 thousand). The smallest group populations can be seen in Slovakia where the mean population per partnership is 21.2 thousand. In the Czech Republic, the mean population per LAG is 35.0 thousand. Poland is the only Visegrad group country where more than 100 thousand citizens form a partnership. In the Czech Republic and in Hungary there is just one such group per country. What must be emphasized, however, is that RDP rules set the upper limit of the LAG population to 100 thousand. In Slovakia, the largest partnership populations do not exceed 80 thousand, although in this country, like in Poland, RDP permits LAG with the population of up to 150 thousand. Most Slovak LAGs include 10 - 20 thousand citizens. There are 29 Slovak groups but only 2 exceed the limit of 40 thousand citizens. In the case of the Czech Republic, Poland and Hungary the largest partnerships range between 20 and 60 thousand citizens. In addition, as already mentioned, Poland, in comparison to the other Visegrad countries, has the largest number of groups inhabited by more than 100 thousand people. In total, they are 24 in number and the largest two of them (LGD Partnerstwo Dorzecze Słupi i Stowarzyszenie Światowid) have populations of nearly 150 thousand. The largest group population in Hungary consists of 118.0 thousand citizens (LAG Del-Nyírség Erdőspuszták) and the largest group population in the Czech Republic is 101.3 thousand (LAG Posázaví).

**Table 1** The structure of LAGs in the Visegrad Countries – plan RDP 2007-2013

	Czech Republic	Slovakia	Poland	Hungary
A number of LAG	112	25	300	50
The Total area of LAG (thous. km <sup>2</sup> )	43	12	153	41
The total number of inhabitants in LAG (thous. people)	3,300	350	10,000	2,500
Exemptions related to the area covered by Local development strategies	- cities over 25 thousand inhabitants	- towns over 20 thousand inhabitants	- municipalities over 5 thousand inhabitants	- towns over 10 thousand inhabitants or with a population density exceeding 120 people per km <sup>2</sup>

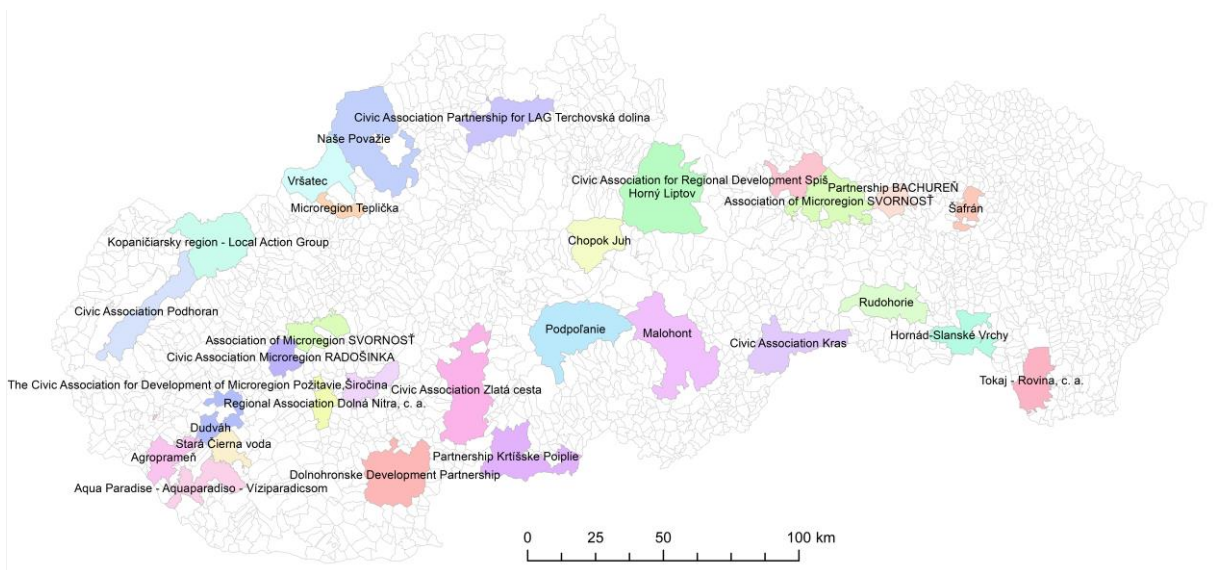
Source: Rural development programmes 2017 – 2013 from the Czech Republic, Slovakia, Poland, Hungary

**Figure 1** Local action groups in the Czech Republic



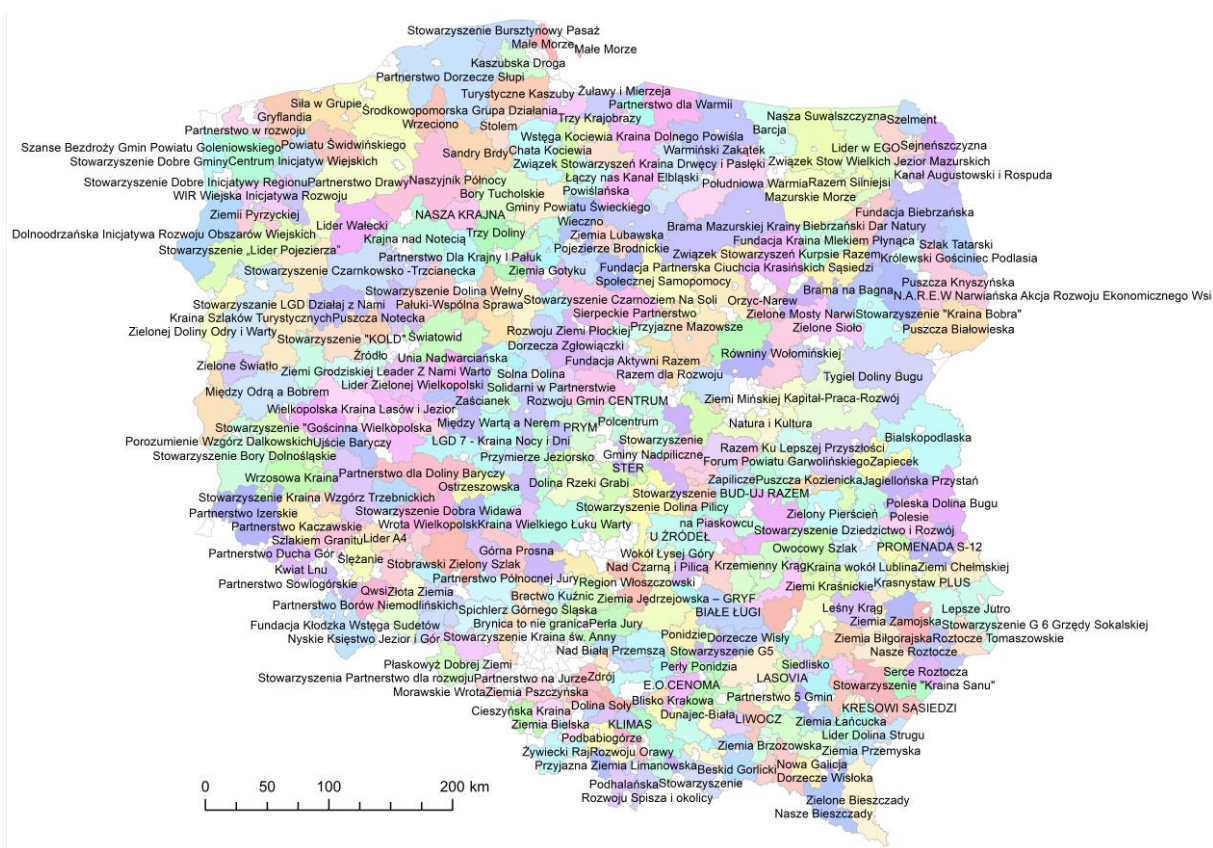
Source: Klufová, 2018

**Figure 2** Local action groups in the Slovak Republic



Source: Klufová, 2018

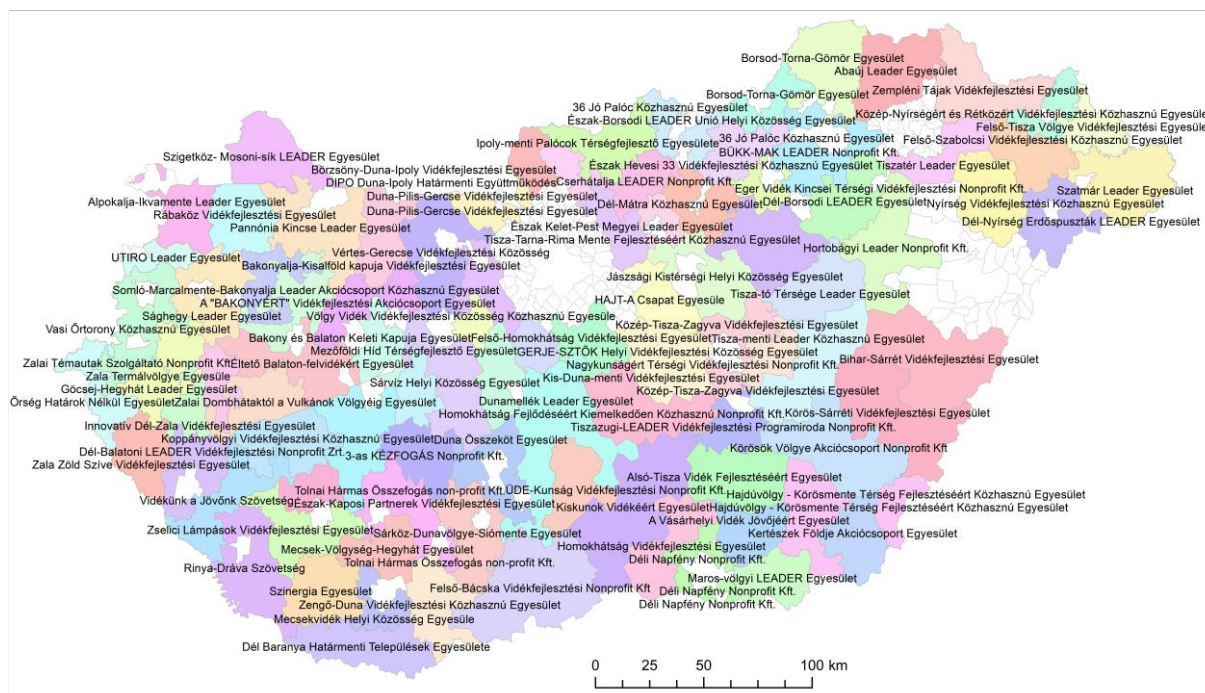
**Figure 3** Local action groups in Poland



Source: Klufová, 2018



**Figure 4** Local action groups in Hungary



Source: Klufová, 2018

Local action groups, their functioning, and implementation of the LEADER programme are implemented on three levels: central, regional and local. The national level includes the control authority, the payment agency, and the certification body. The regional level responsibility for the LEADER programme implementation is within the executive body, which was only established in Poland in the programme period 2007-2013. On the local level, there are the very local action groups and the subsidy beneficiaries. The list of subjects responsible for implementation of the LEADER programme in V4 countries is shown in Tab.2.

**Table 2** Entities and institutions involved in the LEADER approach implementation in 2007-2013

Type of entity	The Czech Republic	The Slovak Republic	Poland	Hungary
Managing Authority	Ministry of Agriculture	Ministry of Agriculture	Ministry of Agriculture and Rural Development	Ministry of Agriculture and Rural Development
Implementing Authority	-	-	Regional Governments	-
Paying Agency	State Agricultural Intervention Fund	Agricultural Paying Agency	The Agency for Restructuring and Modernisation of Agriculture	Agricultural and Rural Development Agency
Certification Body	Supreme Audit Office	Deloitte Audit	General Inspector for Treasury Control	KPMG Hungary

Source: The data found on The European Network for Rural Development website(<http://enrd.ec.europa.eu>)

### **Quantitative Aspects of LEADER Mechanism Implementation in V4 Countries**

Another part of the results mainly focuses on the quantitative aspects of the LEADER mechanism implementation in Visegrad countries, analysing not only the number of the formed LAGs, their total area and populations, but also use of the funds allocated to the programme. The result indicator for this analysis is expressed as the percentage represented by the relationship between the actual value of the item and the value expected by RDP 2007 - 2013. It needs to be emphasized that in all V4 countries the real effects of the LEADER approach (implementation), with just a few exceptions, are much higher than expected in the Rural Development Programme at the beginning of the programme period 2007-2013. Considering the number of the formed tri-sectoral partnerships their total area and populations, Visegrad countries are clearly characterized by a high level of performance in the context of the LEADER programme implementation. In each of these countries, the LEADER approach implementation phenomenon is much more widely spread than originally expected. In nearly all Visegrad countries, except for the Czech Republic, the number of LAGs is higher than expected in RDP. It needs to be noted, though, that in the case of the Czech Republic the number of partnerships selected for funding (111) approaches the original goal of RDP (112). Another fact is that in the Czech Republic there are also groups whose activities are not directly funded from the European Agricultural Fund for Rural Development (there are together 59 such partnerships). The highest effectiveness of LAG formation can be observed in Hungary where the number of the formed partnerships (95) reached nearly double the original expectation (50). Poland achieved and even exceeded the objectives concerning LAG. At the end of 2013, Poland had in total 336 functioning LAGs (RDP expected 300 LAGs). Poland is the Visegrad as well as EU country with the largest number of tri-lateral partnerships. Slovakia has the lowest number of partnerships of all those countries implementing the idea of the LEADER programme - only represented by 29 LAGs. It should not be forgotten, though, that the low number of partnerships in Slovakia is the consequence of the very Rural Development Programme expecting only 25 LAGs to be financed from the European Agricultural Fund for Rural Development.

In most Visegrad countries, except for Slovakia, the LEADER programme implementation applied to an area larger than originally expected by RDP. Like in the case of the number of tri-sectoral partnerships selected for funding in relation to the total area used by LAG the highest index value was recorded in Hungary. In this country, the area with the LEADER approach implemented in more than double the original assumption. The same situation is in Poland where the total area used by the partnerships is much bigger than targeted by RDP, see Tab. 3. In the Czech Republic, the functional groups selected for funding by the European Agricultural Fund for Rural Development cover an area about 20% larger than originally expected. On the



other hand, Slovakia did not manage to achieve the expected area covered by the LEADER programme. In this case, the total area to which the LEADER partnerships apply is 25% smaller than expected by RDP.

In comparison to the areas used by LAGs in the individual V4 countries, it needs to be noted that these countries show changes in their level of coverage of their partnership relations in the three sectors. In relation to the total country, area LAGs cover the largest proportions in Poland and in Hungary. In Poland, the local partnerships cover up to 94.2% of the country area, and in Hungary, they cover 92.7%. The lowest coverage is recorded in Slovakia where local partnerships only cover 18.3% of the total country area. In the Czech Republic LAGs subsidized from the European Agricultural Fund for Rural Development cover 66.0% of the total county area. It must be noted, though, that in the Czech Republic there are groups not financed in the context of the Rural Development Programme. If these local partnerships are included, then LAGs cover about 90.0% of the area of the Czech Republic. In terms of a conclusion, in the case of Poland, Hungary, and the Czech Republic implementation of the LEADER programme in the years 2007-2013 certainly is a widespread phenomenon, while in Slovakia it only covers a relatively small part of the country.

**Table 3** The results of the LEADER approach implantation in the Visegrad Countries in 2007-2013

	Number of LAGs		Overall area of LAGs		The number of Inhabitants in LAGs	
	Total	Result indicator (%)	Total (km <sup>2</sup> )	Result indicator (%)	Total (thousand people)	Result indicator (%)
<b>The Czech Republic</b>	111	99	52	121	4	117,9
<b>The Slovak Republic</b>	29	116	9	75	615	176
<b>Poland</b>	336	112	294	193	19	185
<b>Hungary</b>	95	190	86	210	5	179

Source: RDP 2007-2013 for the Czech Republic, Slovak Republic, Poland, Hungary and website (<https://enrd.ec.europa.eu/>)

### **Evaluation of Key Functions of LEADER Programme**

The scoring system for evaluation of the key functions of the LEADER programme helped identify and compare a) the integrated approach, b) cooperation, c) innovation, d) networking, e) the bottom-up approach, f) partnership (of three sectors) between Visegrad countries and g) regional strategy of local development. The scale consisted of 5 points with 5 corresponding to full application of the above-mentioned features in each country.

The integrated approach, including implementation of multiple events (in comparison to the traditional industry policies), was best scored in Poland. Cooperation understood as real interaction with the aim to achieve a real goal, was best scored in the Czech Republic and in Slovakia, see Table 4.

Lack of innovation is a common negative feature of MAS activities. Czech MAS obtained the best score in this area. As for the scoring of the bottom-up approach (i.e. implementation of ideas provided by local communities), it is rather unsatisfactory. The highest score was obtained by Slovakia (3), the Czech Republic followed (2) and Poland and Hungary were the worst (1).

The distinctive feature of local action groups in V4 countries is the formation of tri-sectoral partnerships, where Slovakia obtained (3) score points, the Czech Republic and Poland (2) and Hungary (1). In the case of Hungary, the situation was encountered where the involvement of all three partners in formation of new LAGs was neglected and minimized.

According to the qualitative evaluation by the management of the national networks of the local action groups the highest score for the key LEADER programme functions were obtained by Slovakia (20), followed by the Czech Republic (16), Poland (15) and Hungary (13).

**Table 4** Evaluation of key features of the Leader approach in the V4

Key features				
	<b>The Czech Republic</b>	<b>The Slovak Republic</b>	<b>Poland</b>	<b>Hungary</b>
Integrated approach	1	3	3	2
Cooperation	3	3	2	2
Innovation	2	1	1	1
Relationship forming	3	3	2	3
Bottom-up approach	1	3	1	1
Local Public-private partnership	2	3	2	1
Area-based local development strategies	4	4	5	3
<b>Total</b>	<b>16</b>	<b>20</b>	<b>15</b>	<b>13</b>

Source: own research

## CONCLUSION

The programme period 2007-2013 was marked by the significant unification of the main principles, objectives, and implementation of the LEADER programme. However, the individual EU countries differ in compliance with the particular detailed implementation rules. This depends on the specific development conditions, which are different in each country (the legal and administrative context, the specifics of the rural areas etc.). Differences can also be observed in the Visegrad countries, including both quantitative and qualitative aspects of the LEADER approach implementation.

Because of the above-mentioned differences, the Visegrad group countries are clearly differentiated also in terms of the amounts of the financial contributions allocated for the LEADER approach implementation in the years 2007-2013. In each of these countries, the share of these funds in the total expenditures for the Rural Development Plan was below the EU mean. The analysed countries adopted various criteria for implementation of tri-sectoral partnerships (i.e. the maximum permitted population per LAG and exclusion of certain areas from LDS), which should be considered a manifestation of compliance with international conditions. In the case of all Visegrad group countries the actual implementation values - results of the LEADER approach (the number of the formed LAGs, their total area, and population), with just a couple of exceptions - are higher than specified in the Rural Development Plans of the individual countries.

Implementation of the LEADER programme in V4 countries appears much more widespread than originally expected. The results were most largely exceeded in Hungary and in Poland. In the Czech Republic, in addition to LAGs directly subsidized from the European Agricultural Fund for Rural Development, there are also partnerships not selected for funding in the context of the Rural Development Plan. The Visegrad Group countries, except for Slovakia, are characterized by large coverage of their territory with tri-lateral partnerships pursuant to the LEADER principle. In the case of Slovakia, the low value of this indicator may be justified by the low number of the formed LAGs, as a consequence of the rules of the RDP.

The Visegrad Group countries distinguish themselves by a large variety with regard to the effectiveness of the fund incurred for the purpose of the LEADER programme implementation. Before the end of 2013 the largest funds allocated for the LEADER programme implementation were incurred in the Czech Republic and for that reason, the country was recognized as one of the top EU countries in this respect. LAGs active in the Visegrad countries are clearly heterogeneous with regard to their populations and numbers of their members involved in their

activity. Despite these differences, there are a couple of common characteristic features of the tri-lateral partnerships in the individual countries.

In their qualitative evaluation of the management of the individual national LAG networks emphasized the major obstacles found (errors of the LEADER programme), such as the low trust among the parties involved in the development process (the Czech Republic), insufficient involvement of the business sector (Hungary), administrative barriers (Poland), low level of participation in the integrated projects and privileged position of the public sector in the fund allocation (Slovakia).

The recommendation for future is to promote cooperation in the community-led local development (CLLD) context, Member States could give priority in their selection procedure to LAGs which have integrated cooperation into their local development strategies. They could, for example, make the quality of LAG proposals for co-operation a criterion for selecting their strategies. Having in mind that, in the system of shared management, not all rules can be harmonised on a European level, it is moreover recommended to make efforts to harmonise the procedures and definitions for LEADER cooperation as far as possible at MS level. This is especially valid as regards inter-territorial co-operation in MS with regional development programs, but also between MS involved in transnational co-operation. The use of other tools for territorial co-operation offered by the ESIFunds.

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## **ECONOMIC TRANSFORMATION OF POST-COMMUNIST SMALL TOWNS: CASE STUDY OF THE LOWER SPIŠ REGION, SLOVAKIA**

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### **Abstract**

The aim of this paper is to examine how small towns have tackled the economic transformation in the post-communist period. It aims to contribute to the comprehensive research of post-communist transformation at different hierarchic levels of settlement system. The study is spatially focused on the Lower Spiš region in Eastern Slovakia as it includes various kinds of small towns at relatively small area. Based on data provided by population censuses in 1991, 2001 and 2011, we assess development of economic performance of the towns by number of jobs, sectoral structure of jobs, ability to provide jobs for local economically active population, and spatial extent of commuting zones. The results prove that post-communist small towns remained important subregional centers of employment and commuting in general. They sustain even though some of them were affected by the recession of industrial sector and their economic base was established or substantially supported by the socialist industrialization. The growth of small towns' economic importance was recorded in the proximity of the major regional town – Spišská Nová Ves, mainly thanks to decentralization of economic activities.

Keywords: small towns, Slovakia, Lower Spiš, post-communist, economy, commuting

### **INTRODUCTION**

The post-communist period brought about radical transformation of whole society in many attributes in the Central and Eastern European countries. That mirrored in urban and rural areas and led to the intensive research of post-communist transformation of urban (e.g., Enyedi 1998, Sailer-Fliege 1999, Tsenkova 2006, Sýkora & Bouzarovski 2011, Navrátil et al., 2018, Balizs & Bajmócy 2018, Kunc et al. 2018) and rural (e.g., Bański 2003, Spišiak et al., 2008, Spišiak 2011, Zubriczký 2011, Wójcik 2013, Kebza 2018) areas. Less attention, particularly in Slovakia, has been paid to research of small towns – the settlements integrating urban and rural features. While in other Central European countries there are certain research studies dealing with them (e.g., Zuzanska-Zysko 1999, Vaishar & Zapletalová 2009, Kantor-Pietraga et al. 2012, Vaishar et al. 2012, Pirisi & Trócsányi 2015, Czapiewski, Bański, & Górczyńska 2016, Filipović, Kokotić Kanazir, & Drobnjaković 2016, Vaishar, Zapletalová, & Nováková 2016), the topic has been marginal in Slovakia.

The aim of the paper is to assess how small towns have tackled with economic transformation in the post-communist period on the example of the Lower Spiš region as it contains various kinds of small towns at relatively small area. Prior to small towns' analysis, the theoretical, methodological and historical backgrounds are introduced. Development of economic performance of small towns is assessed by the set of indicators – number of jobs, sectoral structure of jobs, ability to provide jobs for local economically active population, and spatial extent of commuting zones. The paper has the ambition to fill the gap in the Slovak research of small towns in Central Europe to contribute with knowledge on post-communist transformation of settlement system in Central and Eastern European countries.

### **TERMINOLOGY AND THEORETICAL FRAMING**

The term of a town varies in definition, in geography even more ambiguous is the term of a small town. For comprehensive overview of approaches to the terms see Novotný et al. (2016) in Slovakia or for other post-communist Central European countries Pirisi et al. (2015). In order not to bewilder in using certain settlement terminology, the paper uses the following terms.

A settlement is generally referred to a community in which people live. It is mostly used for rural or urban settlement to denote the historical context implying the preceding forms prior the municipality. A term municipality is used after the settlement gains the administrative function. Municipality, as a local administrative unit, can be either of rural or urban character. It is also quite common to denote rural municipality with a term village, though not much preferred in Slovak geographical vocabulary. A town is an urban settlement historically associated with privileges or later with a status being granted by a ruler. A city is obviously larger in size and functions than a town and is usually referred to urban municipality exceeding 100,000 inhabitants.

The researched municipalities fall under the set of economic and population criteria. Research units (fig. 1) include towns up to 10,000 inhabitants and selected historical towns that despite losing their status played significant role in regional economy by the end of the socialist era. We call them “small towns” although they do not have to be necessarily granted a formal status of town at present. Thanks to this selection criterion, the largest rural municipality is intended to be included in the research.

This paper is geared to small towns` economic transformation. We use the term post-communist economic transformation, even though the Central European countries more often prefer the term post-socialist in synonymous understanding.

## **DATA AND METHODS**

While there are many sources on data on economic structure and performance at national and regional scale, research in this field tackles very limited sources of data at local level. That is why we employed data published as Population census results for censuses in 1991, 2001 and 2011 (SOSR 1991, 2001a, 2011a). These data do not provide information on the wages or the value of local production, but provide details on local economically active population, i. e. number of employed by economic sector, basic information on commuting, number of unemployed, women at maternal leave. More detailed data on commuting at the local level for each of the three latest population censuses were published in special publications Out-commuting and in-commuting (SOSR 1994, 2001b and 2011b). Despite certain differences resulting from minor changes in methodologies, political and social situation, as well as general willingness of population to participate in population censuses, we consider employed data to be the most comprehensive, comparable and reliable to analyse the economic transformation at the level of individual municipalities in Slovakia. To emphasize results of transformation process and to gain better readability of figures, some graphic interpretations of results are provided only for the 1991 and 2011 censuses.

Evaluating the data from population censuses (SOSR 1991, 2001a, 2011a) on population structure by economic activity, sector of economic activity, and on commuting to work (out-going and ingoing) by economic sector, enables us to examine the economic transformation of chosen municipalities. Number of jobs occupied by individuals with permanent address in given municipality (“number of jobs for locals”) is estimated by deducting number of out-going commuters from total number of economically active people residing in given municipality. For number of economically active individuals employed in a town of residence expressed as percentage of total number of economically active individuals (including those commuting to other municipalities) we use the term “local demand satisfaction rate” meaning the ability of a municipality to provide jobs for its own economically active population (to satisfy its demand for jobs). Total number of jobs in each analysed municipality is estimated as a sum of number of jobs for locals and number of commuters to work to given municipality. These data do not provide detailed information on character of jobs (full-time or part time, temporal or



permanent), but the estimated data for 1991, 2001 and 2011 are considered sufficient to mutually compare the municipalities and to record their development trends during post-communist period.

Analogically, evaluating the data on sectors of economic activity of population and commuters, numbers of jobs by economic sectors in 1991, 2001 and 2011 are estimated for each municipality, what enables us to assess changes of the importance of individual sectors in the local economy. These estimations can be affected by certain distortions, which stem from small differences in categorization of economic activities in individual censuses, and also between categorization of employees in given municipalities and commuters. Thus, a category “education and health care” also includes employees in culture in 1991 and employees in public administration in 2011. A category “market and other services” also includes commuters with unidentified economic sector. Nevertheless, commuters with unidentified economic sector can have only minor impact on total numbers and should not significantly affect identified overall trends.

The jobs that were identified in the municipalities for own economically active population include sole traders (proprietorships) who are registered in the municipality, but may perform the work elsewhere. There may be analogically some sole traders working in municipalities but not being counted in the statistics as it does not record their real place of work. This fact may also affect overall results, but it is not possible to get more properly adjusted information due to the character of available statistical data.

The data on commuting at the level of individual municipalities from the three latest population censuses (SOSR 1994, 2001b and 2011b) were used to outline changes in spatial extent of commuting zones of analysed municipalities reflecting their changing role in regional economies. Data are considered reliable but the level of detail is limited. The commuting flow from municipality to municipality (in one direction) is reported only when the total number of commuters to work together with pupils and students commuting to schools is 10 persons at least. Smaller flows are not reported separately, but as “other commuters within the district/from other districts/from abroad”. That is why these flows are not visualised in the maps as flows although the commuters are included in the net commuting balance of each municipality. Despite these limitations, this data source is the most detailed available for all municipalities and sufficient to outline general development trajectories.

## **Spatial frame**

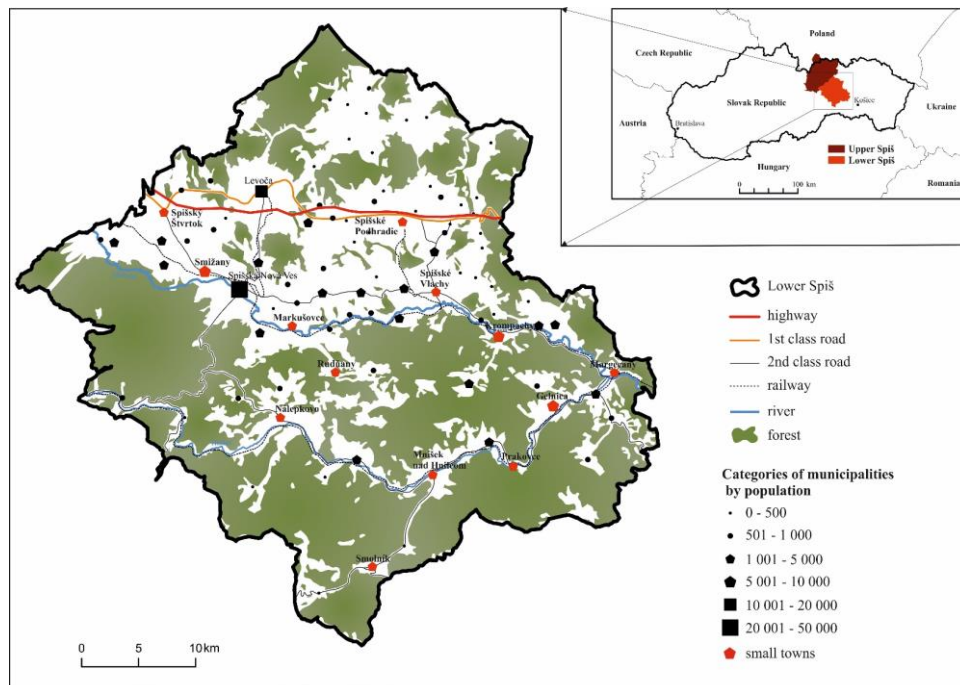
The Spiš region is located in the north-western part of Eastern Slovakia and its northern part exceeds to Poland with very small area. It used to be an administrative county in Hungarian Kingdom from the 11th till the 20th century. The region is surrounded by mountain ranges so its border that shaped already by the early 14th century persisted almost unchanged until collapse of Austria-Hungary in 1918 (Novotná, 2017). The region was historically characterized by multi-ethnic and even multi-confessional population (Šoltés 2009, Benža et al. 2015), what contributed to strong regional identity which remains still preserved, although the region has not been an individual territorial administrative unit since the formation of Czechoslovakia after the World War I. Comparing spatial extent of Spiš as a historical region to the current administrative division, the region covers area of districts (LAU1) Gelnica and Spišská Nová Ves within the Košice county (NUTS III Košický kraj), and Poprad, Kežmarok, Levoča and Stará Ľubovňa in the Prešov county (NUTS III Prešovský kraj). Less than 200 km<sup>2</sup> is located in Poland (fig. 1). Majority of population and economic activities are concentrated into the basins of the Hornád and Poprad rivers. Both flow from western part of the region, the Poprad river flows north-eastwards and the Hornád river south-eastwards, gaining lots of tributaries. They shape the inner division of the region into Upper Spiš (the basin of the Poprad including the valley of the Dunajec river) and Lower Spiš (the basin of the Hornád including the valley of the Hnilec river, the largest tributary of the Hornád within the region).

The historical region of Spiš was characterised by unique multi-layer structure of territorial administration and multiple economic transformation over the centuries. This led to development of specific hierarchy in the regional settlement system evidenced in higher concentration of small towns and lack of distinct regional metropolis. In Slovakia, there are now 21 municipalities with population from 2,000 to 5,000 having recently been granted a status of town and 5 of them are situated in the Spiš region. There are also many municipalities with comparable and even higher number of inhabitants that are considered rural since they have not been granted the status of town, including the largest rural municipality in Slovakia with population nearing 9,000 (Smižany) by the end of 2017 in the region. Some other municipalities were granted a town status in the distant past but lost it in latter periods.

The research is spatially focused on the Lower Spiš region as it contains historical centres of both secular and ecclesiastical power, medieval towns of all kinds (royal, mining, royal

mining, craft and market towns, towns pawned to Poland) as well as municipalities that thrive into towns during socialist industrialization. All these towns are now at different positions in the regional settlement hierarchy. The Lower Spiš region spatially corresponds with the Spišská Nová Ves functional urban region (FUR) delimited by Bezák (2000) on a basis of data on commuting from the 1991 population census. It means that the region was internally coherent and externally relatively enclosed by the end of the socialist period when daily labour commuting considered. Spatial focus on smaller territory allows us for more detailed analysis at the level of individual municipalities.

**Figure 1** Situation of the researched region



Source: ESRI Data (2018)

## Historical background

In the past, Lower Spiš belonged to the economically most developed regions in the territory of present-day Slovakia. German immigration to the region became massive after the Tartar invasions into Hungary in 1241-1242, when Hungarian King Bela IV directly invited German settlers to contribute to economic and social development and introduced very accommodating policies towards them (Gabzdilová & Olejník, 1998, Lengová, 2012). Rich sacral and secular privileges that were granted to municipalities with German settlements induced development of crafts and trade in several medieval towns for the next centuries (Levoča, Spišské Vlchy, Spišské Podhradie, Spišský Štvrtok).

Mining and related industries contributed to economic development of the region as a whole and particularly to certain towns (Gelnica, Smolník, Krompachy, Rudňany, Spišská Nová Ves, Nálepko, Mníšek nad Hnilcom). But by the end of the 19th century, depletion of mineral (predominantly ore) deposits led to closure of mines and downturn of related industries. This process was more intensified after the breakdown of Hungary, which meant the loss of traditional markets for industrial enterprises and trade centers in the territory of today's Hungary and southern Poland (Jančura, 2012, Spišiak & Kulla, 2009).

In newly established Czechoslovakia in 1918, Lower Spiš became peripheral and economic development in the region was recorded only alongside the main railways connecting East Slovakia with industrial Silesian region and Prague in the western part of the republic.

Turbulent history and changing multi-level administrative organization strengthened administrative function of some towns (Levoča, Spišská Nová Ves, Gelnica, Spišské Podhradie, Spišské Vlchy, Markušovce<sup>1</sup>), what stimulated their economic growth (cf. Žifčák, 2004; Jurková, 2013a,b; Rábik, Labanc, & Tibenský, 2013).

While mining and ore processing had a rich tradition in the region, the development of other industries depended mostly on the socialist industrialization after the Second World War. In some cases, even the mining experienced revival thanks to generous state subsidies. Within the region, majority of socialist enterprises were located in Spišská Nová Ves (mainly woodworking, food and textile industries) but some were located even in smaller towns and other municipalities, partly in line with the tradition of ore processing. These towns became important industrial hubs, but their economic base was built on a small number (often only one) of large industrial enterprises. Within the researched region, this is the most case of Krompachy (ore processing and electro-technical industry), Rudňany (ore processing), Prakovce (armament industry), less in Gelnica (engineering industry) and Spišské Podhradie (travertine processing). In Smolník, employment increased in the cigar-producing factory which was established already in the 18th century, similarly distillery in Levoča. As a consequence of collectivization and the establishment of large enterprises in the primary sector of economy, some municipalities became centres of agriculture and/or forestry (Mníšek nad Hnilcom, Nálepko, Smižany, Spišské Vlchy, and Spišský Štvrtok). However, neither agriculture nor forestry were able to provide the number of jobs comparable with the industrial sector. So, these

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<sup>1</sup> Markušovce as a municipality never had important administrative function, but it was the seat of powerful Mariassy family for centuries so it indirectly but considerably influenced the development in the region.

municipalities did not become important centres of employment within the region and they lost importance in comparison with pre-socialist era. The tertiary sector in the socialist era was generally underdeveloped. The only exception among the considered municipalities was Margecany, the railway junction, where the number of jobs was provided in the railway transportation (Spišiak and Kulla 2009).

## **RESULTS AND DISCUSSION**

### **The number of jobs and their sectoral structure**

At the turn of socialist and post-communist era, Krompachy was the most important centre of employment among the analysed small towns. The town with 8,000 inhabitants and less than 4,000 economically active inhabitants provided over 5,500 jobs (fig. 2), most of them in industry and construction (fig. 3). Very similar situation, but with about half of the number of jobs was in Rudňany and Prakovce. In Smolník, the sectoral structure of jobs was alike (fig. 3), but the number of jobs was considerably smaller (fig. 2). More than 2,000 jobs were provided in Gelnica (fig. 2) but sectoral structure was much more diversified (fig. 3).

By 2001, almost all communities recorded decrease in the number of jobs (tab. 1) as a trend related to post-communist economic transformation. In emerging market economy and shifting trading relations from the East to the West, many socialist enterprises bankrupted, or were at least forced to reduce an overemployment considerably. The largest decrease in the number of jobs, exceeding significantly general trends in the region, was recorded in Rudňany, Krompachy and Prakovce, the towns with largest socialist industrial estates (cf. Spišiak and Kulla 2009) and with relatively monofunctional – industrial character by 1991. Krompachy and Prakovce lost about a third of jobs during that decade, Rudňany even over two thirds of jobs so the town utterly lost its function of regional centre of employment. On the other hand, Gelnica, Nálepkovo, Spišské Podhradie and Spišské Vlachy – the municipalities with relatively diversified sectoral structure of jobs (fig. 3) recorded only insignificant loss (lesser than 10%) of jobs.

In the following period (2001-2011) the intensity of loss of jobs was lower. Majority of small towns continued to lose the jobs, rather those industrial. However, mainly smaller centres of employment that were not industrialized during the socialist era (Spišské Vlachy, Spišský Štvrtok, Markušovce) recorded increase in the number of jobs. Stabilization was recorded also

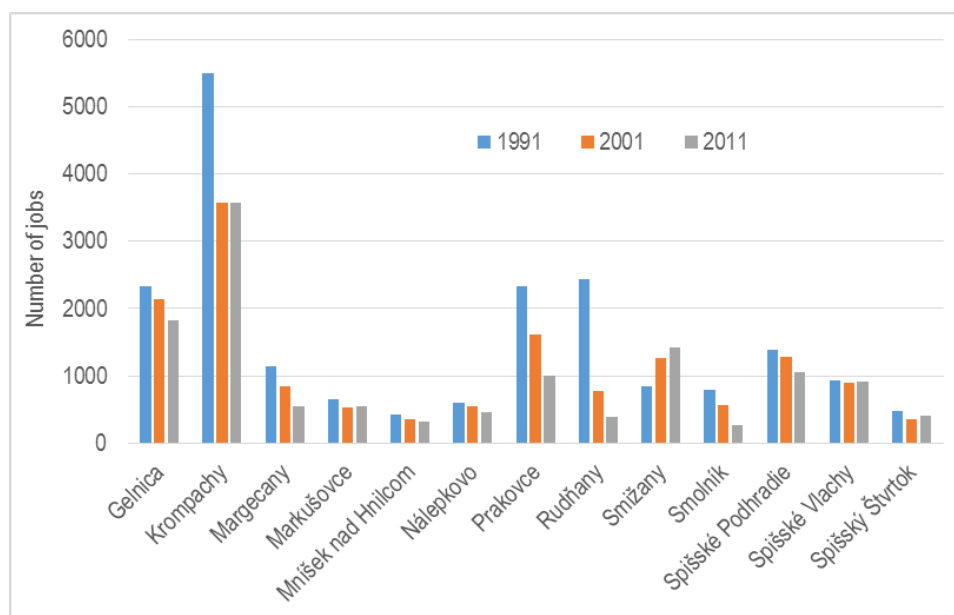
in Krompachy, where foreign direct investment by Panasonic in 2000 (1250 employees in 2008) helped to compensate loss of jobs from other larger industrial enterprises. However, for the sake of Global economic crisis the company began with gradual redundancy and finally left Krompachy in 2015 (TASR 2014).

**Table 1** Development of number of jobs in the small towns of Lower Spiš (1991, 2001, 2011)

municipality/region	population in 2001	number of jobs			growth index number in %		
		1991	2001	2011	1991- 2001	2001- 2011	1991- 2011
Gelnica	6404	2331	2144	1828	92,0	85,3	78,4
Krompachy	8812	5505	3584	3570	65,1	99,6	64,9
Margecany	2035	1144	837	540	73,2	64,5	47,2
Markušovce	3243	649	525	547	80,9	104,2	84,3
Mníšek nad Hnilcom	1691	427	360	320	84,3	88,9	74,9
Nálepkovo	2626	600	543	449	90,5	82,7	74,8
Prakovce	3415	2331	1611	1006	69,1	62,4	43,2
Rudňany	3196	2438	765	392	31,4	51,2	16,1
Smižany	7847	839	1267	1423	151,0	112,3	169,6
Smolník	1299	795	565	263	71,1	46,5	33,1
Spišské Podhradie	3780	1384	1285	1049	92,8	81,6	75,8
Spišské Vlachy	3518	933	904	909	96,9	100,6	97,4
Spišský Štvrtok	2273	466	347	402	74,5	115,9	86,3
<i>small towns</i>	<i>50139</i>	<i>19842</i>	<i>14737</i>	<i>12698</i>	<i>74,3</i>	<i>86,2</i>	<i>64,0</i>
Levoča	14366	5866	5029	4490	85,7	89,3	76,5
Spišská Nová Ves	39193	22416	19242	17884	85,8	92,9	79,8
<i>Lower Spiš region</i>	<i>156237</i>	<i>56939</i>	<i>48098</i>	<i>47669</i>	<i>84,5</i>	<i>99,1</i>	<i>83,7</i>

Source: own elaboration based on SOSR (1991, 1994, 2001a, 2001b, 2011a, 2011b)

The only small town in the region that recorded increase in the number of jobs during the 1991-2001 period and even in the 2001-2011 period, though with less intensity, was Smižany. The largest municipality in Slovakia not having the status of town (about 9,000 inhabitants) was administratively annexed to the Spišská Nová Ves municipality by the end of socialist era, when the construction of prefabricated housing estate started to be built and spatially merged to Spišská Nová Ves. Based on local referendum Smižany regained administrative autonomy as soon as in 1990 (Šoltisová 2015). Construction and emerging decentralisation (suburbanisation) of population from Spišská Nová Ves caused Smižany's rapid increase of population (from about 4,000 in 1990 to about 8,000 in 2011) (cf. Novotný 2010, SOSR 2011). Rising number of inhabitants naturally led to increase in the number of jobs, particularly in market and services. This can be seen in sectoral structure of jobs in Smižany, where the proportion of jobs in market and services significantly rose among all analysed municipalities (fig. 3).

**Figure 2** Development of the number of jobs in small towns of Lower Spiš (1991, 2001, 2011)

Source: own elaboration based on SOSR (1991, 1994, 2001a, 2001b, 2011a, 2011b)

The observations from Poland (Kantor-Pietraga et al. 2012) that industrial monofunctional small towns were the most negatively affected by the post-communist economic transformation are in concord with our observation that socialist industrial centres lost the largest number as well as proportion of jobs. The worst effect of the post-communist transformation was recorded in Rudňany, where the number of jobs decreased from 2438 in 1991 to 392 in 2011, meaning there were only 16% of jobs from 1991 retained to 2011 (tab. 1, fig. 2). Less than 50% of jobs retained in Smolník (33%) and Prakovce (43%).

The largest center of employment among analyzed small towns – Kropachy lost considerable number of jobs in industry and construction which was the most important sector in 1991, but due to stabilized or even increasing numbers of jobs in other sectors, overall loss was lower than in the abovementioned small towns. Kropachy retained 65% of the jobs in the 1991-2011 period and retained largest proportion of jobs in industry and construction among all analyzed small towns (over 25%). The situation is similar in Gelnica, which unlike Kropachy had well diversified sectoral structure of jobs in 1991, and became a seat of restored district in 1996, what helped to increase the number of jobs in public administration (included to the category education and health care in fig. 3).

On the other hand, smaller centers of employment which were not considerably industrialized during the socialist era coped relatively well with the post-communist

transformation as the numbers of jobs decreased less significantly. The best example is Spišské Vlasy, which retained over 97% of jobs, but considerably changed sectoral structure. Numbers of jobs in secondary and tertiary sectors increased at the expense of jobs in agriculture and forestry (fig. 3). Spišské Vlasy together with Spišský Štvrtok (86%) and Markušovce (84%) were the only small towns that retained higher proportion of jobs than the Lower Spiš region as a whole (83.7%).

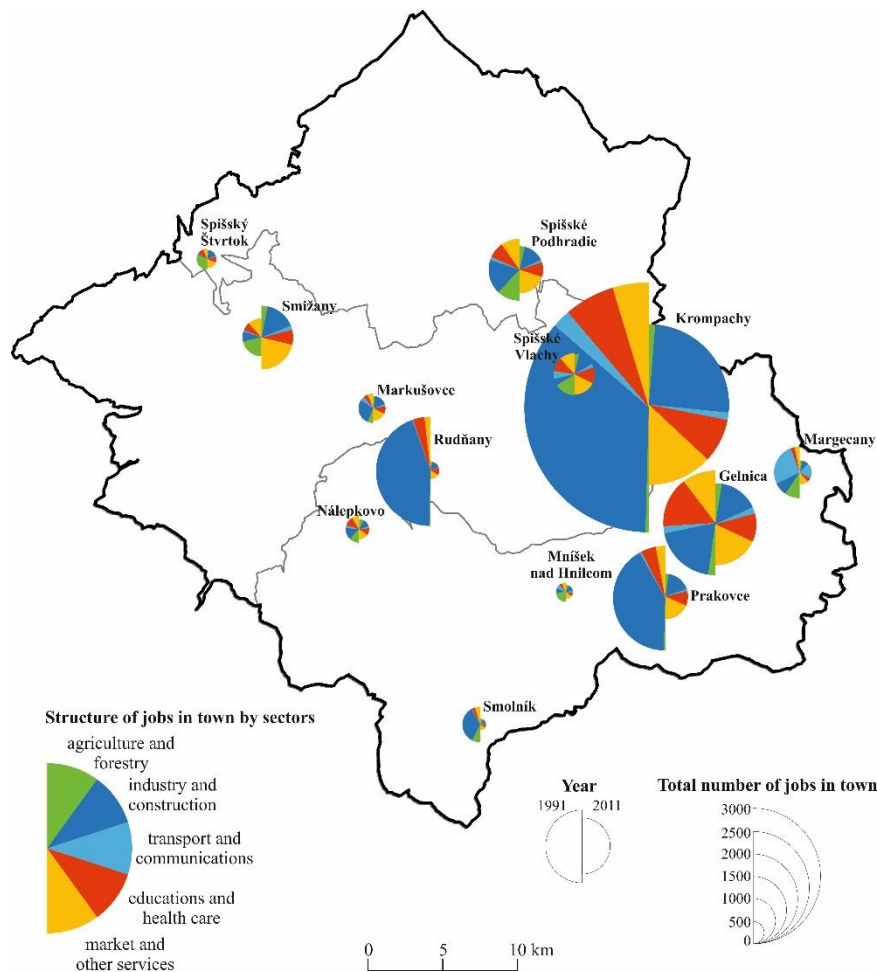
Special case is Smižany, where the number of jobs increased by 70% during the 1991-2011 period, which can also be attributed to the decentralization of jobs (commercial suburbanization) from Spišská Nová Ves, but it is mainly caused by almost doubling the population size of the municipality.

The analysis also shows that the municipalities which have presently the status of town (Krompachy, Gelnica, Spišské Podhradie and Spišské Vlasy) coped generally better with the post-communist transformation, although the population size of smaller of them (Spišské Vlasy and Spišské Podhradie) is comparable or even smaller than some other municipalities not having the status of town (Prakovce, Markušovce, Rudňany, Nálepko). Even though all of them recorded certain drop of jobs, they remained valid regional centers of employment.

The number of jobs in the main regional urban center of Spišská Nová Ves (population almost 40,000) decreased from about 22,500 to less than 18,000 in 2011, which means the town retained 80% of jobs. The region's second largest town Levoča (15,000 inhabitants) retained 77% of jobs (decrease from 5,900 to 4,500). Both are presently seats of districts, although the position of Spišská Nová Ves is stronger in the hierarchy of regional public administration. Both towns had relatively well diversified sectoral structure of jobs even by the end of the socialist era. The relative decrease in the number of jobs in them was higher than in the whole region but stays smaller than in the largest industrial centers among the small towns (particularly Krompachy, Rudňany, Prakovce).



**Figure 3** Number and sectoral structure of jobs in small towns of Lower Spiš in 1991 and 2011



Source: own elaboration based on SOSR (1991, 1994, 2001a, 2001b, 2011a, 2011b)

The largest centres of employment at the end of the socialist period, whose economic base was based on one or limited number of socialist enterprises, lost the largest proportion of jobs. Some of them (Smolník, Rudňany) lost their position of regional centres of employment. Number of jobs in four towns (Krompachy, Prakovce, Rudňany and Smolník) where the proportion of jobs in industry and construction exceeded 50% of all jobs in 1991, lost more than 50% of jobs by 2011 (decrease from 11,069 to 5,231). On the other hand, the major regional town and centre of employment Spišská Nová Ves lost much lower proportion of jobs, nearing the proportion of loss of the region as a whole. Small historical towns not directly affected by the socialist industrialization (or rather negatively as they downturned in regional hierarchy of employment centres) recorded much less significant decrease in the number of jobs – by less than 15%, from 8,773 in 1991 to 7,467 in 2011.

As indicated in tab. 2, in contrast to Spišská Nová Ves, the importance of small towns as regional centres of employment declined considerably during the post-communist transformation period. However, this was mainly caused by the loss of jobs in the small towns,

the ones most industrialized during the socialist era. Although the number of jobs in the category of less industrialized towns decreased as well, it was smaller in comparison with the region as a whole, and so the proportion of jobs in these small towns even slightly increased. The most considerable increase in the proportion of jobs was recorded in the category of rural municipalities, which almost reached the proportion of jobs in the category of small towns in 2011.

**Table 2** Proportion of the number of jobs in categories of municipalities of all jobs in the region

category of municipalities	proportion of all jobs in the region in %		
	1991	2001	2011
small towns	34,8	30,6	26,6
<i>more industrialized small towns*</i>	19,4	13,6	11,0
<i>less industrialized small towns**</i>	15,4	17,1	15,7
Spišská Nová Ves (major regional town)	39,4	40,0	37,5
rural municipalities	15,5	18,9	26,4

Source: own elaboration based on SOSR (1991, 1994, 2001a, 2001b, 2011a, 2011b); \*towns with the proportion of jobs in industry and construction exceeding 50% of all local jobs in 1991 (Krompachy, Prakovce, Rudňany, Smolník); \*\*all other small towns

The results indicate two simultaneous but opposing processes taking place in the region. On the one hand, Spišská Nová Ves strengthened its position among the largest centres of employment in the region, what was given by process of centralization of employment into the largest town, at the expense of medium sized and smaller communities. On the other hand, the relative decrease in the number of jobs in larger small towns and even in Spišská Nová Ves and Levoča was higher than the average for region as a whole, what indicates that decentralization of employment from towns (regardless if currently with status of town or historical) to rural communities is taking place.

At the same time, suburbanization that influences spatial redistribution of population in the region (Novotný 2010) seems to be responsible even for spatial redistribution of employment. This is seen particularly in Smižany which, besides rapid growth of population, recorded rapid growth in the number of jobs, and to a less extent Markušovce and Spišský Štvrtok located in the vicinity of Spišská Nová Ves.

All these processes were accompanied with considerable changes in the sectoral structure of jobs. These are connected with deindustrialization and tertiarization, the processes characteristic for post-communist transformation (cf. Domański 2011, Korec 2007, Popjaková 2008, Rusnák and Bystrická 2010). Thus the transformation affected the most socialist industrial centres and smaller centres of employment benefited from rather diversified sectoral structure of economy. The exceptions can be found in the southernmost part of the region. The historical mining towns in the western part of the Gelnica district were neither substantially

industrialized during the socialist period, nor during the post-communist period suffering from unfavourable location and poor transport infrastructure. They were losing jobs continuously even in the post-communist era.

### **Volume and spatial range of commuting**

Spatial pattern of commuting to small towns of Lower Spiš naturally reflects changes in the number of jobs. Nevertheless, there are certain general trends observable in the region that cannot be truly explained only by the changes in the number of jobs.

Spišská Nová Ves as a major commuting centre in the region concentrated commuting flows from almost all municipalities within the region by the end of the socialist era. Although majority of flows weakened and some even disappeared, the commuting flows to Spišská Nová Ves covered almost whole area of region also in 2011. The size of some flows from neighbouring communities increased, particularly in the case of Smižany, which indicates that the trend of suburbanization is still more related to the population rather than the economic activities.

Small towns in the region recorded significant change in the spatial pattern of commuting between 1991 and 2001 (fig. 4). The largest commuting centres lost the largest numbers of commuters, so the differentiation between analysed municipalities as centres of commuting diminished. Sharp drop was recorded in Rudňany – the second largest commuting centre in 1991, however much smaller in 2001.

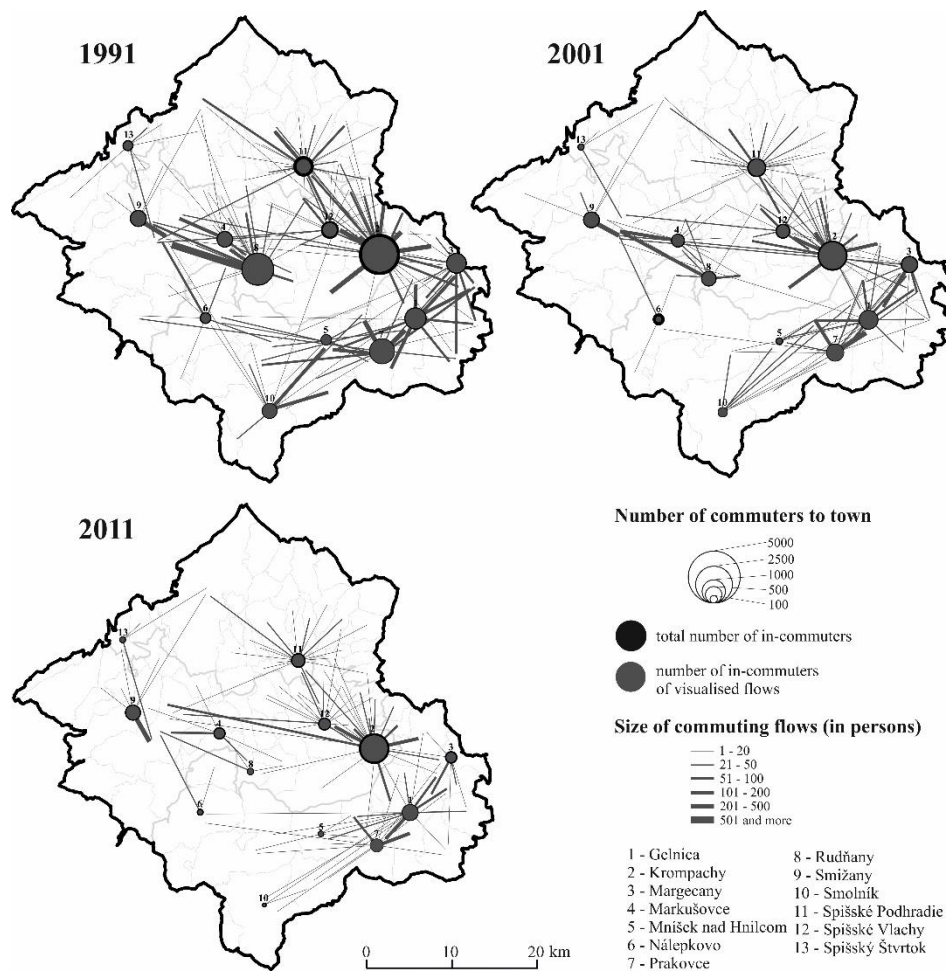
The largest commuting centres from 1991 recorded also the most significant spatial shrinkage of the commuting zones on the one hand, while the spatial extent of commuting zones of Gelnica, Smižany, Spišské Vlchy, Spišské Podhradie or Margecany remained almost unchanged on the other hand. It confirms that the small towns whose economic base was rather smaller but not based only on socialist industry, coped much better with the early stage of the post-communist transformation.

The commuting flows seem to be integrated and spatially equally distributed across the region in 1991. In 2001, the split of commuting subsystem in the southern part of the region is noticeable. It refers to the valley of the Hnilec river which is enclosed by mountain ranges from all sides but the narrow area in the east, where Hnilec flows into the Hornád river. The split is even more apparent in 2011 (fig. 4). This is in line with observations by Bezák (2000, 2014) stating that while the Gelnica-Prakovce functional urban region (FUR) was more integrated with the Spišská Nová Ves FUR in 1991, in 2001 it already had more commuting interactions with the Košice FUR located to the south. In 1991 Gelnica and Prakovce were relatively equal

centres creating the commuting core of the FUR, the role of Prakovce diminished and Gelnica became dominant in latter periods.

Despite rapid decline in the number of in-commuters and shrinkage of its commuting zone during the 1991-2001 period, Krompachy stabilized its position in the 2001-2011 period and became the most dominant commuting centre among analysed small towns. Former large industrial centres and commuting cores such as Prakovce, Rudňany or Smolník continued to decay and the last two mentioned lost their role as commuting centres at all (fig. 4). The shrinkage of commuting zones of the formerly larger commuting centres imply they lost the role of inter-regional commuting centres and became rather sub-regional. This is documented also by lowering the proportion of commuters not included in visualised commuting flows (fig. 4).

**Figure 4** Transformation of spatial patterns of migration into the small towns of Lower Spiš (1991, 2001, 2011)

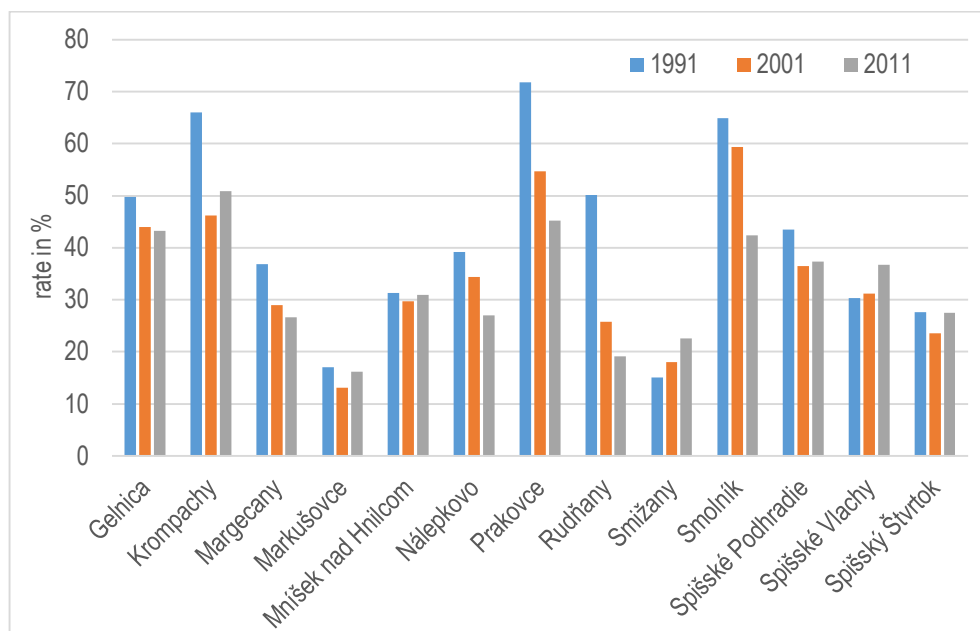


Source: own elaboration based on SOSR (1994, 2001b, 2011b)

Decline in importance of commuting centres went hand in hand in reduction of the ability to provide jobs for its own economically active population in majority of analysed small towns

(fig. 5). In 1991, the highest ability to provide jobs for own population was recorded in the largest employment centres (Krompachy, Prakovce, Rudňany, Gelnica) but also in Smolník with relatively poor transport accessibility.

**Figure 5** Local demand satisfaction rate in small towns of Lower Spiš (1991, 2001, 2011)



Source: own elaboration based on SOSR (1991, 1994, 2001a, 2001b, 2011a, 2011b)

By the 2001, the ability to satisfy own population's demand for jobs declined in all small towns apart from Spišské Vlchy and Smižany. These were the only towns that reached higher values in 2011 than in 1991. From the point of view of availability of jobs for local population it means they maintained the post-communist transformation most successfully. It is particularly interesting in the case of Smižany which recorded rapid growth of population over this period. After more considerable declines during the 1991-2001 period, the situation levelled off in majority of towns or even improved in some cases (Krompachy, Markušovce, Mníšek nad Hnilcom, Spišské Podhradie, Spišský Štvrtok). On the other hand, Prakovce, Rudňany and especially Smolník kept on further significant declining.

There is certain distortion between relatively stabilised or even improved ability of small towns to satisfy the local demand for jobs, and continuously declining numbers of jobs in these towns (cf. fig. 2 and fig. 5). This may be a result of two simultaneously ongoing processes. The first is the ageing of population what means that larger number of population is moving from the category of economically active to the category of pensioners than the number of moving from category of pupils and students into the category of economically active. This is accompanied by the emigration from the analysed towns, which has been described in detail at

regional level by Novotný and Pregi (2016 a, b). It is based on the assumption that the number of economically active people in these small towns decreased, so the towns could satisfy larger proportion of economically active inhabitants even with the smaller number of jobs.

## CONCLUSION

In this paper we sought to assess economic transformation of small towns in the Lower Spiš region during the post-communist era. The researched objects were towns up to 10,000 inhabitants and selected historical towns that lost the formal status of town, but played significant role in regional economy by the end of socialist era. Therefore, the analysed municipalities are termed “small towns” although not all of them are being granted a formal status of town at present.

The research is based on data from population censuses in 1991, 2001 and 2011 which allowed for in-depth analysis by variety of indicators applied from regional to local level. The results show that majority of small towns was negatively affected by the post-communist transformation and certain differences and regularities were identified.

In concord with rather general features of post-communist economic transformation in Central and Eastern-European countries, almost all small towns underwent the processes of deindustrialization and tertiarization. Therefore, the most significant decrease in the number of jobs was recorded in small towns whose economic base was built on one or a limited number of large industrial factories during the socialist era. The larger towns were partially able to compensate the loss of jobs in industry and construction by growing number of jobs in other sectors, particularly in retail and services. Small towns that were not industrialized during the socialist era have handled with the post-communist transformation much better. Majority of them recorded small decrease in the number of jobs, but the intensity of decrease was lesser than in the region as a whole. So the category of all small towns recorded clear downturn in the hierarchy of the centres of employment, due to former industrial towns, but towns that were rather omitted from the socialist industrialization even strengthened their hierarchic position in regional economic system.

Changes in spatial pattern of commuting to small towns partially reflect the decrease in the number of jobs. Commuting zones shrunk most in the industrial towns, particularly those where socialist industrialization maintained economic base established on mining tradition. Without state subvention in post-communist era, such economic base collapsed and historical mining small towns lost their status of sub-regional economic centers and commuting centers as well. On the other hand, commuting zones of small towns with smaller but well diversified economic

base by the end of the socialist era maintained commuting zones almost unchanged or even expanded slightly.

The difference in the number of jobs and even the number of in-commuting employees between the category of the industrialized and not industrialized towns diminished during the period of observation.

The development of the spatial pattern of commuting into the small towns also indicated certain regional differentiation resulting from the orography of the territory. The commuting flows seem to be integrated and spatially equally distributed across the region in 1991. However, the separation of commuting subsystem in the southern part of the region was apparent in 2001 and particularly 2011. It is the valley of the Hnilec river enclosed by mountain ranges from all sides but the narrow area in the east, where Hnilec flows into the Hornád river and where the region is linked by road and railway with the Eastern Slovak major city of Košice.

It is generally possible to state that small towns remain important sub-regional centres of employment and commuting. It is so despite the recession in the industrial sector which affected the towns where economic base was established or substantially supported by the socialist industrialization. Historical small towns, particularly in remote peripheral areas in the south-west kept on economic decay, whereas the growth of economic importance was recorded in the proximity of the major regional town – Spišská Nová Ves, mainly owing to decentralization of economic activities.

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## **CHARACTERISTICS OF COMMUNITY SUPPORTED AGRICULTURE IN THE WESTERN TRANSDANUBIA REGION**

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### **Abstract**

Both industrialization of agriculture and globalization of food trade have begun in the 20th century. Consumer habits have also undergone major changes in line with altered processes in the structure of food trade initiating merits as well as drawbacks. For instance, currently small-scale agriculture or local product supporting consumption is increasingly forced to play a marginal role all over the world. Small farmers are underrepresented in most traded venue, while production is shifting towards bigger market participants. Locally, this means that the volume of production, labour requirements and diversity of products will be reduced, consequently local characteristics will slowly disappear. As an essential requirement for such production the traditional knowledge will not be able to be passed down to forthcoming generations. As a result of a survey, a problem and an objective tree of community supported agriculture was created. These problem/target trees were constructed after an analysis of CSA through a scrutiny of several farmer's organization and individual consumers in the Western Transdanubia region of Hungary. Followed by the evaluation of data the most influential factor, the basic problem was determined, as a consequence of which the long-term, strategic objective in terms of the market power of CSA organizations has been set forth.

Keywords: Short food supply chain, Community supported agriculture, Problem tree, Objective tree, Producer, Consumer

### **INTRODUCTION**

The social and economic roles and the environmental impacts of agriculture are defined by two main directions regarding their goals: interpretation based on production and interpretation based on environmental management. The European agriculture policy used the interpretation based on production to improve the “industrial” agriculture in order to eliminate the food shortages after the Second World War, which made the boost of agricultural performance necessary. They used development of industrial agriculture; mechanization, pesticides and fertilizers to implement this goal, but this caused problems after a short amount of time, as it overloaded and polluted the environment (Kainer, 2007). Thus, the industrialization of agriculture and the globalization of food trade began in the second half of the 20th century.

Changing the structure of food trade changed the consumers' habits also. This process brought numerous problems that often were not reflected in the price of the goods. For example, small scale agricultural production and consumption supporting the local products are getting overshadowed worldwide. The often unequal power relations between smaller and bigger players of the global food supply chain generate significant social tensions all across the world. The intensive, large-scale (conventional) production methods and the increased transport distances are putting a lot of weight on the environment.

Small farmers are increasingly excluded from the center of trade and production is shifting towards the larger market players. Therefore, the physical distance between the producer and the consumer increases, while many players are involved in the value chain. On a local level, it means that the quantity and the demand for personnel is decreasing, so is the diversity of products, which causes the step-by-step disappearance of local characteristics, the traditional knowledge (that is necessary for production) and the trust. Community supported agriculture (CSA), as part of short food supply chain (SFSC) system, offer a solution to these problems. They reduce the physical distance between producers and customers and – unlike long supply chains – they often incorporate personal connections as the guarantee for quality, trust and organic qualification in the system. They provide opportunities for small farmers to produce and sell local, high-quality goods directly; and they provide consumers easy access to delicious, mostly ecologically-produced local goods (Réthy & Dezsény, 2013).

In this paper, the hypothesis which will be tested is that community supported agriculture has probably several market problems yet. The most expected problem effect relates to the inadequate role of CSA organizations in agricultural markets.

## **LITERATURE OVERVIEW**

SFSC is new or improved (with maximum one intermediary) sales method in the cooperation of agricultural producers, that is becoming a regular sales form of the members as time goes by (Reszkető, 2015). The term of short food supply chain covers a board range of marketing/supply channels. Generally, small geographical, social and cultural distance between producers and consumers is typical, and demand for environmentally friendly production methods is often also an important aspect (Benedek, 2014). In general, a food supply chain can be defined as “short” when it is characterized by short distance or few (even no) intermediaries between farmer/food producer and consumer. It works with maximum 1 intermediary, but strictly in non-profit way. It is possible for the producers to appoint or delegate a market organizer, too.

Moreover, the Joint Research Centre of the European Commission created a common definition of SFSCs, based on several seminal studies in the topic: “The foods involved are identified by, and traceable to a farmer. The number of intermediaries between farmer and consumer should be ‘minimal’ or ideally nil” (Santini & y Paloma, 2013).

The local food system is based on: more transparent and traceable food chains, wider range of producers – reduced intermediaries, “closer” relationship between producers and consumers, increased flexibility and adaptability to market changes (the adaptation capability to new situations and consumer needs is high). SFSC has many aspects of advantages, good examples on how SFSCs have increased sustainability in all dimensions: environmental, social, health and wellbeing, and – last but not least – in economic field. Therefore, SFSCs can act as a driver of change and a method to increase sustainability, trust, equality and growth in agricultural, food, business, social, health and rural policy areas. A SFSC can also be a vital element in building healthy local economies (Galli & Brunori, 2013).

As part and parcel of SFSC system, the idea of community supported agriculture was first formulated in Japan in the 1960s and 1970s, as a solution to the growing industrialization of agriculture and food supply chains. The Japanese name of this producer-consumer system was “teikei”, which means “food labeled with the face of the farmer”. Producers involved in the system could be sure that their products are sold at a good price, while consumers could trust the quality of the goods purchased (Hayes & Milánkovich, 2001). CSA is an alternative food-producing network, a model of agricultural production and product distribution:

- It is based on the community with common interest of small farmers and consumers undertaking the risks of the production together and sharing the profits;
- The aim is to produce high-quality (mostly ecological) food for a local community in a risk-sharing membership/marketing structure.

These systems provide livelihood and plan ahead for hundreds of small farmers with the opportunity of direct sales, in a macroeconomic environment that is unfavorable for small family businesses. The essence of this method is direct relationship between the producers and customers and the trust based on this personal relation. In this relationship, the seller and the buyer do not have opposite interests; in fact, they are allies (Sokszínű Vidék, 2013). CSA systems have become increasingly important in food supply chains in the western part of Europe and North America in recent decades. Such initiatives started and spread in the 1980s in the US and Canada. Switzerland was the first European country to form CSA organizations (the first swiss CSA system was founded in 1978), while the first initiative in Germany was launched in

1988. These groups also carried out educational activities and there were also some who gave job opportunities to disadvantaged or disabled workers.

CSA could be of particular importance for the agriculture of Central-Eastern European countries, where agriculture is still an important sector of production. Despite the different political and economic contexts, the development of this area is very similar to the processes occurring in Western Europe: the size of farms has increased, the production processes have become more and more intense, which caused the industrialization of agriculture. These changes and the structural transformation of the sector made the life of agricultural workers hard or even impossible. CSA could be a solution for their yet unsolved problems in today's environment, as they provide important social, economic and environmental advantages for both rural and urban communities (Murdoch, Wilson, & Parrott, 2002).

### **The situation of CSA in Hungary and in the Western Transdanubia region**

The alternative sales methods of CSA could address the problems of small-scale organic farmers who are struggling to access the market, as it puts emphasis on local food products, environmentally-friendly production methods and sustainable farming instead of global processes. CSA is able to help the development of food self-determination, as they make the supply of food more transparent, guarantee farmers their livelihood and promote knowledge about healthy lifestyles and healthy nutrition. CSA can also play a prominent role in preserving agricultural diversity and locally adapted knowledge and methods, for example by recycling and restoring landscape varieties. The environmental sustainability of CSA is promoted by more environmentally friendly production methods, the decreasing quantity of packaging material and the shorter transport distances (Réthy & Dezsény, 2013). CSA is primarily targeting people who are wealthier than average, are more responsive to healthy nutrition and are environmentally sensitive. As CSA is widely spread in France, families with average income are more and more willing to join community supported agriculture. A similar dynamic development is yet to happen in Hungary, but it could be reasonable to promote the concept that has been backed by governmental attitudes: the formation and support of CSA organizations is part of the 2014-2020 Rural Development Program (in Short Supply Chain Thematic Subprogram) (Reszkető, 2015).

There is a growing demand for shortening the global food supply chain in more and more social groups in Hungary. The first CSA initiative was launched in 1999 under the name of "Open Garden" based on Anglo-Saxon example (Vadovics & Hayes, 2007). The initiative was

launched to promote sustainable food systems and to find alternative distribution channels. The currently operating Hungarian CSA systems were mostly influenced by the French AMAP movement (Alliance for Peasant Farming). The first CSA in France was established relatively late, in 2001; all the same the success of the model is apparent considering that there were 1600 communities in the country in 2012. In Hungary, the Association of Conscious Customers has played an indisputable role in the promotion of the French example: they organized several lectures, workshops and other events on the subject. These events helped CSA to gain media attention.

The number of community supported (shared) farms and subscription (box) systems is around 23 recently, although many new CSA systems are about to form. Within the Western Transdanubia region the Vegetable Community of Dunasziget is the prominent participant. The number of buying groups was 13 in 2018, almost exclusively in big cities (Budapest, Szeged, Miskolc, Debrecen) and in the agglomeration of Budapest, although in the examined region, such a community in Mosonmagyaróvár, called Szigetközi Szatyor Közösség (Wisket Community of Szigetköz) exist (Tudatos Vásárlók Egyesülete, 2018).

### **Possible forms and grouping of CSA**

It should be emphasized that CSA also reflects a mentality, which has several forms of realization. It's essential that the core principles must be adapted to the social, economic and environmental conditions. The most common CSA systems are formed the following ways – based on the degree of integration, from most to last (Fig. 1):

*Community supported (shared) farms*, where customers buy “shares”: they pay for part of the harvest in advance and the farmers deliver them the products in return.

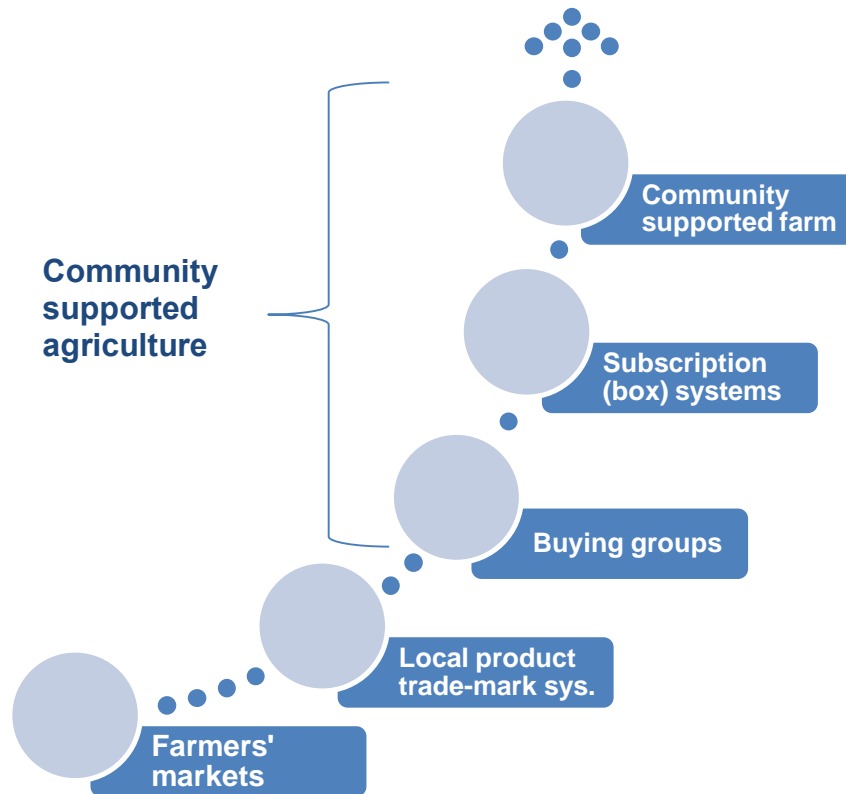
*Subscription systems*, in which farmers or a group of farmers and customers form a union and enter a contract. Farmers deliver fresh products regularly, usually once a week to consumers, who commit themselves to become permanent customers and pay for the goods.

*Box systems*, which are similar although a more flexible form of subscription systems. They allow customers to make orders without commitment when they need products, while farmers deliver the goods to previously formed distribution points (collection points).

*Buying groups*, where several local farmers, an NGO or a small community of customers organize a distribution and delivery system (either door-to-door or to distribution points) for locally or regionally produced goods of small farmers. Customer communities show a great deal of variety and flexibility depending on how they operate and what kind of products they are dealing with.

*Farmers' markets*, that are (not exclusively) organized by a group of local farmers and where residents are able to buy fresh, local products directly from the farmers. (Vadovics & Hayes, 2007; Réthy & Dezsény, 2013)

**Figure 1** Local food distribution systems according to the level of consumer's commitment



Source: own construction based on Vadovics and Hayes (2007), Réthy and Dezsény (2013)

The organizational structure of CSA systems can vary, we can find primary producers, sub-contractors, companies and NGOs among the producers. For producers in shared farms, CSA is the only way of selling, the other types also deliver their products and go on the market with them. Fair pricing is essential for CSA, as the main goal is to maintain farms. Prices have to cover production costs and provide livelihood for producers, all the while giving opportunity to set up reserves. On the whole, the most significant goals and effects of CSA system are:

- To offer an environment protection focused, sustainable alternative for agriculture;
- To provide more workplaces and livelihood opportunities for rural people;
- To preserve traditional production processes;
- To maintain a higher level of the diversity of species;
- To preserve the traditional landscape;
- To provide transparent and fair pricing and production processes.



For local communities, the preservation of agricultural diversity is closely linked to commitment to environmental protection and landscape management. This is accompanied by the need to reduce the risks to climate change. They live and manage in a way that respects environment while maintains diversity at its maximum. They put emphasis on the application of agri-environmental methods and the re-naturalization of production methods, in which human interacts with nature. The initiatives active in the preservation of agricultural diversity contribute to the boost of the local economy, especially on rural areas and create new jobs. In addition to traditional producing activities, other opportunities for additional income can be incorporated into the system (Horváth, 2012).

## **MATERIAL AND METHODS**

In this paper, a problem/objective tree analysis in connection with CSA was carried out by the colleagues of Széchenyi István University, Faculty of Agricultural and Food Sciences. For this study, a range of problems was considered, as result, the core problem was determined. In addition, causes and effects of forthcoming, listed problems were analyzed, which we depicted with a problem tree structure. The problem tree shows the negative aspects of the current situation, while the analysis of objectives points out to the positive aspects of the desirable future situation. The process includes the redrafting of problems in the form of goals, so the objective tree is basically mirror image problem tree. The cause and effect relation is replaced with the relation between assets and outcomes.

The focus of the survey and the subsequent study was conducted at the end of 2015 and early 2016 on the evaluation of the situation of regional and in some aspects domestic CSA, the viability and validity of CSA-based farms. The analysis of the Western Transdanubia region (Győr-Moson-Sopron, Zala and Vas county) was conducted with the involvement of the CSA organizations of the region with almost 40 farmers (Szigetközi Szatyor Közösség, Pannon Helyi Termék Klaszter, Zala Termárvölgye Egyesület) and the consumers connected to these organizations. The consumers were asked to fill out an online survey, while questionnaires were completed on the producer side by personal inquiries. The intermediary level (as an optional, not compulsory part of the system) were assessed based on existing regulatory framework and available statistical data. While processing the results, the number of evaluable surveys for customers is  $n=103$ , for producers it is  $n=32$ . Simple statistical analysis was used to present the problem structure of this issue, whereas the conclusions of problem tree analysis enhanced setting up the objective tree.

## RESULTS

Concerning farmers, the number of older workers is high, just like in the case of traditional agricultural producers. More than 58% of the respondents were over the age of 45. Obviously, they have been operating their farms longer than their younger colleagues. The average operating time of 17 years suggests that this age group started the business relatively late, over the age of 40, just like younger people in this field of work. The employment of external labor is generally not typical. Apart from family members, they usually employ only one or two persons – either permanently and occasionally.

More than half of the respondents (55%) use conventional, traditional production methods, and only 10% of them use organic farming. This special method is characteristic only for fruit farmers and mixed (fruit and vegetable) farmers. Nearly half of the respondents are working with products of animal origin, while the other half is working with products of plant origin. All pig holdings sell not only processed products, but also live animals – almost in the same proportion. When it comes to fruits, 1/3 of the farmers sells only fresh fruits, 1/3 of them sells only some kind of fruit products (jam, syrup and juices) and 1/3 of them sell a mixed palette (fresh and preparations). Regarding vegetables, 50% of the products are fresh and 50% of them are processed.

There is a significant spread in the size of territory both among all the farmers and between the representatives of different product groups. Honey producers do not have any land and the same goes for almost 50% of producers of animal origin products. Relating to farmed land, 52% of farmers own their own land, 24% own a large part of their land (50-100%), while 1% of them does not own any land.

When enquires were made concerning distribution channels, none of the farmers mentioned sales from automatic vending machines or selling their products for supermarkets and discount stores. Only one primary farmer of products of animal origin has resort to the mediator role of Producer Sales Organizations (PSOs). The most commonly used distribution channels are the farmers' market (91%), the traditional market (69%) and the direct on-farm sales (72%). Almost one third of farmers are forced to find new markets more than 50 km away from their location and only about a tenth of them can sell their product locally (within 5 km range). The producers of animal products sell their products in a relatively small distance from their location (within 25 km range). The main reason is the transportability and perishability of their products. Honey producers and fruit farmers usually deliver their products to a larger distance (50-100 km).

Concerning consumer side, almost 60% of them are between the age of 25 and 44. Most of them (73%) are highly educated, their lowest level of education is high-school graduation. The

average net income per capita is over 80,000 HUF for the  $\frac{3}{4}$  of the respondents, and they usually spend 15,000 HUF from this for local products, although there is a significant spread (CV=90%). The amounts of money a family spends on these local products vary from 2,000 HUF to 80,000 HUF in a month. It is clear from the analysis that the income of families does not influence their habits of consuming local products. 24% of the respondent families eat local products daily, while 42% of them eat these products more than once a week. The most popular products among consumers are vegetables and fruits. More than half of the customers also purchases meat, dairy products and honey. The market of other products (bakers' wares, oilseeds, wine, spirits, dry pasta, etc.) is not significant yet, as there are only a few participants both from the side of demand and supply.

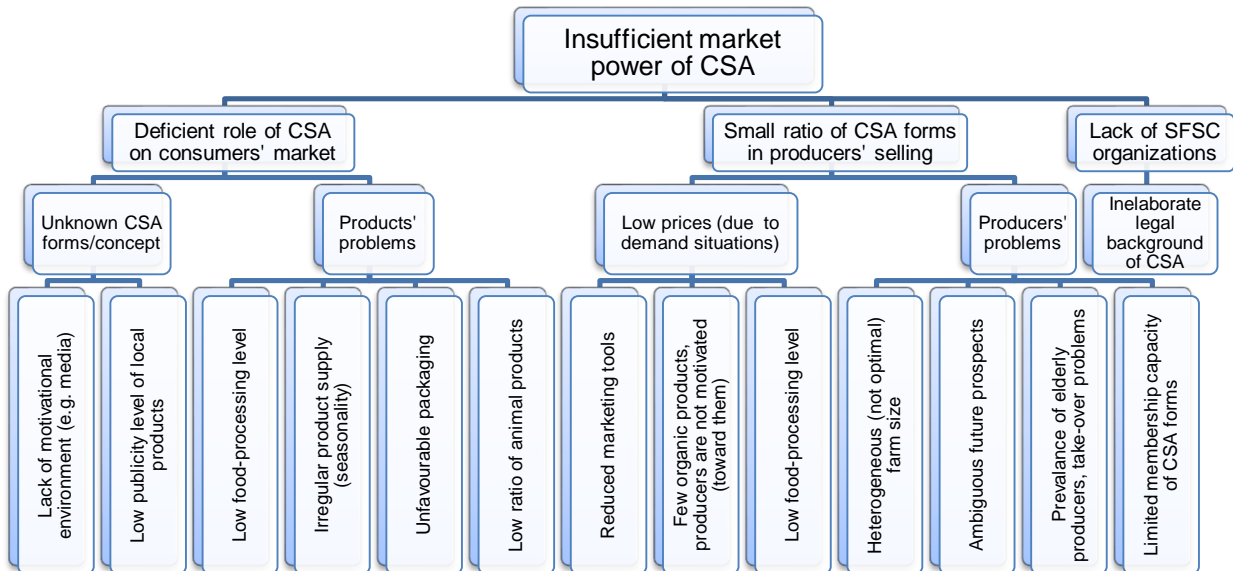
Consumers purchase their products from traditional and farmers' markets. Although in a smaller proportion, but they also buy their products directly from the farmers, the greengrocers or with a special "take it yourself" offer. They do not usually purchase these products from hypermarkets, shop chains and discounts. The home delivery, vending machines and moving shops are not significant either. Almost a quarter of the respondents distinguish and take part of a consumer community. The two other forms of CSA, shared farms and subscription systems, are much less preferred (only 3-3% of the respondents). One of the possible reasons for this is that only a small segment of customers are aware of CSA. Another reason might be the special structure of this agricultural method. As most of these farms own a fix group of customers for at least one year in advance, only a limited number of customers can be a part of these organizations. If they do not extend capacity, entering is only possible through replacement of members, thus only if a member decided to quit the organization.

In the last phase of the survey questions were asked about the possible problems occurring while purchasing local products. The results showed a significant spread between the answers. The opinion of consumers ranges significantly from the approach to different problems. Viewing the average of the answers of respondents, the average rate of factors does not exceed the medium level (3), this means that customers do not experience any of the factors – farms are hard to access, the purchase of local products is time consuming, limited variety of products, high prices, lack of information – most often when they purchase local products. Respondents think that lower level of enjoyment and unfavorable packaging are the least significant problems.

With the scrutiny and evaluation of the problems carried out during the analysis of the present survey the factor with the biggest impact was determined, i.e. the core problem: the market power of CSA organizations is insufficient. It is believed, that changing the attitude of stakeholders is inevitable to solve this problem. Following the analysis of problems, issues

concerning the different stakeholders (consumers, intermediary organizations and producers) have been outlined in a problem tree. (Fig. 2)

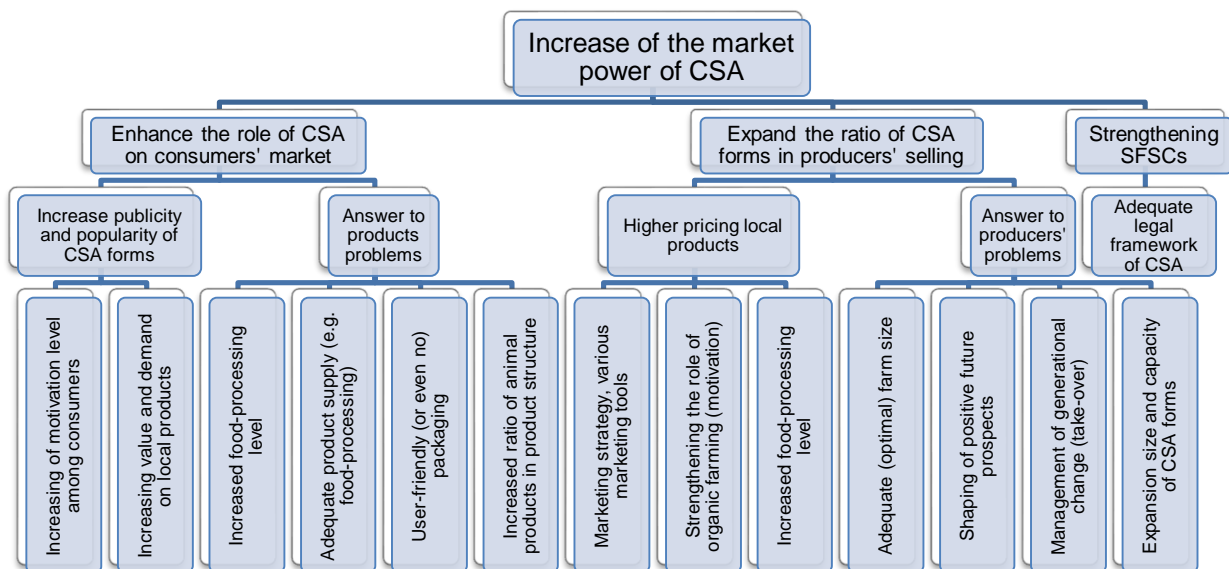
**Figure 2** Problem tree structure



Source: own construction

Studying the problem tree, the answer to the core problem could be the appointment of a long-term, strategic goal: to increase the market power of CSA organizations. To achieve this, it is crucial to increase the motivational level of stakeholders. The answers and solution proposals to the problems of the different levels (consumers, intermediaries, and producers) of stakeholders can be seen in figure 3 concerning the objective tree.

**Figure 3** Objective tree structure



Source: own construction

The methods and tools can be applied to achieve the desired effects depending on the nature of the problem – that is general or specific – and the financial opportunities or restrictive conditions.

Applicable tools on consumer level:

- to increase popularity: open gardens, family events, workshops, involvement of educational and research institutions, dissemination of results;
- state grants for food-processing investments;
- to develop and implement sources of support for organizing and making CSA forms more popular;
- to increase motivation level: open gardens, family programs, “farmer-wellness”, workshops, involve educational and research institutions, disseminate results;
- to design “local product trademarks” for certain product lines, introduce quality assurance systems, develop regulatory systems (legislative frameworks);
- to ensure adequate product supply and packaging: ensure the requirements of storage, processing and packaging, investment grants.

Tools for intermediary organizations:

- to provide adequate, supportive legislation;
- to disseminate knowledge, promote CSA organizations, expand capacity and product scope;
- to utilize support possibilities of the Rural Development Program (2014-2020).

Tools available for producers:

- to integrate the topic into public and higher education, promote a multilevel background support for generational change;
- to facilitate conditions for small livestock farming and supply, create an infrastructure background (subsidies), raise and/or diversify livestock;
- to support policy, favorable credit structures, adequate land policy and operational control frameworks;
- to boost the involvement of professional organizations, consultancy and further training (promotion of organic farming);
- to simplify small-scale taxation and administrative simplification, reduce taxes and contributions to create a positive vision;
- to increase the motivation of producers through professional forums, workshops and appropriate support policies;

- to increase the degree of processing (added value) to increase the price level of local products, increase the product range, use efficient markers;
- to provide vocational training and further training in marketing, through the dimension of strategy.

## CONCLUSION

In Hungary, agriculture has significant importance due to the natural conditions of the country. It plays major role both in employment, in the maintenance of the rural population and in internal and external trade. This is especially true for rural areas, where many of the CSA solutions can be important in meeting these goals. Taking the economic considerations into account, we attach decisive importance to the role of the state in the promotion of community supported agriculture, at least in the first phase. That is why it is considered to be highly useful for all stakeholders that the Short Supply Chain Thematic Subprogram is included in the Rural Development Program.

The exploration of systemic problems of community agriculture is essential to support the spread of CSA, to eliminate the factors that limit its effectiveness and to inspect ways to increasing the number of stakeholders. This study offers some important insights into this field of problems. The tested hypothesis, namely the probable market problems of CSA gained verification. Among them, the most significant problem was actually related to the insufficient role of CSA organizations in agricultural markets.

The core problem raised in the analysis of the Western Transdanubia region, namely the boost of the market power of CSA organizations at the top of the objective tree, is possible to be solved using the tools proposed by the study together with their allocation to a coherent strategic system.

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## **EMPIRICAL EXPERIENCES OF THE HUNGARIAN ALTERNATIVE FOOD BUYING COMMUNITIES**

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### **Abstract**

In our study we highlight the potential role of alternative food systems in local economic and community development through connecting literatures and good examples. We are focusing on a special short food supply chain form, named “buying groups”. These sales channels are an alternative and innovative type of Community Supported Agriculture. Buying groups are grass-roots initiatives that support local food production and sales. Farmers and their buyers are a community, so that cooperation is beneficial to both the producer and the consumer. The primary advantage of the producer is that it can build up a direct and long-term relationship with its customers, locally sell its quality products, so it can operate cost-effectively and optimally. The consumers' advantage is that they are able to acquire food from healthy and safe sources, contributing to the preservation of their health and the development of the local economy. These good practices can fundamentally reform the increasingly globalizing consumer behaviour, strengthen identity and community spirit. Buying groups are still in their infancy in our country but have latent potential for stimulating many local economies and tourism. We would like to give an overview of the main results of our primary research conducted among members of Hungarian Alternative Food Buying Groups. In order to explore the sociometrics and lifestyles of communities, we revealed general consumer behaviour, the consumer types based on food buying behaviour, the demand and attitude of local food by using questionnaire survey.

Keywords: food consumer communities, food consumer behaviour, questionnaire study, cluster analysis

### **INTRODUCTION**

As a result of concerns about the long-term sustainability of globalized retail trade and the stronger presence of health conscious consumer behaviour, governments and groups of conscious consumers worldwide are increasingly focusing on the promotion and development of local food systems and small-scale retail chains and the production of quality local food products to promote the market. Food purchasing is basically based on trust between the trader and the final consumer, which appears to be damaged due to the impact of the ever-changing and “non-personalized” retail trade, the various food scandals, environmental sustainability considerations, etc. In Hungary and worldwide the conscious consumer, the health trends and initiatives are trying to provide alternative solutions to this phenomenon. These initiatives and, in our view, good practices can be considered as a means of local economy and community development. According to Gébert, Bajmócy, Málóvics, and Pataki (2016) the classical local



economic development theories are means-oriented because their focus is on means and not ends (well-being). We believe that the local food systems and communities are part of the capability approach presented in their article. This theory is formulated by Amartya Sen in 1979s. The local economic development, based on the capability approach taking into consideration the human values, is value-driven and in opposite with traditional value-neutral development approaches it means a community-based development. (Gébert et al., 2016) “The central notion in Sen’s approach is the term “capability”, which refers to the actual freedom to achieve valuable doings and beings. For this purpose people need means (e.g. income, infrastructure). But the possession of means does not imply the freedom to achieve our goals. A number of conversion factors may influence how we can use our means. Conversion factors can be manifold, for instance, personal characteristics like age, gender; environmental characteristics, like pollution; and social behaviours, like racial discrimination” (Sen, 1999 in. Gébert, Bajmócy, & Málovics 2017, p. 8). As Csizmadia (2018) emphasized according to Nárái-Reisinger (2016) statement warn that in Hungary the “we cannot achieve change” thinking is still strongly present, however, a “lot of small initiations”, sooner or later, evolve into social level, but for this, they must dare to act, while decision-makers must accept ideas, thoughts (p. 267.)

In Hungary, the demand for developing and improving a network of short supply chains, both supply and demand, has increased, so in the 2014-2020 Rural Development Program, Hungary has developed the Short Supply Chain Thematic Programming (REL) (Bakos, 2017). Local short food supply chains (SFSC) offer a direct or as short as possible alternative sales channel for small-scale food-producing farms, which are hindered in development due to global competition. These innovative and grass-roots forms of sales bring producers and end consumers closer together, contributing to the direct marketing of quality and high added value local food and supporting the local economy and tourism. There is little information available about typically grass-roots, community-driven local food systems, so we consider it important to examine good practices and development opportunities. In our view, there are many reserves for rural development and the local economy in these consumer-producer communities and channels. Many researches have proven the positive effects of local food products on local spaces (Káposzta, Ritter, & Kassai, 2015; Kassai et al., 2016; Péli-Némedi, 2016; Bakos-Tóth, 2016; Nagy, Káposzta, & Nagy et al., 2016; Bakos-Topa, 2016; Bakos, 2017, Kiss-Nagyné Demeter, 2018). For example, Káposzta et al. (2015) concluded during their research that local products have direct and indirect impacts on the product chain actors and locality.

## **LITERATURE REVIEW**

According to a study of the European Parliament (2016), demand for short-term food chains and local markets has increased in all EU Member States in both rural and urban areas. The direct sales form is a common practice for only 15% of European economies. They sell more than half of their production directly to the final consumers. These farms are mostly small farms between 1 and 8 ESU. Only 3% of them exceed 100 ESU. There are many types of short food chains and local food systems in Europe such as producer markets, box systems or community-supported agriculture. Among their benefits, it is important to emphasize that farmers can work with fair prices, and consumers can get fresh and seasonal products. They have lower environmental impact on these food systems and contribute to higher levels of social cohesion at local level. These models are also beneficial for local economies, which also have the potential to create jobs. The EU's current rural development policy for 2014-2020 treats short food chains as a priority. Thanks to the co-financing of the European Agricultural Fund for Rural Development, a number of measures are available for producers wishing to join the local food systems. With the help of the European Innovation Partnership in 2015, research on local development of food systems was developed to improve the position and income of producers. Following the examination of the European situation on short supply chains and local markets, the European Parliament decided to support these food systems. It wants to help local farmers and link food products to their place of origin.

According to a Eurobarometer 2016 survey, European residents are increasingly aware of this issue, as four out of every five European respondents believe that strengthening the role of producers in food supply is fairly or very important. Small farms are provided to multinational companies who often make their situation impossible due to their unfair commercial practices. Member States have significant discrepancies in the proportion of their sales through farms through direct channels. This rate is estimated to be nearly 25% in Greece, 19% in Slovakia and around 18% in Hungary, Romania and Estonia. Less than 5% in Malta, Austria and Spain, and 21% in France directly sells their products to farmers through short supply chains. Recent research has shown that these major differences are likely to be due to the lack of uniform short food supply chain and local food system definitions, as the EU has defined a general guideline definition, but the Member States themselves in their rural development programs can define what they mean under these systems.

As defined in Regulation (No 1305/2013) of the European Agricultural Fund for Rural Development: “A short supply chain means a supply chain involving a limited number of economic operators, committed to cooperation, local economic development and close geographical and social relations between producers, processors and consumers.” Hungary, when formulating the thematic sub-programme for Short Food Supply Chains defined these phenomena as “... the grouping of producers and growers sells their food products to consumers or groups of consumers directly or via an intermediary.” (VP 2014-2020, p. 901.) In a broader interpretation of Red and Gemma (2011, p. 228.), local food supply systems are “unique, geographically-defined, economic-social formation and ecosystems that are specific in a particular region, with special natural (soil and climatic) endowments, microorganisms, plant and animal species and human, technical resources and infrastructure. The basis for its operation is that food producers living in a given region maintain close contact with local consumers, strive to exploit local production capabilities, nutrition habits, traditions and infrastructure, which enhances self-sufficiency. Based on “holistic” territorial development, it can be achieved through the division of labour between the city and the village, relying on the possibilities of multiple organic connections.

Small-scale producers in Hungary are typically composed of micro-enterprises, the majority of which do not have the appropriate skills, legal knowledge, attentiveness and ability to participate in the circulation of the short sales channel. Therefore, the sub-program focuses on the development of key areas, where very small deficiencies can be identified for small producers. These objectives have been harmonized and linked to further national strategies and development programs, which are as follows:

- Food Chain Security Strategy 2013-2022,
- National Rural Strategy,
- Hungary's medium and long-term food development strategy,
- Territorial and Settlement Development Operational Program 2014-2020

There is an increasing number of forms for consumer engagement towards local food systems. The first classification of SFSCs was carried out by Marsden, Banks, and Bristow in 2002. The SFSC types they created were based on the spatial dimension, which Renting and his team (2003) revised a year after, with a strong emphasis on timeliness and quality. The most cited categorization in international and domestic literature, Ilbery and Maye (2005) and Jaros (2008), based on Benedek and Balázs (2014), are shown in Tab. 1. The various manifestations of SFSCs were classified into three groups, based on the way of sales. Direct, “face to face”

sales include the producer markets with a popular and old history, road sales, bargain sales, “pick it yourself” opportunities, guest services, and delivery and box-like solutions to homes that have emerged in recent years. This category also includes web stores, although in my view this sales form is not really about direct connections, as orders are often delivered through delivery companies to final customers. A common characteristic of sales types in the community marketing-based sales group is that the various relationships are manifested in an institutional framework (Benedek-Balázs, 2014).

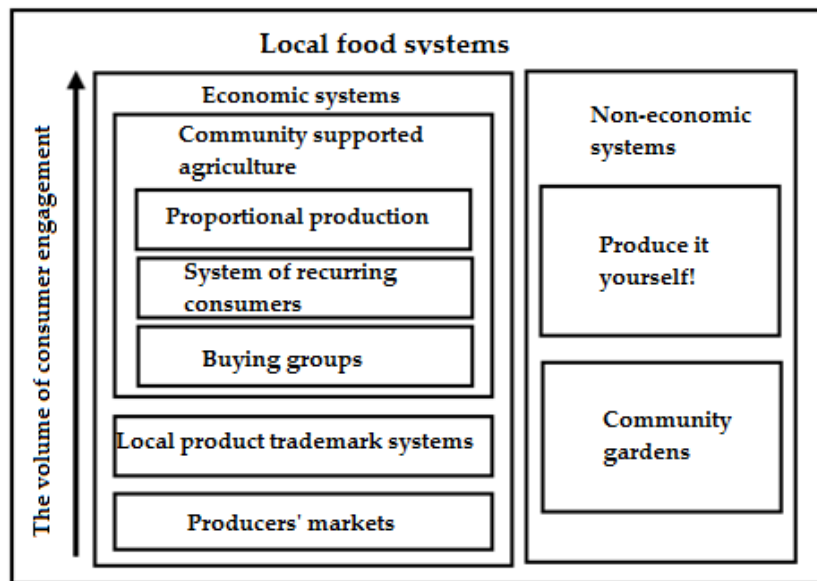
**Table 1** Types of SFSCs

<b>Direct sales</b>	<b>Community marketing-based sales</b>	<b>Extended supply chain</b>
Producers' market	Shops of co-operatives	Protected origin, specialties
Selling along the road	Community Supported Agriculture	Quality assurance systems
Direct sales at the farmer	Selling to local catering facilities	Certifications
Pick it yourself activities	Selling through local product shops	
Guest tables	Regional products (raw and processed)	
House delivery	Thematic paths based on certain food products	
Webshops	Festivals	
Box programmes	Selling to emigrated people in special shops	

Source: Ilbery and Maye (2005), Jarosz (2008) in: Benedek-Balázs (2014, p. 4.)

For example, in this group, besides the traditional distribution channels, there are new and innovative types, such as the community supported agriculture. Within the extended supply chain, as the group's name suggests, we can find quality assurance systems, organizations of origin protection and trademarks. Based on the classification of Vadovics and Hayes (2007), in Réthy and Dezsény (2013, p. 5.) established the following food chain types (Fig. 1). The authors categorize local food systems into two large groups. They distinguish between so-called “economic systems”, which are based on cooperation between farmers and consumers, and “non-economic systems”, in which consumers produce for themselves in their homes or in the nowadays popular “community gardens”. Within the economic systems, “community supported agriculture” and their subtypes, as well as “local product trademark systems” and “producer markets” are distinguished. It can be seen that the degree of consumer engagement is the highest in the case of community-supported agricultural systems.

**Figure 1** Local food systems based on consumer engagement



Source: Réthy and Dezsény (2013, p. 5.), based on Vadovics and Hayes (2007)

The **European** Commission's JRC 2013 report summarizes the main benefits and disadvantages of short supply chains:

The advantages of SFSCs:

- The majority of final sales will remain at the producers compared to the conventional sales forms and this additional income can be used to develop the economy.
- Consumers can get traceable, fresh, healthy and seasonal foods at affordable prices, compared to the retail prices. This way, high added value food products are also available to those with lower incomes.
- There is a direct and trusted relationship between buyers and producers
- Increasing demand for local products will also boost the local economy and the local community
- Strengthen relations between actors in the short food supply chain, generating new jobs in agriculture and small-scale food processing, which is particularly important in peripheral and disadvantaged regions, regions
- A strong local food sector can support local tourism by providing local food products to a part of the cultural identity of a given area for tourists
- Environmentally friendly and energy-efficient (requires less packaging, energy for storage and transport)
- It supports social cohesion by maintaining and generating local jobs, which reduces migration from disadvantaged areas

- Bringing people in urban areas closer to the countryside and to affordable local food.

The disadvantages of SFSCs:

- Local food systems do not always meet the right amount of local demand
- Due to higher production costs, they can spend less on development and marketing, even if they receive institutional support

Development limits of SFSCs:

- For applying the direct sales form, producers do not always have the knowledge and skills required, and it is very common that additional training is needed
- The lack of entrepreneurial knowledge and culture is often a hindering factor
- Young farmers' generation is the most open to direct sales, but in most of the member states it is difficult to access land due to high prices, and access to credit has proved difficult after the crisis has come out. EU subsidies for young farmers help eliminate the problems caused by lack of resources and encourage the young generation to carry out agricultural activity.
- Small farmers are also faced with the additional administrative costs associated with direct sales and the costs related to food hygiene legislation. The EU recognizes this by trying to provide small farmers with simplified legislation without compromising food safety.
- We can consider seasonality as a barrier, because small scale farmers cannot compete against conventional producers who can provide a wide range of foods throughout the year. Small farmers may be forced out of public catering because they are not able to do the processing, conservation and long-term storage of their agricultural products.
- Local food systems are not well known among consumers, partly because of inefficient communication and marketing, and partly because of the human and material resources that can be devoted to this purpose.

Community Supported Agriculture (CSA) type movements began to emerge in the USA, Japan and Europe from the second half of the 20th century, independently of each other. The first of these types of communities appeared in Germany in the 1950s. The idea of community-supported agriculture in Japan began in the 1970s, as a response to the adverse consequences of the agro-industrial development. The movement was named “Teikei”, which means “Food labelled with the farmer's face”. Nowadays, Community Supported Agriculture is present in the countries of four continents of the Earth. Today, around 6,000 in the United States, and in the western part of Europe, there are thousands of similarly organized economies and related communities. These communities are differentiated in space, and differ greatly in their size and

organizational form. Considering their local features and needs, they have many forms of manifestation. After the turn of the millennium, communities producing high-value-added food and a growing number of conscious consumer groups also appeared in Central and Eastern European countries. Since these communities were formed far from each other both in terms of space and time, there is no unified definition for Community Supported Agriculture, only common guidelines that are based on local national definitions. These principles, according to the European CSA Research Group (2016), provide an alternative approach to agriculture for solidarity, direct human relations, mutual respect, respect for small-scale food production and consumption and respect for the environment. In the wording of the 2014 Statute of the Hungarian National CSA Network (KöKiSz - Community Smallholders' Association), "the CSA is a system based on trust, solidarity, mutual commitment and personal contact between a group of consumers and one or more producers. It is a local food system based on the principles of organic farming (whether proven ecologically or not). At the initiative of individual farmers or NGOs, consumer members are committed to agricultural production for a given period. According to the terms of such an agreement, consumer members may share the produced food without the attached price tag, but they pay a flat fee to finance the operation of the farm with regular contributions."

In the Hungarian context, only a few literature deals with the topic of community supported agriculture and, therefore, the unified conceptual definition has not yet emerged in Hungary. In the 90s, the direct translation of "Community Supported Agriculture" was first used by the academics. However, later the terms "Community agriculture", "community farming", "producer-consumer communities", "vegetable community" and the French "AMAP economy" were used, as well. Nowadays, in our country, consumer communities operate in the northern axis of the country and in urban areas, agglomeration areas. Of course, their number may be different, but in our research, we were focusing only on those that are competent enough to consciously organize their activities and reach a wider audience, for example, by appearing online (e.g. their own website, web shop, Facebook). Regarding to consumer communities, consumers have the most freedom, because they do not have to pay in advance and have no obligation to buy the portion of their food products produced in cooperating economies, such as in the system of permanent buyers (Community farms) or proportional farming (box system). As a matter of fact, we can also regard consumer communities as a mixture of these two types, since members informally commit themselves to food products from local farmers, accepting the seasonal selection, but the consumer decides on the quantity and nature of the products.

Several local producers, non-governmental organizations or small consumer communities arrange a delivery and distribution system (door to door or a permanent reception point), typically for small farmers, locally or regionally produced goods. Customer communities offer high quality, value-added, reliable and traceable resources to local consumers and their customers. These communities distribute foodstuffs from farms with a maximum of 80 kms, at a producer price. In consumer community systems, many products of a variety of producers are usually displayed, depending on the size of the community. Customer communities in Hungary are typically non-profit organizations operating on a civil basis. Community members can make their orders by phone, fax, online on a regular basis for delivery and receipt for a specific day. These systems are flexible enough and can vary depending on their operation and product range (Lőrincz, 2017):

*A. Personal system:*

- The organisers co-ordinate the orders
- The producer is present when the consumer receives the product
- The consumer pays to the producer directly
- The transaction is finished in about two hours
- The producers may sell more goods than ordered (to other consumers)

**Advantage:** direct contact between the producer and the consumer

**Disadvantage:** It requires more space and infrastructure. Transactions are not as traceable as other possibilities; buying communities may become more market-like.

**Examples:** Kiskosár Buying Group, Szatyor Debrecen, Tatai Fészek Buying Group, Gördülő Kosár Buying Group

*B. Community system:*

- The producer is not present at the transaction
- Contribution of volunteers, compilation of unit boxes
- The buyer pays to the organizer who transfers the money to the producers

**Advantage:** it can be handled in a smaller place, more traceable product traffic and administration.

**Disadvantage:** there is no direct customer-to-customer relationship; it also requires a large volunteer portfolio and much effort.

**Examples:** Miskolc Green Basket Community, Nyíregyháza Community, Kecskemét Szatyor

*C. Institutional system:*

- Similar to the community system, the producer and the buyer do not meet personally



- The circle of buyers is represented by an institution, a work group, and the transfer takes place in the given institution
- Payment is made with a one-week slip drawn by a volunteer appointed by the institutional / workplace customer group and handed over to basket organizers who forward it to the producers

**Advantage:** buyers are concentrated in one place, the transaction is quick

**Disadvantage:** there is no direct producer-consumer contact and it requires plenty of volunteer work

**Examples:** Pannon Helyi Termék

We identified two more categories based on our empirical research:

*D. Community system + shop + providing related services*

- It combines the community system with a permanent point of sale / shop where not only those can receive their food packages who pre-ordered it, but also occasional buyers can buy from a basic product range
- They are intensifying approaches, community building activities and complementary services such as home delivery, cookery courses, community-building, food and venue insurance etc.

**Advantage:** reaching a broader consumer segment, fix transaction point

**Disadvantage:** the organisers must form an official organisation, which might be costly and takes a permanent staff.

**Examples:** Budapesti Szatyor Közösség

*E. Buying group organised on a social media website:*

- The community does not have the basic infrastructure that is needed to organize and operate a permanent producer-consumer community, so an enthusiastic volunteer creates a community site / forum where local producers and customers can meet.
- The volunteer takes care of site maintenance, content filtering, but handover and acceptance processes are co-ordinated between producers and buyers.

**Advantage:** it does not require much organisation effort and infrastructure capacities,

**Disadvantage:** it is more difficult to ensure- and control quality and the community-building function is lower than in other forms

**Examples:** Közös Batyu Vásárlói Közösség, E-Kofa

## **OBJECTIVES AND METHODS**

Questionnaires and interviews were conducted by the framework of the doctoral research of the main author, who is investigating the alternative local food systems since 2016. The results of the research showcased in this paper are based on her primary research study conducted in the spring of 2017. Sampling of the questionnaires was representative and the number of relevant respondents (after filtering out the failed questionnaires) was 297.

A questionnaire study was conducted among the general population with the help of second year students of the Szent István University in 2016 (Esztergom, Kecskemét, Érd, Csömör) and 2017 (Miskolc, Eger). Sampling was arbitrary and not representative, but as far as possible, we tried to approach as many types of people as possible (gender, age, income position, education). The number of relevant respondents (after filtering out the failed questionnaires) is 817. In this paper regarding this research the evaluation of open questions is given.

The IBM SPSS Statistics 20 statistical programme package was used for processing the questionnaire database. In processing the results, besides descriptive analysis, we tried to reveal dependency relationships between the different criteria by using the cross-table analysis. Through the cross-table analysis we sought to explore the deeper relationships. With the help of the principle component and cluster analyses, we identified consumer types based on their food purchasing behaviour. The respondents rated on a Likert scale ranging from 1 to 6 that how important the eleven criteria we gave were to them when purchasing their food. The criteria: the shop's reputation, all available at one place, food of Hungarian origin, food produced locally, organic farming, chemical-free, natural, etc., the knowledge of food, price, quality, packaging, health consciousness, and finally, the recommendation of family and friends. During the survey we tested our hypotheses, our preliminary assumptions based on secondary results that the Hungarian Alternative Food Buying Communities indicate different consumer characteristics and their consumer behaviour is the closest to the so-called LOHAS's (Lifestyle Of Health and Sustainability) behavioural pattern.

## **RESULTS**

### **The results of the survey among 'Basket members'**

Surveying among the consumer community has brought the expected results, as by purchasing in a buying community, they are committed to high added value local foods. It is not surprising, therefore, that for 62.6% of respondents it is very important and for 34.0% it is partly important to buy locally produced food. Our hypothesis that purchasing communities,

primarily those with a higher education qualification and households with higher than average income, have been certified since 70.7% of respondents have a higher education degree and have higher income than 250,000 Hungarian Forints. The basket members could be labelled on Likert scale ranges from one to six (1-none at all ... 6-fully-characterized) that the motivations listed by us are characteristic of them when purchasing them in consumer communities (Tab. 2). Based on the averages of responses, the main motivations of their community purchases reflect modern conscious consumer behaviours, as it is important for them to get their basics from trusted sources (5.60), fresh (5.60) and healthy (5.47). At the same time, in addition to the individual interests, there is a strong emphasis on social responsibility in their purchasing decisions, as the motivation of the local economy (5.22) and local producers (5.20) is strongly emphasized by their purchases. This consumer segment also has an environmentally friendly attitude (4.97). In spite of the fact that this is a purchasing segment with a higher disposable income, it can be stated that they are somewhat price sensitive.

**Table 2** Motivations behind buying in buying groups

Criteria	Mean value	Deviation
To get safe and reliable food	5.60	0.830
To get fresh food	5.60	0.822
To get healthy food	5.47	0.914
To support the local economy	5.22	1.107
To support local producers	5.20	1.120
To protect the environment	4.97	1.248
Affordable prices	4.40	1.123
To strengthen my local identity	4.02	1.601
To belong to a community	3.68	1.642
Due to the possibility to take part in community programmes	3.17	1.608
Other	2.23	1.800

Source: The authors' own editing based on own research (2017, n=297)

Contrary to our preliminary assumption, consumer communities do not yet fully fulfil the role of community development and identity in Hungary. Based on our empirical experience, currently few communities have the capacity to accommodate the food procurement and distribution system on this front and the consumer segment is not open enough for it either. Of course, there are one or two smoother and more organized and functioning communities such as the Budapest Szatyor Buying Community, the Esztergom Kiskosár Buying Community or the Miskolc Green Shopping Community. It is very difficult to “slow down” and “engage” the accelerated consumers of our time and give them a community experience. It was clear from the research that this form of purchasing was chosen because of health and environmentally

conscious functional food procurement, rather than membership in the community or participation in community programs. However, it is clear that their consumer behaviour is the closest to the so-called LOHAS's (Lifestyle of Health and Sustainability) behavioural pattern. The special character of the group is given by the environmentally and health-conscious consumer attitudes (Kotler-Keller, 2006) and the buzzwords of consumers in the consumer community are reliability, traceability, health, freshness, environmentally friendly and local / neighbourly farmers. The main purpose of the survey among basket members was to find out what kind of lifestyle characteristics were to be written along with these customer groups. Based on the averages of responses, the examined consumer segment has the lifestyle characteristics shown in Tab. 3 according to their responds. Personal demographic characteristics go beyond the lifestyle, as it generally shows the way people want to “lead” their lives and thus reveal a lot about their individual goals (Töröcsik, 2007) and thus reveal the basic consumer habit. In the life of the respondents, on the Likert scale which ranges from one to six (1-not at all ... 6-fully-featured), the main priorities are health (5.68), family (5.64) and a calm, balanced life (5.48). They try to be autonomous (5.14) and live a secure life (5.31), they are eco-conscious (5.28), they are supporters of meaningful life (5.26), friendships are important to them (5.19), as well as learning (5.18) and leisure time (5.02).

**Table 3** The lifestyle characteristics of basket members

Lifestyle characteristic	Mean value	Deviance	Lifestyle characteristic	Mean value	Deviance
Health	5.68	0.675	Trying new things	4.71	1.028
Family	5.64	0.782	Saving money	4.68	1.084
Relaxed, balanced life	5.48	0.864	Travelling	4.56	1.227
Autonomy	5.34	0.914	Respecting traditions	4.52	1.317
Living a secure life	5.31	0.916	To belong to a community	4.35	1.366
Eco-consciousness	5.28	0.921	Success/career	4.04	1.257
Joyful/meaningful life	5.26	0.967	Religious beliefs	3.31	1.819
Friends	5.19	0.912	Busy lifestyle	3.23	1.488
Learning/knowledge	5.18	0.961	Economy	3.11	1.287
Free time	5.02	1.071	The opinion of others	2.78	1.257
			Party-personality	2.67	1.414
			Following trends	2.65	1.290
			Seeking power	2.07	1.268

Source: The authors' own editing based on own research (2017, n=297)

Based on dominant lifestyle characteristics, they could be described best with the functional consumer behaviour (Töröcsik, 2007). They show a pure consumer type, which consumes goods not due to symbolic motivation, but by internal motivations, their own “well-being”.

### Consumer types based on food buying behaviour

Three consumer types were also identified among the respondent basket members based on factors affecting their food buyer behaviour. Factors based on criteria influencing food purchasing are shown on Tab. 4.

**Table 4** Principle component analysis with Varimax rotation (Basket member survey)

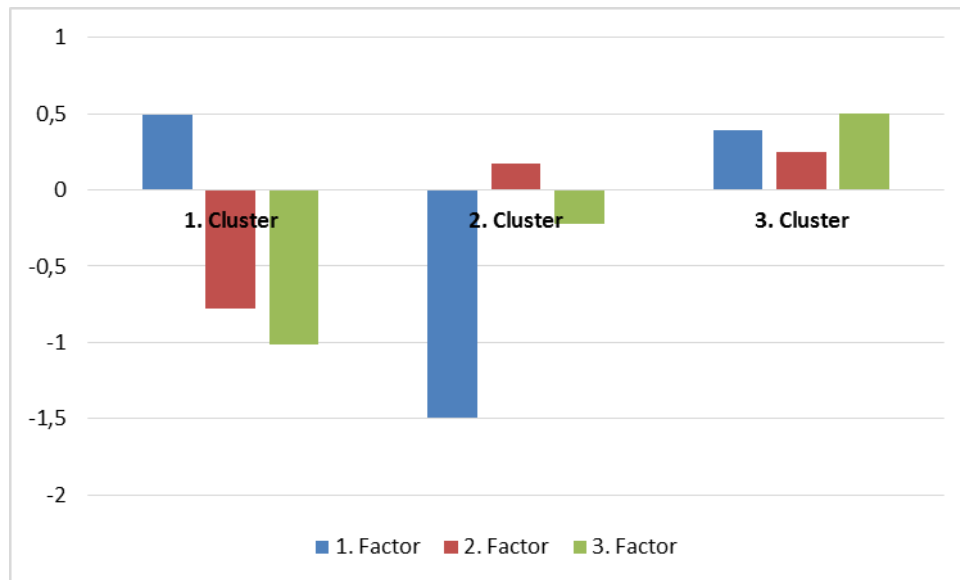
Factors influencing food purchase	Basket member survey		
	1. Factor	2. Factor	3. Factor
Health consciousness	.733	-.029	.092
Environmentally friendly packaging	.732	-.039	.007
Bio-origin (without added chemicals, etc.)	.723	.046	.298
The recommendation of friends and family	.690	.038	-.190
Quality	.595	.264	.195
Everything should be available at one place	.187	.802	-.095
Price	.095	.794	.145
The fame of the food brand	-.135	.667	-.036
Hungarian origin	.182	.128	.712
Locally produced food	.167	.371	-.660
The fame of the shop	.526	.180	.532
KMO=0.637; the explanatory variance is 56.7%			

Source: The authors' own editing based on own research (2017, n=297)

Based on the food buyer behaviour of surveyed basket members, the three clusters in Fig. 2 were identified. Contrary to our assumption, we cannot only talk about a homogenous consumer type in their case. Obviously, buying food in a buying community does not mean they are fully committed to domestic food and reject retail brands from abroad. It should be noted that among the basket members, the issue was related to their general grocery behaviour and not just to the consumer community. There are 33 respondents in the first cluster (**Conscious-locational patriotic cluster**), and they are looking for purchases of foodstuffs of Hungarian origin, and food which is healthy and good quality. The 32 respondents in the second cluster, which is named "**Convenient and Price Sensitive Brand Loyal cluster**", have many similarities with the type of consumer cluster identified in the other sample, with the difference that for them the important thing is the fame of the shop and not that all the products should be available in one place. They stick to the usual brands, products and they are price sensitive. They are mostly adventurous or newcomers who are just getting familiar with local food and in their general consumer behaviour preferring local and Hungarian products is not as dominant. Also, price is more important for them than quality and health preference. The largest cluster (with 81 people) was named the "**Hybrid Cluster**", because for them it is important to be able to buy all the

products in one place, that the products are of Hungarian origin, and health awareness and environmental protection are also important for them. They consider the price/value ratio and they are loyal to brands and products. Essentially, this cluster is the combination of the first two clusters.

**Figure 2** Consumer groups based on the survey among basket members



Source: The authors' own editing based on own research (2017, n=297)

Nezdei-Alpek (2018) has made a similar survey in 2016 focusing on consumers' and operators' approaches in seven traditional markets on seven different settlements as measure points representing the possible social and economic regional differences. The author identified four clusters generated by cluster analysis. "The adventure seekers valued the market atmosphere and the uniqueness of products as the most important factors to visit the marketplaces. The price optimizers thought only about monetary value. The supply-addicts considered product quality, selection and exclusiveness. Finally, classic market visitors represented the more common market-visiting reasons (e.g. quality and price of products or supporting local producers)." (p. 146.)

### ***Analysing open questions***

The next section is about the opinion of respondents regarding to buying communities. During the research we created analytic categories reflecting to the hypotheses, which categories are the criteria of our investigation.

### ***Supporting local producers***

In our analysis, the most dominant motivation was the support of local producers. It is quite clear that it is very important for the interviewees to support a narrower place of residence, to strengthen local economic development and thus to strengthen local strengths, values, and characterize the place. At the same time, the experience of personality is also a great attractive force, a sense of “homeliness”, and buying from acquaintances is extremely important for the interviewees.

### ***Community development***

Successful local economic development is unimaginable without an active, strong and conscious local population. We could see in the answers of 65% of the respondents, that these types of initiatives are not only important because of their economic benefits, but also because of the fact that they are closely related to recreational free-time activities. These motivations occur in a complementary way, and they clearly show that programmes organised by the community friendships and common thinking are highly needed “commodities”.

### ***Health consciousness***

Health conscious behaviour was most important for the basket members. This conscious behaviour was an expected attitude among this group and by examining their answers we can see that the health of their family and reliability are very important for them. The results of the questionnaire survey carried out among the general population also show that healthy and quality food is becoming increasingly important for ordinary people as well.

### ***The value set behind health consciousness***

In many cases, respondents emphasize the value sets behind a healthy lifestyle approach. The open questions reveal that the respondents consider culture and tradition of eating and producing as the pillars of not only the individual, but the community thinking and socialization processes. Approximately one third of the sample emphasized that it is very important for them to buy Hungarian raw materials, Hungarian products and goods.

### ***Environment consciousness***

The aspect of protecting the environment is clearly reflected in the respondents' responses. There were many critical responses as well. The relatively homogeneous responses also reveal an aspect that is based on an unusual, but in any case, realistic view. In our analysis, the issue of transport is mentioned in environmental terms. It is not only about how shortening the vertical chain is good economically, but a very large percentage of respondents state that the short product chain is environmentally friendly and less costly:

### ***Reliability, control***

By approaching open issues with quantitative indicators, we can conclude that for three quarters of the respondents, the criterion of verifiability, control and reliability is best associated with locally produced food ingredients. Respondents repeatedly mention that personal presence and visiting nearby food production areas are important factors. Of the respondents, only one person had a realistic critique, according to which inappropriate “production” conditions, controversial techniques and simple homemade preparations are also encountered among local producers.

## **CONCLUSION**

A survey among basket members highlighted that households with higher than average earnings and higher education typically use this alternative food supply option. Contrary to our preliminary assumption, consumer communities do not yet fully fulfil the role of community development and identity in Hungary. Based on our empirical experience, currently few communities have the capacity to accommodate the food buying and distribution system on this front and the consumer circle is not open enough for it either. However, it is clear that their consumer behaviour is the closest to the so-called LOHAS's (Lifestyle Of Health and Sustainability) behavioural pattern. Their support for local producers, their health and environmental awareness are serious for them. Their dominant lifestyles are based on their mature, clear, consumer-type image, which is not motivated by symbolic food consumption and the appearance of the outside world, but motivated by internal motivations and their own “well-being”.

The alternative Short Food Supply Chains like Hungarian Alternative Food Buying Communities can play an important role in revitalizing the countryside, in local economic and community development, in supporting the livelihoods of small farmers and in promoting a healthy lifestyle. Judging by the current state of development of these communities, it is necessary to receive a strong local and governmental support and promotion and to clarify their legal background.

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## **THE LEVELS TO MEASURE REAL CONVERGENCE – CATCHING-UP ISSUES IN HUNGARY**

### **A REÁLKONVERGENCIA MÉRÉSI SZINTJEI – A FELZÁRKÓZÁS KÉRDÉSEI MAGYARORSZÁGON**

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#### **Abstract**

The paper primarily focuses on Hungary's catching-up process in terms of real economics. Yet, considering that the presence or absence of real convergence can be verified in several ways, in this paper the catching-up process is analysed at three levels: I will consider how well or badly Hungary performed economically against the average performance of EU member states between 2000 and 2017 and when we can foreseeably reach such average performance level. Four groups of EU member states can be established by beta convergence analysis by taking both the initial income levels and growth rates into consideration; Hungary is also categorised accordingly. To utilise another method of categorisation and to deepen our analysis, I furthermore investigate whether Hungary belongs to the category of less developed, medium developed or developed EU countries as far as real economic indices other than GDP per capita are concerned. Finally, I analyse cross-country inequalities in Hungary. When comparisons with the other EU member states are made, it is unavoidable to discuss convergent or divergent macroeconomic trends within the EU and for this reason the paper also investigates how convergence between the EU member states can be tested and reveals the results of the related calculations.

Keywords: regional equalisation, European Union, Hungary, real convergence

#### **INTRODUCTION**

Findings of economic convergence research are available in great numbers. Such analyses and the theoretical or practical conclusions drawn from them scatter over a wide spectrum depending on the target regions and scopes of the analyses or the indicators used in the calculations, that is, the macroeconomic index or indices used as the basis for quantifying cross-region catching-up or equalisation.

This paper intends to be an addition to research findings dealing with catching-up and equalisation too. There are two arguments to justify this aim: the first is that the analyses about convergence processes among EU member states, obviously provided the right statistical methodology is applied, confirm the existence of equalisation concerning real convergence among the 28 member states. When a specific country, in our case, Hungary, is selected and we test certain macroeconomic indicators to see whether this country demonstrated catching-up or lagging tendencies over a longer period, we will, however, arrive at different findings.

Therefore, one of the objectives for this paper is to point out that it is insufficient to analyse convergence among EU countries with only one calculation method and in aggregate form since it might yield a distorted picture of the real economic processes. To gain a more realistic picture, the analysis must be done with several macroeconomic indicators and separately for each country.

The other motivating factor behind writing this paper was that convergence analyses typically measure external catching-up, that is, whether a country is getting closer to or farther from the EU mean, or the average performance of various country groups, for example, of the eurozone or cohesion countries. Such studies ignore the internal relationships of the given country, although persistent regional cross-country inequalities may significantly hinder development and catching-up with more developed peers. So, a further objective for this paper is to highlight this shortcoming through a specific example, that of the counties of Hungary.

After the theoretical background and applied methodology is summarised, due to limitations of space, this paper discusses the changes in Hungary's real convergence in four areas only<sup>2</sup>:

1. from the aspect of equalisation among EU member states<sup>3</sup> based on GDP per capita figures,
2. based on the number of years required to reach the GDP per capita mean value of the European Union,
3. by categorising EU member states according to GDP per capita, employment rate and productivity,
4. cross-country equalisation based on the changes in GDP per capita figures of the various counties.

## **THEORETICAL BACKGROUND**

### **The complexity of convergence research**

Studies on the efficiency of European integration form a part of economic convergence research that was in the focus of analyses from the date of the first EU expansion in 1973 to that of the next large expansion in 2004.

The EU regularly publishes reports on economic, social and regional cohesion, which – besides topical analyses – generally address the changes in employment, GDP per capita, export

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<sup>2</sup> The limitations of space do not allow for presenting all the indicators used in the study as time series, so it is not done here.

<sup>3</sup> In my calculations I consistently ignored the data of Luxemburg. The country's outstanding data are outliers that would have distorted the results.

and import within the EU, and direct capital investment in the various member states (European Commission, 2017). In international publications, convergence is interpreted as the regional equalisation of income per capita (Dauderstädt, 2014), that is, whether poorer countries grow faster than the rich ones over the analysed period. In the event the GDP per capita figures of less developed countries increase at a rate higher than those of the more developed countries, there is convergence between the analysed countries, and if no such relationship is identified between the growth rates, we can talk about divergence. Of these analyses, the theory of Barro and Sala-i-Martin is considered a ground-breaking one; it confirmed a 2% converge among the regions of Germany, Italy, the United Kingdom, France, the Netherlands, Belgium and Denmark between 1950 and 1985 with the help of GDP growth and deviation over regions (Barro – Sala-i-Martin, 1991). Using the calculation methodology developed by Barro and Sala-i-Martin, in a paper published in 2013, Goecke found a negative relationship between the income by capita figures of the 15 EU member states in 1950 and the growth rates of income until 2012, therefore the neoclassical hypothesis was sustained, that the countries which were poorer at the start achieved higher growth rates. By this he proved that the more disadvantaged EU countries were able to get closer to their more developed peers in the analysed period, so convergence could be confirmed in the region. However, the decreasing trend of the difference between the income per capita of the 15 member states and the mean reached a turning point in 2007, but then it started to increase. Therefore, the author concluded that a divergent development had got started that year (Goecke, 2013). Many researchers have quantified how much the development levels of the EU member states converged by analysing GDP per capita and arrived at similar results to those of the above-mentioned two studies: Kaitila revealed beta- and sigma-convergences among 27 EU member states between 1999 and 2012<sup>4</sup>. Gill and Raiser completed convergence calculations over a wider period in their work published in 2012 and confirmed sigma-convergence among the 27 member states between 1950 and 1980, and 2000 and 2010, respectively, while Cuaresma and his co-authors confirmed beta-convergence already for 28 EU member states over the period of 1995-2009 (Kaitila, 2013; Gill-Raiser, 2012; Cuaresma et al. 2012). In summary we can conclude that these studies confirmed convergence among all the member states based on the changes in their GDP per capita figures.

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<sup>4</sup> Beta-convergence indicates that the poorer countries demonstrate faster economic growth than their richer peers within a region and between two dates or years. Sigma-convergence tests the reduction in the deviation of GDP per capita over different areas and a prolonged period. The specific details of the calculations are presented under Data and Methods.

A further aspect to be considered when analysing convergence among EU member states is to test how much the 12 member states that joined the EU in 2004 or later were able to catch up. Vojinović, Sanjaya, and Próchniak (2009) analysed how much the ten countries joining in 2004 gained on each other and on the former 15 member states: by taking the income per capita values of the various member countries between 1992 and 2006 into consideration, they showed that beta- and sigma-convergence existed, and their calculations also incorporating the EU15 average figures furthermore confirmed that the difference between the new and old member states decreased over the analysed period.

Busch confirmed the success of the catching-up process between the countries joining the union in 2004 and the other member states by showing that, following the accession, the foreign trade, and the international flow of capital and people of the new member countries had greatly expanded by 2012. The author furthermore confirmed the acceleration of the convergence process by pointing out that during the analysed period the gross national income, gross investment volume, gross domestic consumption, R&D expenses and net capital volume got increasingly closer to the EU15 mean (Busch, 2014).

Filipetti and Peyrache analysed the catching-up rate between 1993 and 2004 with respect to countries joining the EU in 2004 and 2007, respectively. They explained the acceleration of the catching-up of the 12 new member states with the EU15 by the closing technological gap and the improvement of productivity (Filipetti-Peyrache, 2013).

Such publications generally analysed how much the development levels of several countries got nearer to each other from the aspect of real convergence. In terms of content and methodology, the work of Diaz del Hoyo et al. can be considered as a major development as compared with the afore-cited, since they did not only analyse real convergence among the eurozone countries but also included sustainability in the analysis, pinpointing the specific positions of the various countries (Diaz del Hoyo et al., 2017).

Ever since the Maastricht Treaty was signed, the analysis of the convergence criteria set for EMU membership, that is, nominal convergence, has also become a focus of analyses. Apart from nominal and real convergence, further convergence indicators have appeared in different studies, such as the analysis of well-being, standard of living, democracy and the political institutional system (Dauderstädt, 2014).

In summary: the studies on convergence between the EU member states mainly focused on the equalisation of the income per capita figures of the countries making up the EU (real convergence), then shifted to the analysis of how much the Maastricht criteria were complied with (nominal convergence) while encompassing other selected convergence indicators. International studies are uniform in stating that there exists real convergence among EU

member countries. Testing nominal and other, e.g. structural convergence has mainly been in the forefront of research regarding the 12 new members, and it is judged differently for each country.

When analysing the catching-up processes of countries that joined the EU in 2004 and afterwards, we can see that the analyses regard the EU countries as a homogenous set, that is, they consistently compare the performance of new entrants with that of the old members or the average performance of all the eurozone countries. This method undoubtedly yields a comprehensive view of the advancement of new entrants but fails to provide a realistic picture because of the heterogeneity of former member states. A further important proposition is that the regional inequalities within the new entrants may hinder the catching-up process, which calls for testing for cross-country convergence. In Bourdin's analysis this idea is embraced by the author considering not only external catching-up (convergence) or the lack of it (divergence) to verify income (GDP/capita) convergence or divergence within the EU but at the same time considers whether cross-country inequalities decrease or increase (Bourdin, 2015). This kind of complexity has penetrated the theories of the new economic geography, which, in terms of spatial structure, all boils down to the question whether the catching-up of a country as a whole with its European peers will be realised at the expense of regional polarisation (Nemes Nagy, 2005).

### **The prospects of catching-up**

The primary aim for this paper is to demonstrate that the measurement of real economic convergence in a selected new member state, in our case, Hungary, can be approached from several aspects so as to gain a more realistic view of the country's performance. Nevertheless, when convergence or the catching-up of a less developed region is tested, it is also indispensable to consider the chances of such closing-up. The conclusion that can be drawn from the above-described theory of Barro and Sala-i Martin justifies Jánosy's view on economic development: poorer countries are in fact able to get closer to their richer counterparts due to the spreading of technological achievements and increased productivity (Jánosy, 1975). Levitt expresses a similar thought: he holds that technological development will lead to a uniform global market, price competition will create standardised markets, which will consequently result in the convergence of prices, wages and earnings and the harmonisation of the institutional framework (Levitt, 1983).

As far as closing-up and catching-up is concerned, with respect to less developed countries and EU accession, the risks of lagging or stagnation must also be borne in mind.

Artner and Róna have confirmed that based on the theory of optimum currency areas (Mundell, 1961) the weaker status (within the eurozone) entails the risk of earnings shifting from less developed countries to more developed ones since the currency is much too strong for the less developed countries (Artner – Róna, 2012). Therefore, after joining the currency area, the less competitive countries will be forced to cope with this drawback too.

When evaluating the closing-up performance of the countries that joined the EU in 2004 and thereafter, and of Hungary among them, we must, nonetheless, bear in mind that catching up with more developed countries is a rare phenomenon. After their respective regime changes, the countries followed highly different trajectories; neither catching-up, nor lagging nor stagnation are inevitable or predestined (Csaba, 2006).

We can find only few examples of successful catching-up throughout history. Mihályi cites historical examples in his paper to demonstrate the failure of closing-up (German unification, the plans for catching-up in the Soviet Union), and by using Hungary as an example he points out that our country would persistently require 2-3 times as much extra growth to catch up with EU member states. This extra growth is hindered, however, by the indebtedness of the country's economic actors and the lack and improper allocation of the factors of production (Mihályi, 2011).

This paper does not aim to settle the argument whether closing-up is inevitable or not, or whether its absence is a natural state of matters. It rather focuses on the question whether we will gain different results with the help of country-specific multi-tier convergence analysis from those yielded by aggregate analytical methods. A further research question investigates how internal and external convergence can take place: in the case of Hungary, what are the cross-country inequalities like in the light of real economic indicators?

## **DATA AND METHODS**

### **The levels and dimensions of convergence**

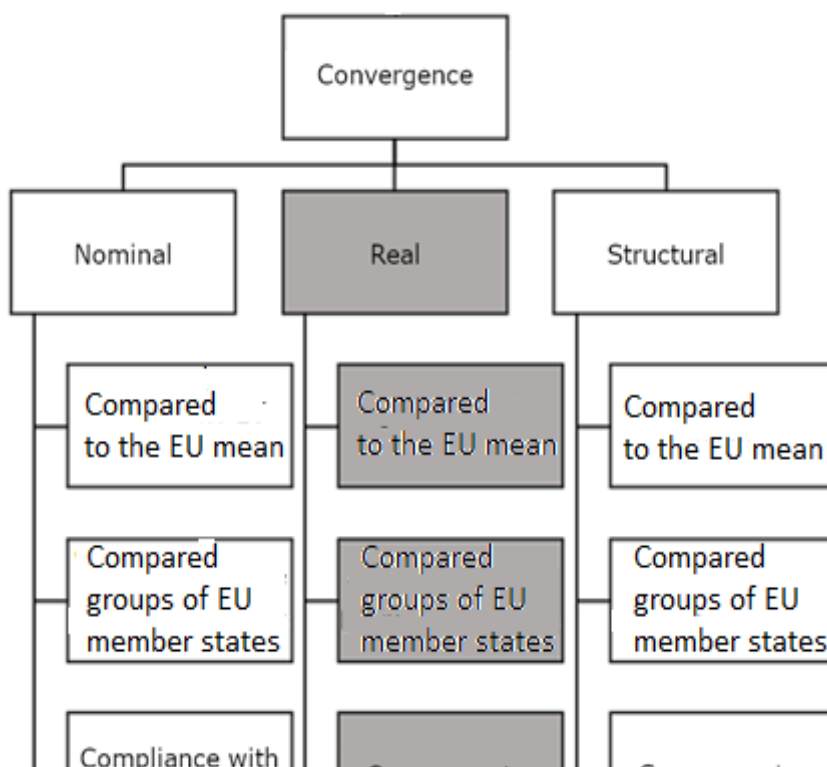
The catching-up process of any new member state, or in our case, Hungary, can be analysed at several levels and along various dimensions: The paper is going to use the three categories published by ICEG EC (ICEG EC, 2005) to analyse the dimensions of catching-up, i.e. of nominal, real and structural convergence. Nominal convergence refers to the indicators defined by the Maastricht Treaty: inflation, budget deficit and public debt to GDP. Real convergence in short includes the indicators of economic development; in the analysis, GDP per capita, productivity and rate of employment make up this category. Structural convergence is measured by the ratio of agricultural workers, the quality of the business environment, poverty and



household disposable earnings. The levels basically refer to spatial scope of the analysis: on the one hand, it is not sufficient to consider only whether the analysed countries are able to get closer to the economic performance of EU member states, but it is also important to see whether convergence exists within the various countries and if the given economy is getting closer to the equilibrium. On the other hand, comparison to EU countries not necessarily yields an unbiased picture, bearing in mind that difference in development can be pinpointed even among the 28 member states. In consequence, the paper is also going to group the EU countries used as a baseline and see which of these groups Hungary is nearing the most.

To analyse the differences in development of the specific country's regions beta- and sigma-convergence calculations are applied. Nominal convergence is tested by compliance with the Maastricht criteria, while catching-up with EU member states and their subsets is analysed by describing the differences in the respective macroeconomic indicators and by clustering the four countries. Fig. 1 gives a summary of the convergence analysis.

**Figure 1** The levels and dimensions of convergence



Source: author's own compilation

In this paper, due to limitations of space, only Hungary's real convergence is analysed based on this categorisation; see Tóth (2015) for a detailed description of the levels and dimensions used here.

### The theoretical background to real convergence calculations

When analysing the highest level in Fig. 1, Hungary's specific macroeconomic indicators between 2000 and 2017 are compared to the average figures of the EU member countries. This is done in two stages. Firstly, I verify the existence of equalisation among the EU member states between 2000 and 2017 by beta-convergence analysis. In the second stage Hungary's situation is compared to various country groups.

The first stage requires the testing of beta convergence between the EU member states. Absolute beta convergence means that the poorer countries grow faster than the rich ones. When considering the cross-sectional GDP per capita data series of several countries at times  $t$  and  $T+t$  expressed in PPS, we obtain the following regression equation:

$$\gamma_{i,t,t+T} = \alpha + \beta \ln(y_{i,t}) + \varepsilon_{i,t} \quad (1)$$

where  $\gamma_{i,t,t+T} = \ln\left(\frac{y_{i,t+T}}{y_{i,t}}\right)/T$  denotes the annual average GDP growth rate of the  $i$ th economy between time  $t$  and  $t+T$ , and  $\ln(y_{i,t})$  is the logarithm of the income of the  $i$ th economy at time  $t$ . If  $\beta < 0$ , convergence can be confirmed in the data sequence (Sala-i-Martin, 1995).

Due to the background to beta-convergence analysis, however, equalisation does not automatically mean closing-up for less developed countries, that is why the research furthermore examines how many years Hungary would need to catch up with the EU mean:

Hungary will reach the average GDP per capita of the EU member states in the  $t^{\text{th}}$  period, if:

$$GDP_t^{HU} = GDP_t^{EU} \quad (2)$$

where:

$GDP_t^{HU}$ : Hungary's GDP per capita expressed in PPS in the  $t^{\text{th}}$  period.

$GDP_t^{EU}$ : Average GDP per capita figures of EU member states expressed in PPS in the  $t^{\text{th}}$  period.

If the average GDP growth rate of all the EU member states between period 0 and  $t^{\text{th}}$  is  $\alpha$ , and Hungary's average GDP growth rate is  $\beta$ , the following two equations are obtained:

$$GDP_t^{HU} = GDP_0^{HU} \times (1 + \beta)^t \quad (3)$$

$$GDP_t^{EU} = GDP_0^{EU} \times (1 + \alpha)^t \quad (4)$$

where:

$GDP_0^{HU}$ : Hungary's GDP per capita in PPS in the 0<sup>th</sup> period

$GDP_0^{EU}$ : The average GDP per capita of EU member states in PPS in the 0<sup>th</sup> period.

We are looking for the value of  $t$  for which equation (2) is satisfied, i.e.:

$$\frac{GDP_t^{HU}}{GDP_t^{EU}} = 1 \quad (5)$$

After rearranging the equations applying the formulas (3) and (4) and taking their logarithm the following formula is obtained for catching-up time:

$$t = \lg \frac{GDP_0^{EU}}{GDP_0^{HU}} \div \lg \frac{1+\beta}{1+\alpha} \quad (6)$$

Using of the formula (6) , and the income figures for year 2000, as the initial year, and the average growth rates in the period 2000-2017, *ceteris paribus* we can calculate how many years are required for catching up with the EU mean<sup>5</sup>.

The second level of testing real convergence is the comparison with country groups. The member states joining the EU in 2004 and afterwards, when deciding whether to go ahead with the accession, were motivated by the aspiration to gain similar levels of development and well-being to those enjoyed by former member states. The phrase ‘former member states’ is too general a category since the Maastricht criteria were not yet in place at the time of their accession, which would have motivated them to manage the state economy according to stricter rules. Furthermore, there were and have always been significant differences in the levels of development of the EU15 member states. There were similarly large differences between the countries joining in 2004, therefore the whole European Union was too varied both in economic and socio-political aspects to be used as a basis for comparison in its entirety. When analysing the catching-up process of new member states, and of Hungary among them, it does, in fact, matter which EU country’s indicator an analysed macroeconomic indicator of the given country converges with: in terms of public debt, for instance, it is more favourable if the analysed countries approach Estonia’s 7% rate of public debt to GDP and not the Greek one, which is over 100%. This is the reason for categorising EU countries and conducting the analysis with respect to the country groups.

Cluster analysis was performed to define the country groups. Clustering is the procedure in which the variables assigned to various components are the dimensions along which countries are categorised, so that the countries falling in one group would be close to each other along every variable while would fall far from the other groups (Barna & Székelyi, 2002).

The analysis is built on hierarchical clustering (with groups created based on the distance between group means), the essence of which is that it creates clusters step by step starting out from the object until all the other objects can be incorporated in one group. For the sake of transparency, I use 3 indicators for the analysis of real convergence and standardisation between 0 and 1 is always required during the analysis. The three selected indicators are: GDP per capita, employment rate and productivity. The categorisation of EU countries according to productivity

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<sup>5</sup> It is undoubtedly a simplified formula that fails to consider that growth rate of Hungary’s GDP per capita is largely influenced by the EU growth rate.

gives the starting point for the paper published by Novotná and Volek in 2018. The authors created three groups with a view to productivity levels in 1996: the first group consisted of the countries boasting productivity rates in excess of 100% of the EU mean. The second group included the countries with rates ranging between 50-100% of the EU mean, and the third group comprised of those with rates below 50% of the EU mean. Their calculations put Hungary in the second group. This group was characterised by the average growth rate of productivity exceeding that of the EU until 2013 but not reaching that level since 2014 (Novotná & Volek, 2018).

The ideas of the above-cited Bourdin and Nemes Nagy furthermore suggest that it is also important to see if there is equalisation among the regions of an economy, in this study, of Hungary, or growing income inequalities are more typical of them. This paper analyses this by the above-described beta-convergence, while sigma-convergence analysis is not presented herein.

Sala-i Martin and Barro consistently pointed out in their papers of 1990 and 1995 that beta- and sigma-convergence are related: beta-convergence is a necessary but not sufficient condition of sigma-convergence (Barro & Sala-i Martin, 1990) and (Sala-i Martin, 1995).

In connection with these convergence-theories we cannot leave out the criticism of such models either: Quah claimed that the results of the regression calculated from cross-sectional data do not confirm beta-convergence with reference to Galton's fallacy, the essence of which is that over time the extreme values will approximate the mean, therefore sigma-convergence could exist even without beta-convergence (Quah, 1993).

### **Issues of index selection and data**

In the analyses of real convergence several indicators and macroeconomic indices can be used, for example, GDP per capita adjusted for Purchasing Power Parity, the GDP growth rate, unemployment rate, employment rate, price level, wage level and the development of other earnings. Naturally, several papers could be written on the analyses of the changes in each indicator, but considering the limitations of space, this paper tests only three indicators: GDP per capita, employment rate and productivity.

The most generally applied indicators to represent a country's economic well-being are GDP or GNI. GDP is a value-added indicator that expresses the income generated within a country's borders over a period (generally a year) both with respect to income and consumption. Although gross domestic product fails to adequately represent a nation's development indicators, the volume of available resources or the level of technological development as such, it is still suited to make the growth rates and wealth of nation states comparable. An analysis of the

development of well-being indicators could be a separate field of any study dealing with this topic, but the primary aim of the current research is to delineate Hungary's main developmental trends and for this purpose the changes in GDP per capita figures at nominal values seems to be a fitting indicator.

The consumption side of a national economy's GDP is reflected in the market demand for products: consequently, gross domestic product is made up of consumption, corporate investment, government spending on goods and services and net export demand. The data are analysed based on the Eurostat database and by categorisation. According to the definition of the database:

- it includes the consumption of households and not-for-profit institutions;
- investments can be analysed by several statistical indicators; in this paper one of the most important ones, gross fixed capital formation is used;
- net export demand is the difference between the export and import of goods and services of the given national economy.

Among other things, the labour market conditions of the analysed country can be tested using the employment rates, i.e. the ratio of the employed to the working age population, again from the Eurostat database. Finally, the productivity indicator is taken from the AMECO database, which expresses GDP per person employed expressed in 1000 PPS.

GDP per capita figures of the counties of Hungary are used, to analyse internal convergence, such data are published by the Hungarian Central Statistical Office.

## **RESULTS**

First of all, see whether beta-convergence is tested within the EU between 2000 and 2017, that is whether less developed countries were able to realise faster economic growth in this period than their more developed peers. Additionally, consider what country groups can be identified when illustrating beta-convergence and of such country group which are the ones that trigger and fuel convergent or divergent processes.

Afterwards, shifting the focus to Hungary's performance, the paper describes how the number of years required to catch up with EU average income has changed from year to year between 2000 and 2017 by a parallelism with the changes in the ratio of Hungarian GDP to EU mean GDP.

With the aim of deepening the analysis the results of the cluster analysis are presented based on several indicators (GDP per capita, productivity and employment rate) to show which category Hungary belongs to (less developed, medium developed or developed) in the analysed period based on these three indicators.

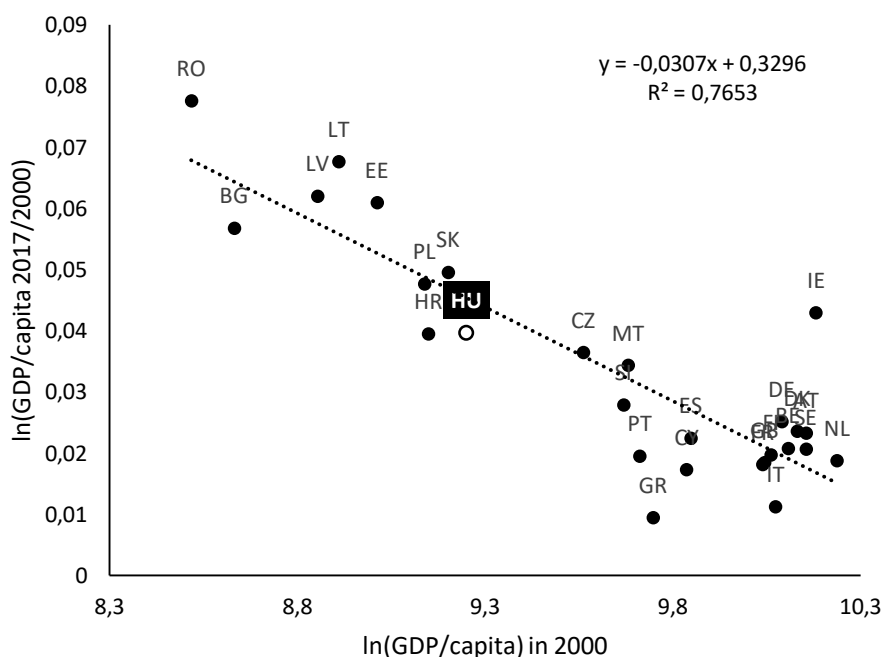
Finally, to compute internal equalisation the beta-convergence on GDP per capita figures of the various counties are presented and the existence of a link between the change in GDP per capita and the value of beta is tested, based on domestic data.

### Convergence between EU member states

As the first step of the analysis we must check whether there is convergence among EU member states between 2000 and 2017, or whether beta-convergence can be confirmed in this period.

The results of the calculations are presented in Fig. 2.

**Figure 2** Beta convergence in the EU between 2000-2017



Source:author's own calculation based on Eurostat data

The vertical axis in Figure 2 shows the logarithm of the growth rate of GDP per capita between 2000 and 2017 and the horizontal axis shows the logarithm of the GDP per capita in 2000, therefore the figure illustrates equation (1). The slope of the fitted line –beta – has a negative sign (-0.0307).

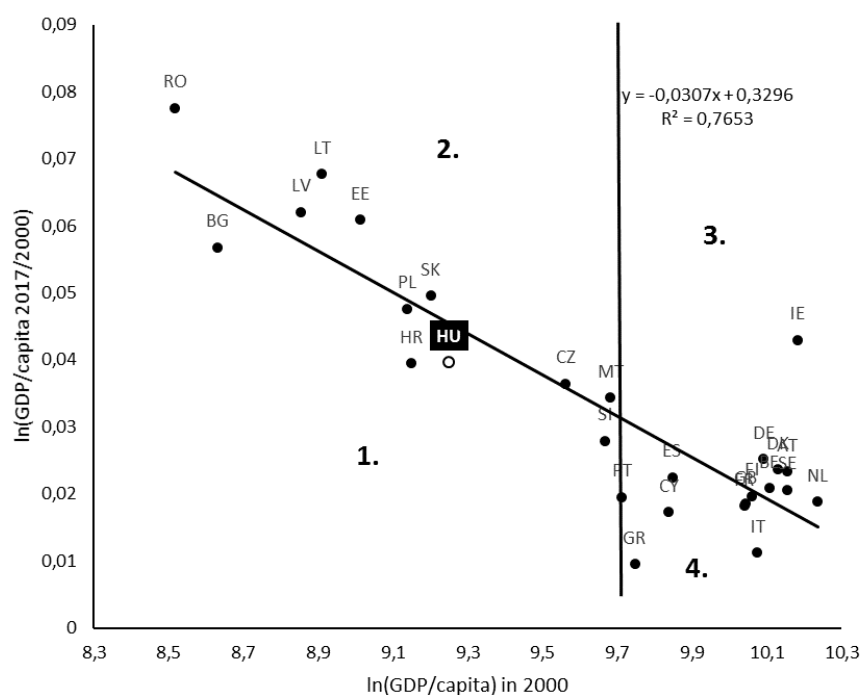
Regression calculations prove that convergence can be confirmed among EU member states between 2000 and 2017 with a strong R square value and lower than 5% significance, therefore we can state that the less developed countries grew faster in this period than their more developed peers.

To gain a more precise picture, let us divide the diagram into four parts, along the straight regression line (countries above and under the line) and along the GDP per capita median in

2000 (the median value in our case is Portugal's income per capita). As a result, we can categorise the member states into four groups based on Figure 3:

- The first quarter includes the countries who did not show the signs of catching-up and had relatively low incomes (lagging countries that are less developed).
- The countries in the second quarter demonstrated relatively high average growth with a relatively low initial income level (countries that are less developed but are catching up).
- Category three contains the countries with relatively high incomes which demonstrated growth rates higher than the rate predicted by the regression line (developed and growing countries).
- The fourth quarter contains the countries that have relatively low growth levels with a relatively high income level (countries that are developed but still lagging).

**Figure 3** Categories of countries based on beta-convergence



Source: author's own calculation based Eurostat data

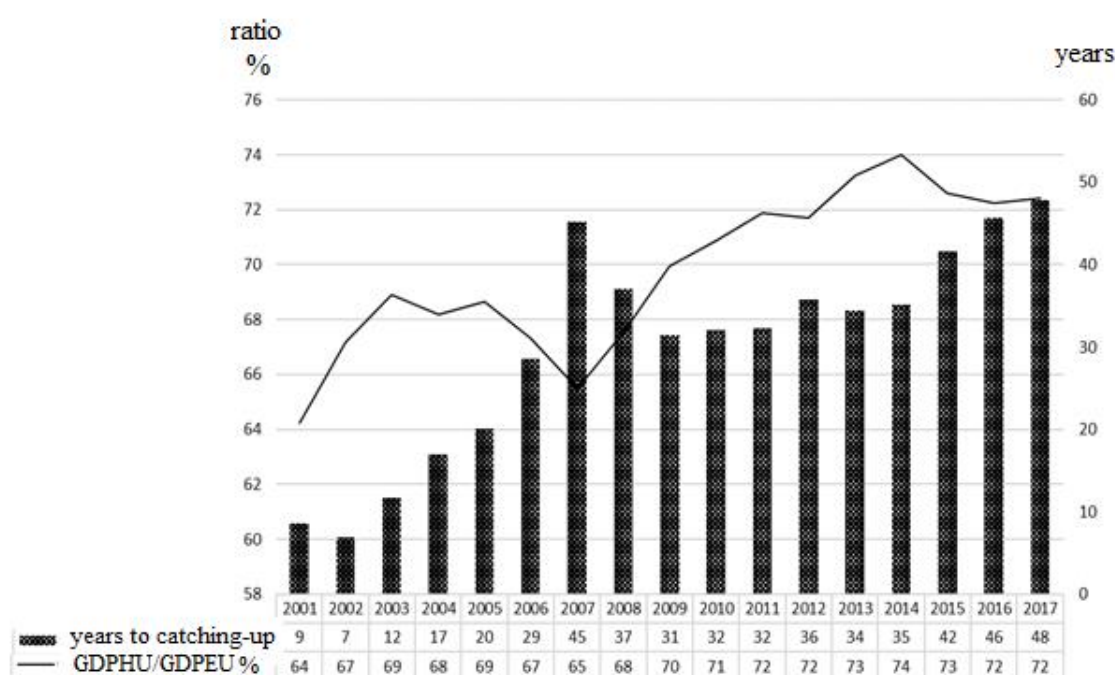
Provided we accept this simple categorisation, we can see that the presence of beta-convergence is mostly justified by the countries in quarters 2 and 4, while the countries in quarters 1 and 3 hinder the process of equalisation.

Before completing further analyses, it is important to note that Hungary is in the first quarter during the analysed period along with Poland, Slovenia, Croatia and Bulgaria, that is among less developed countries that are lagging behind their peers.

### Hungary's catching-up with the EU mean

In the following section, we are going to see how the number of years required to close on the EU mean changed between 2000 and 2017 by considering the EU average growth rate and that of Hungary using the calculation method presented above. Also included are percentages to illustrate the ratio of domestic GDP (PPS) per capita to EU average GDP per capita figures in the different years.

**Figure 4** The number of years needed for catching-up, and changes in the ratio of Hungary's GDP per capita to the EU mean



Source: author's own calculation based on Eurostat data

In the ideal case, the ratio of GDP per capita should demonstrate a constant increase and the number of catching-up years a decrease. As opposed to this, we can see that between 2001 and 2007 the number of years required to catch up with the estimated EU mean grew increasingly, while domestic GDP showed a downward trend after a short span of convergence. The figure highlights the fact that our country had already shown the signs of recession well before the global crisis, as early as 2005, and this drop had become salient in comparison with EU member states by 2007: the number of catching-up years was strikingly high that year, while GDP per capita fell back to 66% of the EU mean. In post-crisis years, right until 2014, we can see that while the catching-up time stabilised around 35 years, there was a gradual convergence in GDP



per capita. Since 2015 this trend has reversed; the time required for catching-up is increasing again, although at a slow pace, while we can observe that income levels fall behind or stagnate.

### Hungary's real economic position among EU member states

Below, Hungary's real convergence is tested by creating groups. In order to gain a more realistic insight into Hungary's real economic position, not only the GDP per capita figures are considered, but also two other indicators. We are going to demonstrate which group of EU countries Hungary belongs to in terms of development levels (low, medium or high) based on the employment and productivity levels too. The results of the calculations are presented in Table 1, while Tab. 2 shows the group averages for the country groups created by cluster analysis based on the employment rate, GDP per capita and productivity data between 2000 and 2017. The numbers in parentheses after country names indicate the country groups defined in Fig. 2, i.e.:

- (1): poor and lagging countries
- (2): poor but catching up countries
- (3): rich countries that develop further
- (4): rich but lagging countries

**Table 1** Country groups based on real economic position between 2000 and 2017

		Based on GDP per capita								
		Low			Medium			High		
		Level of productivity			Level of productivity			Level of productivity		
		Low	Medium	High	Low	Medium	High	Low	Medium	High
Level of employment rate	Low developed	<i>Hungary (1), Poland (1), Slovakia (2)</i>	<i>Romania (2), Bulgaria (1)</i>		<i>Greece (4), Malta (2)</i>		<i>Spain (4)</i>			<i>Belgium (3), Italy (4)</i>
	Medium developed	<i>Estonia (2), Lithuania (2)</i>	<i>Latvia (2)</i>	<i>Czech Republic (2), Cyprus (4), Portugal (4), Slovenia (1)</i>						<i>France (4), Ireland (3)</i>
	Developed									<i>Denmark (3), Germany (3), The Netherlands (3), Austria (3), Finland (4), Sweden (3), United Kingdom (4)</i>

Source: own calculation based on Eurostat and AMECO data

**Table 2** Average employment rates, GDP per capita figures and productivity levels between 2000 and 2017 in the various development groups

Country groups	Employment rate		GDP per capita		Productivity	
	Mean (%)	N	Mean (PPS)	N	Mean (thousand PPS)	N
<b>low level of development</b>	58.40	11	14424.48	9	26.56	3
<b>medium level of development</b>	65.30	9	21542.86	7	42.56	1 2
<b>high level of development</b>	71.89	7	29925.00	1 0	63.22	1 1

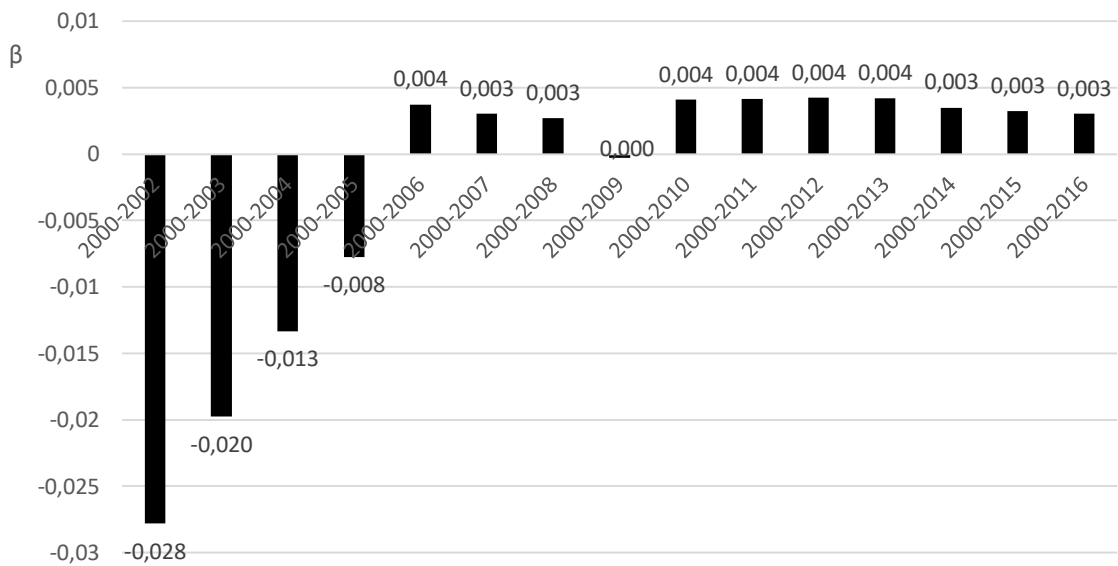
Source: own calculation based on Eurostat and AMECO data

In the analysed period, the cluster analysis identified clearly separate country groups bearing significant differences. Hungary is among the countries with low levels of development in all the three respects. In the group of countries with low development levels, we can find countries (Romania and Bulgaria) that persistently have higher productivity levels, which proves that relatively low employment and income levels may be coupled with higher levels of productivity. These calculations do not contradict those of Novotná and Volek: the group of developed countries coincides with their first group that shows higher productivity levels than the EU mean. There are differences between the countries in groups 2 and 3 (in this paper, the groups of countries with medium and high development levels), which might result from the fact, that the authors categorised the countries based on their performance in 1996 as the base year. However, they also pointed out in their paper that the growth rate of the productivity of group 2 countries had failed to reach the EU mean since 2014, even taking a significant plunge during the years of the crisis. The growth rate of this group's productivity currently stands at the 1997 level, consequently, in the longer run, seen dynamically, we may rightly assume that the original categorisation (of 1996) has changed.

### Internal equalisation

In the following section the above-described beta convergence indicator is used to analyse internal equalisation. The research results described in the relevant literature typically calculate the beta value between two dates (for example 2000 and 2017), or they might cut a longer period into two or three time segments specified by major economic events (e.g. between the year of EU accession and of the economic crisis, and the subsequent period). Here I am going to assess the changes in beta based on the GDP per capita figures of the Hungarian counties and considering year 2000 as the base year. Figure 5 shows the slope of the linear regression line illustrating the relationship between the logarithm of GDP per capita of the base year and the logarithm of average GDP growth rate between 2000 and 2002, then between 2000 and 2003 etc.

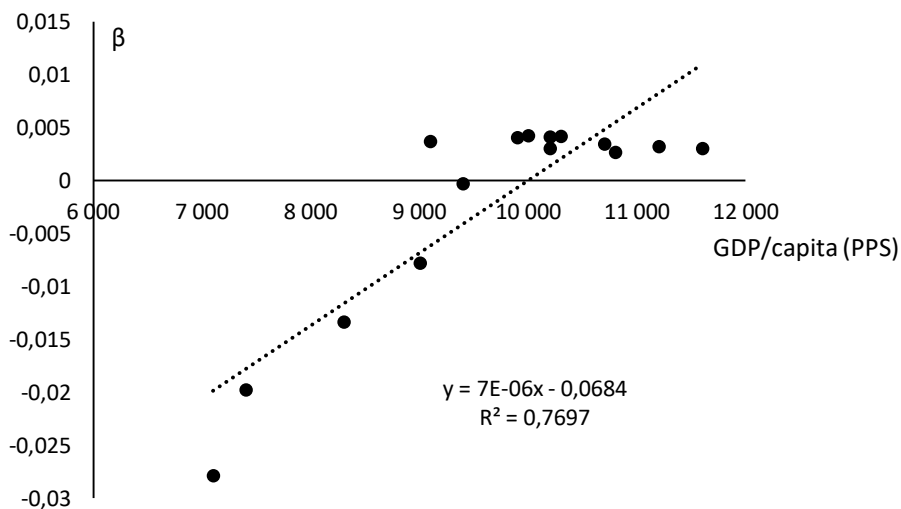
**Figure 5** Changes in beta values in Hungary



Source: author's own calculation based on HCSI data

Convergence between counties can be confirmed if the beta values are negative. Figure 5 confirms this to be true for every year between 2000 and 2005, although with a decreasing equalisation rate. The years following the EU accession had already been characterised by divergence, which was cut short by the crisis, and since 2010 the beta has been positive every year, and the differences in levels of development between counties have proved persistent ever since. Beta convergence analyses can be applied to Hungary in a somewhat limited way, due to the fact, that there is a positively significant ( $p < 0.05$ ) relationship with high R-square values between GDP per capita and the beta convergence indicator as shown in Fig. 6.

**Figure 6** Relationship between GDP per capita and beta



Source: author's own calculation based on HCSI and Eurostat data

This positive relationship suggests that in the period since 2000, as incomes have increased, so has the level of inequality. Even if we do not totally accept this opinion in terms of statistics because of the low number of data (18 years), Figure 6 still suggests that we can assign a negative beta value to low income levels while for GDP values over 9000 the beta values are positive, what's more, nearly constant, which do not change, which suggests that inequalities are 'cast in stone'.

## DISCUSSION

Analyses and publications confirm equalisation among EU member states in terms of real convergence over several periods and between different country groups. My calculations do not refute them: beta convergence can in fact be confirmed among the incomes of EU member states. Still, we must not forget that certain countries do not take part in the shift towards equality. There are states that fall behind their peers even despite their poorer initial positions. Hungary is also one of such lagging countries.

Catching-up as an aim goading the Hungarian economy seems unreachable both considering the current results and their trends. While GDP per capita altogether has been approaching the EU mean since the beginning of the 2000s, rising from the initial 60% to over 70%, this performance has still proved insufficient for the catching-up years to diminish in number. The estimated catching-up period of 35-50 years is currently increasing and, consequently, reaching the EU mean income levels seems to be a dream for Hungary for the time being.

This stagnating and deteriorating trend is supported and partly explained by the fact, that Hungary had belonged to the category of least developed countries already in the period preceding the accession and has persistently belonged there ever since in terms of changes in incomes, labour market conditions and efficiency. The concurrently low levels of these factors are clearly a sign. The long-term catching-up opportunities of a country with low income and employment levels are largely improved if its productivity is high or at least shows a growing trend. Romania, for instance, shows better efficiency ratios in the categorisation than Hungary, which will, in the long term, mean better competitiveness and facilitates Romania's catching-up at a higher pace. However, the improvement in the relative position of the other countries will reduce Hungary's chances of catching-up, and will consequently increase the number of catching-up years.

There are numerous reasons for Hungary's lagging behind; one of the possible explanations is that regional inequalities are getting fixed. While in the pre-accession period income levels were typically equalising among domestic counties, since the EU accession, the inequalities

have become more pronounced: the ‘poor’ counties lag behind while the more developed regions keep developing. It is an alarming negative phenomenon that GDP growth made income inequalities more striking in the analysed period, which implies that the extra income, let it be generated with EU support or by factors traditionally enhancing development, will cause lagging regions to drift more and more towards the periphery.

## **CONCLUSION**

Considering all the points presented in this paper we can state that it is not sufficient to confirm beta-convergence to adequately analyse the differences among EU member countries. This convergence indicator is a fitting basis for analysing catching-up, but we must also consider where the given member states are in relation to the resulting linear regression line.

The presented beta convergence and cluster analyses of all the EU member countries over the analysed period may seem contradictory at first glance: while beta convergence confirms equalisation among the member states, the results of the cluster analysis separate the countries into categories according to their development levels. Yet, the countries shown in Figure 3 and categorised in Table 1 match, which means that the countries slowing down or even hindering equalisation are naturally present in the convergence process (the richer and developing, and the less developed and lagging countries) as well as those countries that act as motive forces in this process.

A further conclusion is that it is also important to consider the catching-up processes of the various countries one by one. It is not enough to focus only on the actual indicator value as the percentage of the EU. The chances of catching-up must be analysed at several levels and with various methods to gain a more precise picture and understand the underlying reasons.

In closure, to answer the question posed at the beginning of the paper whether Hungary is going to catch up with its more developed peers at the expense of cross-country inequalities: the findings suggest that Hungary’s catching-up has become doubtful with the ever more pronounced cross-country inequalities.

## **Acknowledgement**

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## **HOW PEOPLE IN ZALA COUNTY SEE SECURITY IN TOURISM**

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### **Abstract**

Events all around the world bring new challenges not only to tourists and tourism professionals, but also to law enforcement agencies. Today's new law enforcement challenges include, besides general police tasks, the elimination of terrorist threats in tourist destinations and at special events. Professional difficulties involve the lack of local knowledge of the stationed personnel, the estimated time of arrival at the venue, and the limitations of observation and communication in large crowds. The study, among other things, seeks to find out how recent events have influenced the leisure habits in tourist destinations and event venues, furthermore, whether news in the media generate a sense of security or mistrust in humans. If we go beyond the classical sense of security that is the freedom from unlawful acts, namely, from terrorist attacks, we should also mention many elements of technical security. The broad sense of security includes safety of the environment (built and natural), consumption and health. However, we can take a different view. Not only the tourists' safety needs to be emphasized and focused on, but safe tourism is also important for the residents in the tourist destination. In addition, there is an emerging trend that prefers nature and tranquility to busy cities and resorts bustling with tourists. The research seeks to find out what factors affect the employees in Western Hungary and the consumer behavior in tourism in Zala County, along with the cultural and social characteristics and the psychological needs (e.g.: motivation, perception, attitudes). How consumers see the security of tourism and what are the aspects that may be important when choosing a holiday destination. What kind of responses the agencies in tourism sector have had for security issues in recent years, which can prevent problems and increase the sense of security for those who want to relax.

Keywords: tourism, security, consumer demands

## **INTRODUCTION**

### **Significance of safe destination**

Tourism is one of the constantly growing industries in the world, which has recently been influenced by political instability and terrorism. This trend has an impact on demand for potential tourists and significantly influences tourism (Sönmez, 1998). World tourism is affected by economic crises, the external environment, natural disasters, and political conflicts, which determine the destinations the tourists choose (Ritchie 2004).



International conflicts between countries play a significant role in the development of target images. The negative events in a region have a damaging impact on the tourism sector of the region (Alvarez & Campo, 2014; Rittichainuwat & Chakraborty, 2009; Thapa, 2004).

Security and safety has become a complex multidimensional notion with a wide range of components belonging to it: political security, public safety, health and sanitation, personal data safety, legal protection of tourists, consumer protection, safety in communication, disaster protection, environmental security, getting authentic information, quality assurance of services etc. Security has undergone a significant change: from a more or less passive factor it is now an active element of tourism, an imperative to act in order to protect tourists and their belongings as well as all the achievements of the industry (Kővári & Zimányi, 2017).

Security is a prerequisite for the development and successful improvement of the tourism industry (Pizam & Mansfeld, 1996; Hall & Timothy-Duval, 2004). If a tourist destination cannot eliminate the threats against those arriving there and give a sense of security, it cannot be considered competitive even if the local conditions are. Security nowadays determines the functioning of an existing or potential tourist destination to such an extent that security factors can be interpreted as the prerequisites of the tourism industry (Michalkó, 2012, 2019).

Thanks to the rapid development of tourism, as well as the differentiation and the media-friendly appreciation of security risks, the modern interpretation of tourism security now means much more than focusing on infringements. While tourism-related security risks (crimes, offenses) remain crucial, more and more attention is being paid to the risks associated with health, infrastructure and the social environment, which often overlap with one another and with the infringements.

Tourism is essentially an industry based on trust and one of the most important foundations of its complex system is security. The problem of security, of course, raises extremely diverse issues ranging from natural disasters, terrorism, and financial processes to accommodation services, the environment, food, health, or transportation. In tourism, preconception and experience are dominant factors in decision-making. The former involves the political environment, the safety of transportation (airports, planes, trains), the safety of the natural environment (water quality, tsunamis, volcanic eruption) and cross-border terrorism that threatens everyone (Péter, Németh, & Lelekóné Tollár, 2018). During travelling, our first choice is a safe destination, followed by entertainment opportunities and event venues that interest us. Organizers have to exercise extreme caution when planning an event. There may be multiple laws regarding a given event depending on whether it is organized in a building or in the open air, or how many participants are expected. Not only the organizers of large-scale events, but

also the mayors of local governments arranging rural fairs or end-of-the-year parties should be acquainted with the relevant regulations (Király & Vájó, 2015).

Public safety basically covers offenses falling under the authority of the police. Minor and major violations committed against tourists include pick-pocketing, vehicle burglary or stealing luggage and valuables from hotels and railway stations.

Cities and popular tourist destinations are now trying to do their best to prevent the terrorist threat. Following the Barcelona van attacks, the centers of Italian cities are enclosed, one after the other, blocking the wider streets, seafront promenades and monuments with concrete blocks, cordons and large flower boxes (Németh & Péter, 2019).

Similar precautionary measures have been introduced in German cities. The safety of outdoor events is of paramount importance everywhere. For example, in the province of Hessen, all seven police headquarters are ready to deploy special units to take action if necessary without any time loss. In most major cities, the area of events is surrounded by cordons and, at the strictly controlled entrances, concrete elements are also installed to prevent truck and truck attacks. In order to avoid harassment against women, refugee shelters in many provincial metropolitan areas are provided with multi-lingual leaflets on equality between women and men and on the right to self-determination.

On 2 February 2019, the yellow vest movement repeatedly called for demonstration, warning tourists and the local population to avoid demonstration routes in the French capital and in several major cities (Bordeaux, Toulouse, Marseille, Valence). In Paris, 5,000 people were mobilized by the authorities to curb any unrest that might occur, and borders are strictly controlled. Military presence at railway stations and airports is significant. Tourists often fall victim to pick-pocketing, hotel theft and vehicle burglary. In case of hotel theft, it is advised to ask for the details of the hotel's insurance company, too, because under the French Civil Code the hotel assumes joint and several liabilities for theft in its territory. However, insurance companies will only reimburse for damage supported by invoice, and in case of cash theft they insist on the presentation of a bank receipt document.

Under French law, hotels are required to complete a police form with all foreign guests. In addition, all facilities are authorized to carry out security checks if necessary (Department of Consular Affairs and Citizenship, 2019).

Health security is also very diverse, ranging from pollen allergies to hepatitis infection for unprepared tourists. Travelers can actively contribute to increasing the health risk of the destination they visit by carrying a wide variety of pathogens (in particular, contact with HIV-infected people is considered dangerous to host society in sex tourism). Crimes risking human

health involve drug-related offenses that primarily are relevant to tourism (drug trafficking, possession of drugs). In many countries, trafficking (and, of course, using) even small quantities of drug is punished severely, sometimes by death penalty (e.g. Thailand, Indonesia, Singapore, Malaysia, Iran). The reverse happens when the host country's drug policy is more permissive and tourists purchase drugs through the laws of the host country, which are later taken out of the country; it is considered a crime (e.g. the Netherlands). It is worth mentioning here Thailand has a military government, which results in tense security situation, and health security is not the best either. Malaria, dengue fever and chikungunya virus also occur. In recent years, the number of dengue infections has been particularly high, so it is advised to take precautions against mosquito bites not only in rural but also in urban environments.

Consumer safety, which avoids the annoying inconvenience of the traps installed by service providers, affects the tourists and the local population equally. Some taxi drivers and hospitality units overbill the services, while traders harm the travellers by selling low quality goods or fake products.

Danger may arise from the use of all infrastructure facilities and service units. The greatest safety risk is the transportation infrastructure; accidents caused by transport vehicles, deficiencies in road and rail networks are significant. Travellers may be not only victims, but they may also cause incidents; for example, a bus in a bad state of repair or a burning cigarette in a hotel room may lead to catastrophes. Some traffic accidents and crimes are related to the consumption of alcohol or drugs. Alcohol abuse violations are partly due to differences in blood alcohol thresholds in each country. There are zero tolerance laws in four countries in Europe (Hungary, Romania, Slovakia, Czech Republic), while in other countries a certain amount of alcohol is allowed. On the other hand, we can say that in many cases tourists have a loose interpretation of regulations that applies to them when they are far from home. Moral norms in traffic and bad roads also cause tragic accidents on Egyptian roads. Accidents are mainly caused by human error. The majority of holidaymakers in Egypt do not have good subjective perception of safety on the roads.

On the one hand, navigational safety means giving information and direction in order to reach the destination without any problems, on the other hand, it facilitates the mastery of a given culture. If the tourists get lost, they lose time and wandering around consumes their energy; the worrying may distract them and they can even get into serious danger. In many cases, local rules and habits may be crucial; knowing what to do when warning signals are detected, how to dress, or how to use means of transport can help prevent accidents, difficult moments, and conflicts.

By giving an Egyptian example, it is important to know that in Egypt begging for baksheesh is a common phenomenon. Children usually surround the tourists, then more and more people gather around them asking for money; you should not give them anything and they will disappear. This behavior can prevent some theft. The hotels are safe, there are safety deposit boxes everywhere. Since general hygiene conditions are also different from European standards, we have to protect ourselves against diseases that spread with contaminated food, drink and tap water.

The economic instability of a tourist destination can also have a major impact on demand. Bayramov and Abdullayev (2018) studied the influence of political conflict and terrorism on Turkey's tourism indicators and competitiveness. Turkey has been challenged by political conflict, and several associated terrorist attacks in recent years. Consequently, the risks involved in visiting one of the world's top tourism destinations, Turkey, have increased. Crisis has challenged the country's competitiveness and share in world tourism as a top tourist destination. Studies on the effects of this on tourism have shown that conflict has a significant, negative impact on a region's tourism industry. The results show that there is a strong relationship between the changes in the terrorism index and overall tourism growth rates. Political conflict and terrorism have an adverse effect on Turkish tourism development.

In order to protect an event attracting both tourists and local residents, the police used to provide double security (i.e. external and internal). The external protection is carried out by law enforcement groups, such as the traffic police or the public order division. This area consists of the streets outside the event venue; the basic goal is to create an external filter to eliminate disturbing behaviour and crimes (vehicle burglary). They set up checkpoints to be able to protect the scene and to deal with the crowd in a safer and more comfortable way. The past few years have brought highly significant changes in world tourism. Unfortunately, in the threatened areas the locals also fall victim to the increasing crime, and they have to tolerate mass tourism with all its negative effects, e.g. lack of tranquillity. The deviant needs of the masses must be served; organized crime based on prostitution, child trafficking and forced labour emerge. The most vulnerable groups are at increased risk: children, women, young people are the most likely victims. It is therefore of utmost importance to talk about the dark secrets of the glittering world of the travel market more frequently. However, there are many existing or evolving future destinations, where these phenomena are not present, and visitors consider them a haven of peace (Ernszt, Péter, Keller, & Tóth-Kaszás, 2018).

The essence of tourism is to experience temporary changes offered by the services. Tourism security means the lack of threats hindering the effective functioning and development of the

tourism market. Tourism security decreases or prevents the risks of temporary stay threatening both the traveller and the destination (Michalkó, 2012).

## **THEORETICAL BACKGROUND**

### **The security of tourism in international tourism**

Looking at the current political turmoil across the globe, we aim to analyze the effects of interaction between political instability and terrorism on tourism development using panel data from 139 countries for the period 1999–2009. The study analyzes the extent to which a country's political conflicts and terrorism can negatively impact its tourism industry. The results reveal that the effect of political instability on tourism is far more severe than the effects of one-off terrorist attacks. Surprisingly, the findings suggest that terrorist attacks increase tourism demand for countries with low to moderate political risk. However, countries that experience high levels of political risk witness significant reductions in their tourism businesses. In addition, political volatility and terrorism together can cause serious damage to the tourism industry.

Cleanliness and security in and around the tourist sites are a key concern for foreign tourists. Disasters create difficult, often tragic situations for the affected area and its residents. There must be forward-looking policies set out by both the government and other sections of society interested in promoting tourism in order to deal with terrorism while not hurting tourism (Ranga & Pradhan, 2014).

Risk perception in tourism is associated with the issue of safety in travel, and results in an impact on tourist's travel decision and destination choice (Sonmez & Graefe, 1998). When potential tourists plan a holiday that is risky, this generates a fear of negative consequences. Consequently, those perceived risks and perceptions of safety may cause potential travelers to cancel their travel plans, change their destination, modify their travel behaviour or obtain more information. A tourist's decision-making process is influenced by the individual's external and internal factors. Several internal factors related to terrorism may influence every key stage of the decision-making process.

Tourism competitiveness is measured by the Travel and Tourism (in the following: T&T) Competitiveness Index (TTCI) provided by the World Economic Forum (WEF) in the TTCI Reports of given years, for 136 countries of the world. TTCI is a composite index, that is a weighted average of 14 indices (called „pillars”) describing the environment in which tourism operates. These include the actual safety and security index of the same year, which, again, is a weighted average of several safety and security related measures (Crotti & Misrahi, 2018).

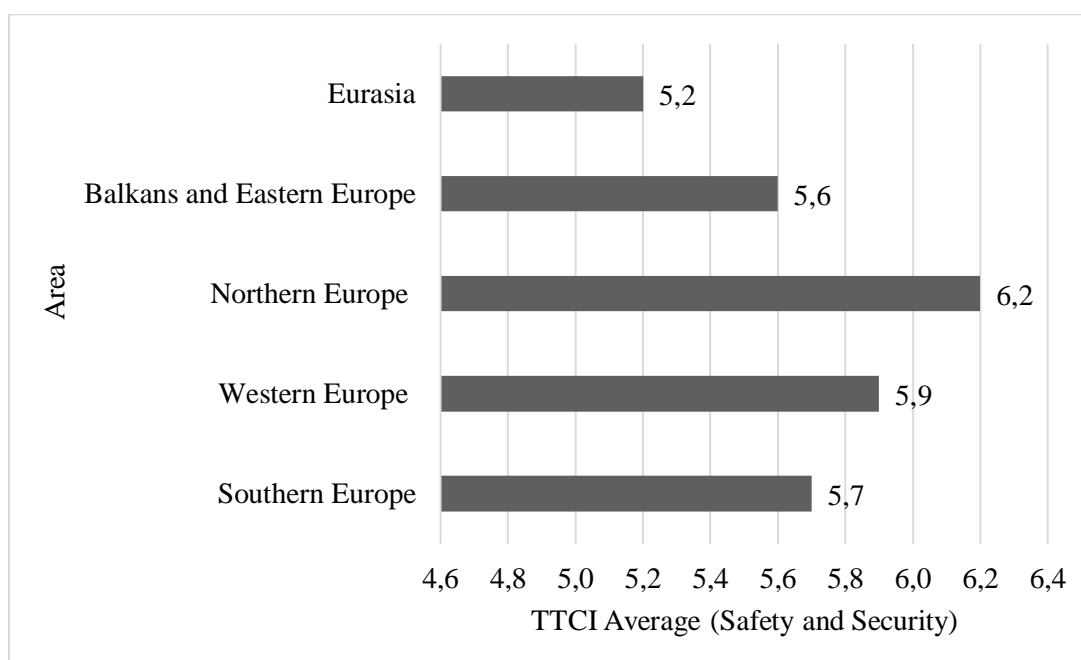
Yet, to date, Europe remains the largest T&T market, almost twice as large as Asia-Pacific, the second largest and rapidly growing market.

While the number of arrivals continues to grow in Europe, international revenues started to decline in 2015, suggesting possible re-adjustments in the sector at the regional level. Different hypotheses can be put forward to explain this phenomenon. For instance, given the importance of intra-regional travel, lower spending may reflect lower purchasing power and more attention towards lower-cost travel solutions. At the international level, shifts in international arrivals from North America to Asia may entail shifting spending patterns. As these trends evolve, the continuous improvement of the sector’s competitiveness will be essential in light of the industry’s transformation, especially in the more mature destinations.

The country's religious affiliation is also important in the destination choice for international tourism. A cross-country study of 164 countries (Fourie, Rosselló, & Santana-Gallego, 2015), for the period 1995-2010 provided evidence that religious similarity has significant explanatory power in global tourism. Religious or ethnic diversity may be the consequence of international labour migration, which, later, may boost the tourism flows between the region of origin, and the host area (Bacsi, 2019).

In the Balkans and Eastern Europe, price competitiveness is strong, but the sub-region has not invested enough in air connectivity and cultural resources yet (Fig. 1).

**Figure 1** The Travel and Tourism Competitiveness Index in Europe in 2017 (Safety and Security)



Source: Created by authors based on World Economic Forum (2017) data

At the same time, international openness tends to be weaker than in Western Europe. The Eurasian sub-region also faces issues relating to international openness and transport infrastructure. Yet this sub-region boasts more qualified and efficient human resources while, at the same time, providing more price competitive options, thanks to lower hotel prices and fuel costs.

Hungary's 5.7 average is ranked 45th out of 136 countries, which means that tourists consider it safe.

A total of 22.4 million foreign tourists came to Hungary in 2017; their number increased by 4.3% compared to 2016. Tourists spent a total of 83.7 million days in our country. 63% of the tourists stayed for more than one day. The number of tourists arriving for several days (14.1 million) rose by 4.7%, the number of overnight tourists (8.3 million) increased by 3.8% in 2017. Decrease in travel time is an international trend (KSH, 2018). Data on Hungary's safety record is very good, while in Spain and the United Kingdom the terrorist threat was high in recent years, so preventive measures were necessary to protect the population and tourists.

Thanks to Hungary's strict migration policy, Budapest is Europe's safest capital and is directly accessible from the United States. In addition, Budapest is also the sportiest capital in the world due to a series of sports events organized in the city. Moreover, the Asian tourist arrivals to Budapest are increasing year by year.

Rising domestic tourism also indicates that Hungarians are more inclined to travel to Budapest, but at the same time, the capital has been able to expand more in several source markets: the US, Southwestern European (Spain, Portugal), Israeli, Ukrainian and several Asian markets had a double-digit increase in 2018. Today it seems that the Far East's superpower, China, has the greatest tourism potential for Budapest: in 2018, 199,913 Chinese guests (+ 14.4%) spent about 329,081 nights (+ 14.9%) in the Hungarian capital, and they stayed mainly in hotels (BFTK, 2019).

### **Changing trends in consumer habits**

According to the Maslow model (1954), individuals at different hierarchical levels of demand satisfaction want to travel for different reasons due to different motivations. The desire for rest, the desire to escape, or the desire for self-realization at a higher hierarchical level are motivations for travelling (too), which can be derived from the socio-demographic and psychological characteristics of the individual and are influenced by the gender, age, social status, income of the tourist, and many other factors. However, the Maslow model cannot explain what destination the tourist will choose and why. In the second half of the seventies,

various tourism motivations were categorized into a comprehensive logical framework, based on Tolman's (1959) behavioural psychological research. Reviewing the scientific research on tourism motivations, Dann (1977) concluded that although there is a lot of confusion and sometimes it is difficult to determine whether researchers are actually studying the same phenomenon, basically two approaches can be identified.

Travel can be seen as a response to a need missing from the tourist's life. The activity of travelling and the characteristics of the destination pull (attract) the tourists by responding to the motivation. The two approaches represent two groups of tourist motivations identified by Dann (1977) and categorized as push and pull motivations. Push motivations represent the inner desires that push the tourist towards the journey. The pull motivations are the tourist's perceived and appreciated characteristics of the destination; they pull (attract) tourists to the destination. The destination's pull factors are assessed by the tourist in the light of his / her own motivation (push).

During travelling, the well-being of tourists is based on physical safety and health. Besides these essential factors, however, well-being is associated with satisfaction and emotional balance as well. Naturally, these desires do not emerge in our mind by themselves. The desires to travel for pleasure and to leave the privacy and safety of our home are driven by an extremely sophisticated system, and the tourist rarely recognizes the local authenticity, culture and lifestyle advertised by the marketing. This logic suggests that the tourist desires can never be fulfilled. The constructionist and reflexive approach to authenticity, however, crosses the border between reality and the scheme offered to the tourist. This does not eliminate the constructive, selective and branding procedures of the tourism industry, but it does make it clear that the satisfaction of the tourist does not necessarily depend on them (Pusztai, 2013; Bacsi & Kovács, 2016).

Recreational events, linked to other tourism products, make it possible to create a full range of products in order to extend the tourist season. As far as the European trends in the festival market are concerned, it can be concluded that in 2017 the impact of the crisis can still be felt, but as a whole the market is growing. The large, multi-day festivals are becoming more and more popular, and the events may be specialized. The most important and most decisive trend for this tourism product is slow travel; moreover, event tourism also starts emphasizing the accessibility of the destination as well as the security issues. In the last decade, we witnessed a decrease in territorial concentration in event tourism: many rural events and festivals have intensified offering quality programs to their visitors annually, and their organization and marketing communication are constantly evolving. Thanks to the strong state involvement, we also organize many major international sports events, partly due to our centuries-long



achievements in certain sports and partly through our sport lobby activities (swimming, water polo, fencing, handball, football, etc.). Sports events attract more and more tourists and the number of spectators is increasing dynamically year by year (Hungarian Tourism Agency, 2017).

The Tourist Police is a special service in the preventive work of law enforcement agencies aimed at preventing crimes and helping the tourists in trouble. In order to provide tourist information in Hungary, most of the Tourist Police organizations are accompanied by appropriate foreign language interpretation. The Tourist Police work is mostly needed in the most visited regions, usually serving in the summer high season (Oláh, 2010).

Tourism Online (2018) reports that a significant proportion of travellers decide to explore the lesser-known parts of the world in 2017. 45% of respondents plan to choose a destination offering more adventurous experiences this year, while 47% want to go to a place where none of their friends have been before. Whether it is hiking in an isolated mountain village or some other unusual experiences, people have a growing desire for adventures to discover previously unknown areas in a unique way.

Although technology is becoming more and more widespread in all areas of our lives, real human relationships and the interaction with the hospitable staff are also appreciated. As mobile phones and social media are entering the private sphere increasingly, tourism providers can contact consumers on multiple platforms (Simay & Gáti 2017, Bogáromi & Malota, 2017). According to the results of our empirical research, the majority of people would not stay in a place where the staff is unfriendly and unhelpful, while the popularity of private accommodation that builds direct contact grows steadily.

In their study, Bogáromi and Malota (2017) sought to find out the way European tourists look at Hungary. In terms of country image, issues of security and hospitality were in focus. Quantitative data collection was carried out in the summer of 2017.

CAWI method was used, the sample consisted of respondents aged 18-65, who have traveled at least to two countries during the last 4 years, and at least one of the visited countries was an ex-socialist country. The representative sample comes from 8 countries: The United Kingdom, France, Italy, Germany, Sweden, Austria, Poland, and the Czech Republic.

The study by Bogáromi and Malota focused on safety, so they asked the respondents how safe they felt Hungary and Europe. The number of people travelling in Europe is steady, since the migrant crisis was insignificant in every country (5-12%). Most respondents consider Europe less safe in terms of travelling and holiday-making. 24% of the French and 63.9% of the Polish respondents deem travelling in Europe less safe since the beginning of the migrant

crisis. The proportion of those who see travelling more dangerous than before vary between the lowest 23.6% (Polish respondents) and the highest 51.6% (French respondents).

The annual number of Hungarians traveling abroad has increased by 19% over the past 10 years, from 17056 to 20297. The average stay fell from 3.1 days to 2.8 days, while spending increased. Between 2007 and 2017, Hungarian tourists spent 63% more on foreign travel, which was EUR 816,487 million in 2017. It means that we spend less time travelling but spend more.

According to an international study in 2018 (IPSOS, 2017), 54% of European travellers deemed rest and relaxation, while 44% the time spent with family and friends during their holidays the most important. At the same time, Europeans considered safety-related aspects when choosing their destination, right after costs and weather. For Hungarians, the most important aspect when planning a holiday abroad is to spend enough time with their families and friends. We value security abroad more than adventure - while price, of course, remains an essential factor for everyone. Ladies with families are especially thoughtful, with nearly 60 percent mentioning safety as one of the most important aspects. It is not surprising, of course, that young people have desire for discovery, along with the joy of spending time with friends and the need for security (IPSOS, 2017).

Croatia was the number one foreign destination among tourists in 2017, with 24% of travellers choosing our southwestern neighbour. Greece (13%), Transylvania (12%) and Italy (10%) are very popular, but Spain (7%), Germany and Austria (5.5%) are also among the preferred countries. The decision of the 20-29-year-old Y-generation is interesting: most of them are planning a European trip but instead of targeting the above-mentioned 'classic' summer destinations they choose Denmark, Ireland or the Netherlands. 10% travel overseas and others visit North Africa, Asia and Australia (Turizmus Online, 2017).

## **DATA AND METHODS**

The quantitative research involved omnibus research by questionnaire. The sample population involved 508 people, 49% of whom were men and 51% women. The survey represented the active workers in the Zala county by gender. We applied random selection when choosing samples (Barna, Nagy, & Molnár, 2006). We used Equal Probability Sampling (EPSEM, based on the data of the employees in Zala County) after determining the representative number of units. In EPSEM sampling, the sample is an average unbiased estimate of the expected value. As far as the questionnaire is concerned, omnibus research has been carried out, which covered the employee's holiday habits and consumer priorities. The research covered the region of Zala County. In the correlation analysis, we are interested in the relationship between travel decision

and age, and the significance of security. We performed correlation analysis to map the relationship between the variables.

The research seeks to find out what factors influence the consumer behavior in tourism in Zala County, how the residents see the security policy measures in their own and in the most visited areas, and how the authorities communicate with them. In addition, we investigated the main cultural and social features and the psychological needs of the subjects (e.g.: motivation, perception, attitudes) and their personal characteristics (e.g.: age) that may impact the destination selection process. What were the reactions of the authorities in tourism sector (Tourism Destination Management, Police, Department of Consular Affairs and Citizenship) to security issues in recent years in order to enhance the sense of security of tourists?

## **RESULTS AND DISCUSSION**

The empirical results show that break times are decreasing due to the employers' influence or the employees' own expectations in Zala County. Non-stop working may cause not only fatigue and – in worse cases - burnout but, unfortunately, also long-standing illnesses. The biggest part of the Hungarian population would like to relax a lot quickly and feel the need to change; however, they cannot achieve it due to financial reasons or internal impulse. These factors influence the efficiency of the employee, which also has an impact on the success of the employer.

The results revealed that despite being overloaded, employees feel that it is natural to have more breaks because it increases performance; in addition, building common rooms help establish and maintain a good relationship between colleagues. There are, of course, peak hours (mostly in production, commerce, and hospitality) when there is less time to have a break, but they try to compensate the employees.

The quantitative results of the empirical research include the motivating factors that determine the employees' decisions. On a Likert scale (where 1 was the least typical and 5 was the most typical choice), we asked the respondents to mark the aspects they considered important (Tab. 1).

There is a strong emphasis on the appropriate price/value ratio (4-27.1%; 5-62.4%), but there is a significant sense of security (4-25%, 5-59.1%), which results in looking for destinations where holiday makers do not feel threatened (Péter et al., 2018).

**Table 1** Main factors determining the travel decision (distribution)

	1	2	3	4	5
Dining options	4.1%	5.1%	22.2%	31.0%	37.6%
Number of services	5.6%	9.3%	32.0%	35.1%	18.0%
Price / value ratio	0.6%	1.0%	8.8%	27.1%	62.4%
Quality	0.6%	1.2%	6.6%	42.0%	49.6%
Sports facilities	12.1%	18.9%	31.2%	24.7%	13.1%
Wellness facilities	11.6%	12.7%	23.2%	28.0%	24.5%
Safety	4.5%	9.1%	2.3%	25.0%	59.1%

Source of data: created by the authors, 201

In the hierarchy of needs, the physiological needs are immediately followed by the desire for security. Organized mass tourism fans who enjoy the so-called "all inclusive" travel packages and have little contact with the locals because it is the most enjoyable and secure way for them to rest, now have several similarities with the adventure travellers who need minimal security and comfort, travel independently, organize their trip individually, and gladly socialize with the local people.

Altogether 39.2% of the workers surveyed in Zala county spent their holiday abroad, while 60.8% chose a domestic destination. 47.8% choose a summer holiday, however, the results show that the duration shrank from the former 7-10 days to 5 days. The popularity of long weekends has not changed and is similar to the national average, with an average three-day stay. More than 90% of the consumers across the country use the Internet to access travel information, and almost every tour operator and travel agent has their own website. However, most service providers are not acquainted with the travellers seeking online information or receiving their services. This also means that they do not have sufficient data on the efficiency of their online sales activities or about their online target groups, either. To prevent this, tourism service providers should be advised to measure their website traffic and develop a website statistics software that allows them to make surveys easily. Data may include the location of visitors (e.g.: search engines, destination site) or how many people used basic (accommodation, programs) or additional tourist services (insurance) in certain period(s) (month, year) (Gyulavári & Hubert, 2014). In addition, website statistics can help tour operators find the most visited menu points and place the most frequently "clicked" item in the most conspicuous area of their site. Most consumers feel the need to read other people's opinion in forums before travelling, but only a few travel agencies operate a forum on their website; the rest of them are not interested in creating such an online service, which consumers are missing. (Péter et al., 2018). According to the latest GFK data, based on a national representative survey on the holiday plans in 2017 involving 1,000 people, slightly more than half of the Hungarian

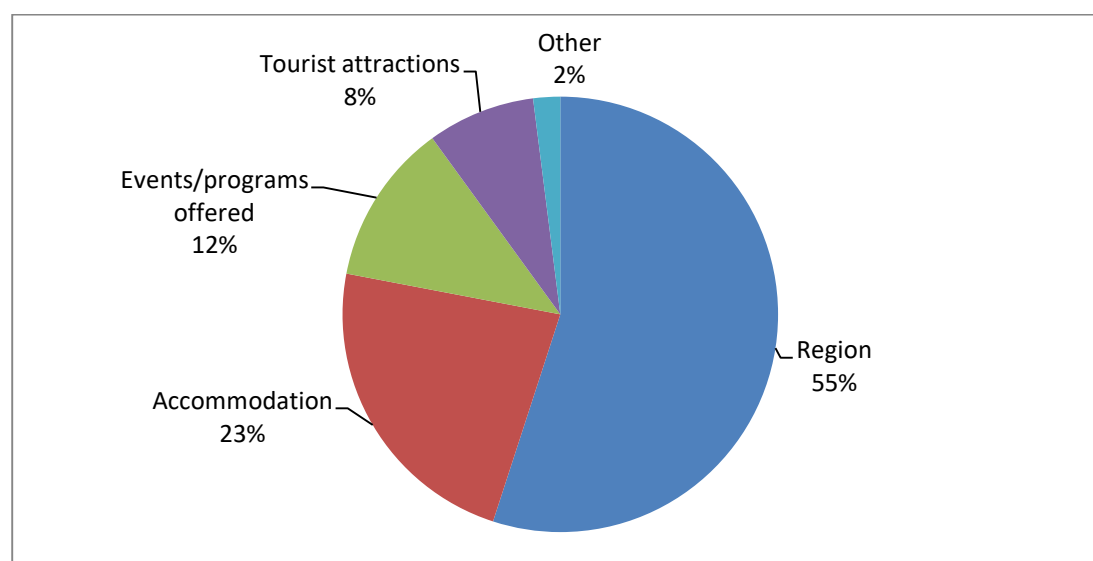
population (54%) plan to travel this summer, most of them (32%) choose domestic locations, 10% travel abroad and 12% have both domestic and international destinations during the summer holiday. The most popular domestic destination remains Lake Balaton, while the Croatian, Greek and Italian beaches and Transylvania are the top foreign locations. Travel habits are clearly related to age, social and financial situation and place of residence. While 20-to-29-year-olds typically travel abroad, the 40 to 49 year old population prefer to stay within the borders.

Half of the employees interviewed said that the common goals motivate them to accomplish a task, but they do not feel that they are asked for their opinions often enough when making decisions. 9% totally agreed that the management gives meaningful response to their proposals. Personal experience with security issues has a deep impact on travellers, since a single smile can make them return to a given destination, however, one negative experience is enough to discourage them permanently in the future.

The events attracting a large number of tourists have great significance; if the venue has a pleasant tourism image, there will be higher interest in tourism packages, consequently the packages may be put on sale. If the site does not have strong attraction, the recurring event can raise the visitors' interest in the destination and finally, albeit slowly, it will develop.

Most respondents choose a tourist destination (55%), but accommodation (23%) and events/programs (12%) are also of paramount importance when making a decision. Security and fun-packed environment are the top priorities to remember (Fig. 2).

**Figure 2** Motivating factors when making a travel decision (%)



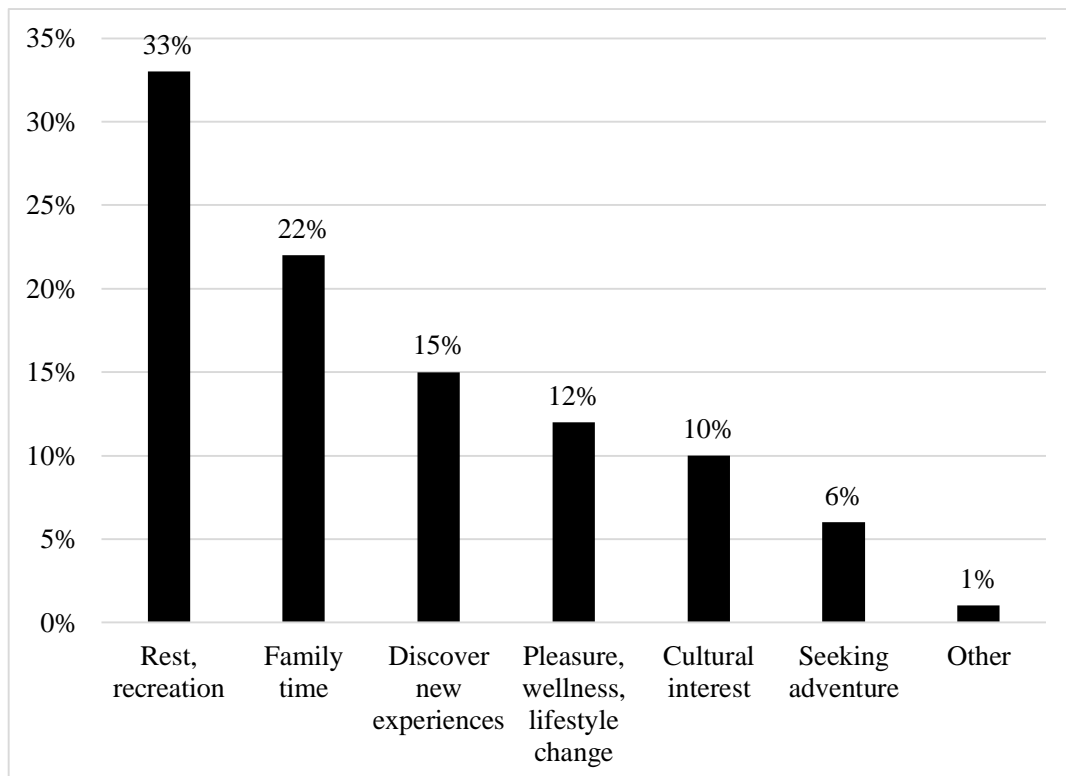
Source of data: created by the authors, 2017

Employees in Zala County still consider wellness eating and sleeping excessively. Since they "cannot waste their time," they want to discover new experiences (15%) and look for adventure

(6%) that can make their holiday unforgettable; the respondents claim it can be carried out only in a calm and safe environment.

As Fig. 3 illustrates, the desire for rest and recreation is strong (33%), however, in recent years discovering new experiences (15%) and seeking adventures (6%) have gained importance, which is typical of the respondents from generation Y and Z. They are more determined to travel, even if they have less discretionary income, and feel that nothing bad can ever happen to them.

**Figure 3** Distribution of objectives during the holiday (%)

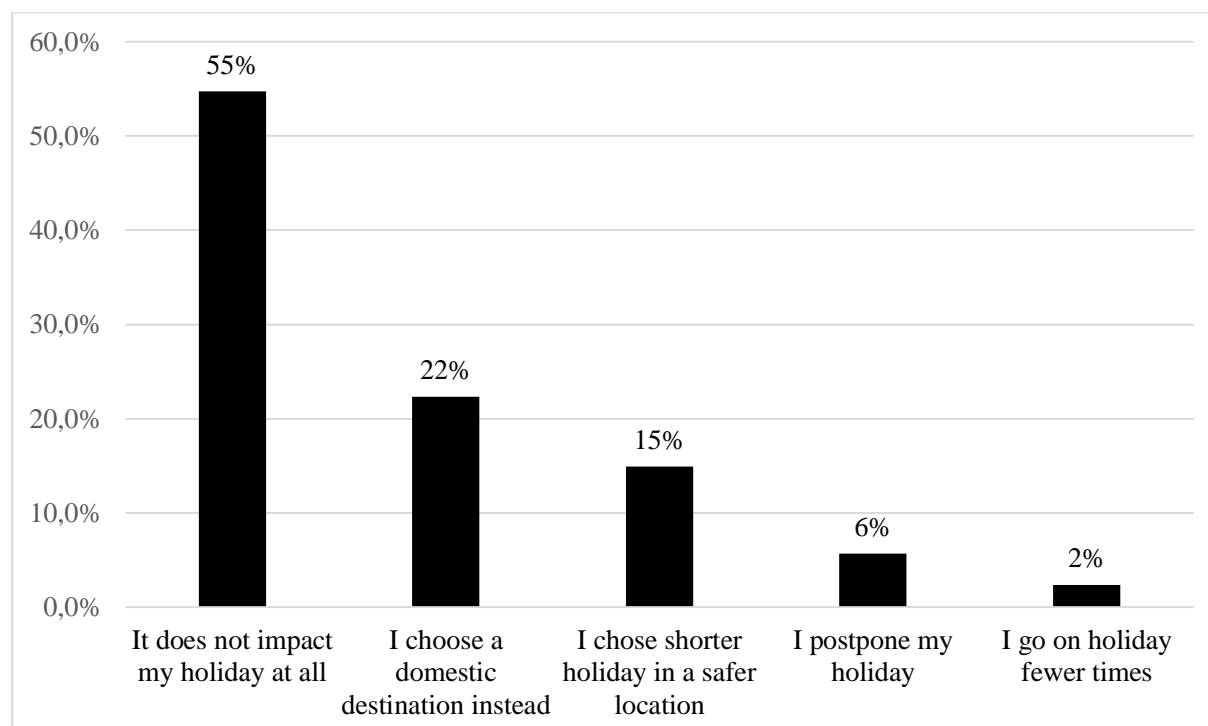


Source of data: created by the authors, 2017

When several places experience threats (domestic political affairs, terrorism, economic recession) all around the world, this could be a major setback to the further development of tourism. There may also take place a significant territorial reorganisation because the tourists will avoid the dangerous areas. In 2011, rebellions in North Africa and in the Middle East resulted in such shifts in geographical location. Similarly, environmental problems, pollution and disasters also influence the further development of the tourism industry and may discourage tourists from visiting certain locations or even larger regions. Hopefully, however, these political and environmental problems will not happen too often in too many places, and the new tourism trends discussed in this research will not be disrupted.

The increasing terrorism threats and antipathy towards foreigners may influence the growth of tourism in some cultures, both quantitatively and qualitatively. Fig. 4 shows that more than half of the respondents (55%) do not take the terrorist threats into account during their travel, but 22% decide on domestic holidays and do not travel abroad, because they consider Hungary safer.

**Figure 4** The impact of terrorism on holiday habits (%)



Source of data: created by the authors, 2017

Fortunately, Hungary is not a potential target of terrorist attacks. In 2017, the State initiated prior consultation regarding the security measures with the Constitution Protection Office and the Counter Terrorist Centre (professional bodies), and last but not least the local governments also got involved, says Kertész (2017). This solution allows the police to provide a secure escape route for the crowd. 75% of the respondents did not cancel any of their programs due to terror threats, but 25% rescheduled their trip and did not visit the planned events. The biggest proportion (11%) stayed away from international sports matches.

The correlation analysis revealed strong relationship between travel decisions and age. It is interesting to point out that the Pearson correlation coefficient has negative value (-0.718) at 0.0007 significance level. It shows a reverse relationship, i.e. the younger someone is, the more confidently they make decisions, and are not influenced by their financial background; when they are short of money they look for alternative options and use Internet forums to find cheap or free accommodation. When the body indicates the worker that it is time to rest, young people

recognise the "danger" sooner; middle-aged and older respondents can only afford to relax "a lot, quickly", which presents new challenges not only to healthcare workers but also to tourism professionals.

## CONCLUSION

Hungary is in a favourable position on the international list of safe destinations, ahead of several Western European states. This has a positive impact on foreign tourists and gives a competitive edge to domestic tourism, ensuring the livelihood of over four hundred thousand workers in a market that is also supported by state-sponsored developments.

The Hungarian Tourism Agency also works together with the Constitution Protection Office and the relevant government agencies and county governments. Tourism is a sector that is fundamentally determined by external circumstances, such as technological innovations, changes in travel habits, or precisely the current security situation.

The global terrorist threat is intensifying in many countries around the world. Risk management tasks and crisis management schemes are of greater importance than ever before. International cooperation among the national security organizations of each country is much appreciated, especially during major international events. Hungary is a safe country, which should be promoted and represented constantly. The activities of TDM organizations are becoming more valuable, as the professional organizations dealing with tourism have to play a pivotal role. Players in the management and tourism sector need to respond effectively to new challenges. In the context of conscious tourism planning, the management tasks of the host areas play a key role in the sustainable exploitation of the retention in the areas visited by tourists.

If tourists are open-minded, they can experience and see that the crimes are often committed in front of their eyes, or they may be offered various illegal "services". Therefore, it is important to inform and encourage all concerned parties to report suspicious cases to the police. In addition, it is also worth confronting the tourists, who may be potential criminals in many cases, with the consequences of crimes by means of campaigns (Ernszt, 2018).

Security plays a key role in travel decisions, which is supported by our empirical research and will be even more appreciated in the future. The proactive police work is crucial in tourism, because it helps the tourist to create a sense of security. In order to fulfil this task, it is necessary to work together with various tourism organizations and local governments, to achieve proper



communication between the executive bodies and the society, the overall aim of which is to reduce the number of crimes, assist the victims of crime, and provide full counselling.

The aim is to emphasize security in all available media, and it is important to keep foreign partners and domestic customers up to date. The primary tools for the State to prevent panic are the appropriate diplomacy and consular service/delegation. The Hungarian Tourism Agency can also help develop a sense of security by creating a well-made image film, as well as appropriate destination management and event management (Péter, 2018).

The promise of peace and security is of the utmost importance for a tourist destination. Not only the lack of terrorist attacks, but also the lack of other crimes can be attractive. There are groups for whom tranquility is essential; especially for families with children and for the growing population of elderly people. Therefore, those destinations that can guarantee it also have to use it for marketing purposes. Approximately one third of the respondents participating in the research said that security issues would either make them choose a shorter vacation or domestic destinations. However, this does not necessarily mean rescheduling, since the vast majority (86%) does not cancel their programs.

In addition to personal security (hygiene, public security, tourist police) travellers put great emphasis on the security of property and on financial security. Preconceptions about the security of a destination strongly influence travel decisions. The role of social media in shaping preconceptions and spreading the reputation of experienced security has intensified.

The research has led to surprising results: while all the data at global, European and even national level clearly highlight the explosive development of the tourism industry, the research we carried out has come to the conclusion that even nowadays the economic crisis affects many people, as about one third of the respondents choose cheaper or shorter holidays. Thus, despite the ever increasing demand for high quality service, there is still a considerable segment of society that is forced to choose cheaper or shorter holidays. As a consequence, service providers need to satisfy the two requirements at the same time: travellers expect excellent service, safety and peace of mind at a reasonable price. At this point, the importance of hospitality cannot be emphasized enough. This may even slightly - but not completely - compensate for the fewer number of services or the lack of "luxury", or even more, it can make the holiday experience more beautiful and unforgettable.

Correlation studies proved that the younger generations make more confident decisions (and worry less about security) that may be independent of their financial situation. Both sexes considered the location of the holiday the main motivation. The participants of the survey return to areas that offered them positive experience, which can be utilised with emotional marketing

propaganda. The activities of Tourism Destination Management organisations should be reconsidered; as professional organisations they should act as a driver in tourism and the management must respond effectively to new challenges even when dealing with suprastructures.

Crime prevention practices become remarkably important in tourism processes, because the century-old means of criminal law are ineffective to prevent the rapid criminal offences (Zsarnóczky, Molnár, & Garamvölgyi, 2018).

As a consequence, any method, technique, and technology that restrict violent crimes are supported by both the society and the government. The international strategy for crime prevention also prefers social crime prevention; therefore, the state has an obligation to support local organizations actively involved in crime prevention. The aim of the European Union legislators is to establish a coordinated network of voluntary, self-motivated social groups operating efficiently. As for efficiency, local and subregional levels are of paramount importance. Individual strategies adjusted to each settlement can also be developed, whose design, adaptation, monitoring, feedback and decision-making are required by the whole process.

#### **Acknowledgement**

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## **HOTEL RESERVATION IN A HUNGARIAN – LOCATED IN HÉVÍZ – THERMAL AND SPA HOTEL**

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### **Abstract**

E-world is characterized by the preference for electronic options, which provides more efficient, faster and more convenient solutions than the traditional way. The emergence of the Internet restructured and made dynamic the tourism sales chain, creating the concept of e-tourism. Online tourism services have made a significant contribution to the growing popularity of individually organized trips by providing convenient and quick information, comparison and transaction opportunities.

At present, the former traditional and new, modern booking options live side by side. Based on hotel booking statistics, in our study we examine the characteristics of direct and indirect, as well as offline and modern online booking.

The proportion of direct (45.6%) and indirect (54.4%) bookings was balanced in the hotel, while 71.2% of reservations were connected to offline channels. It is likely, however, that online interfaces play an important role in searching and getting information - the literature also proves this.

Keywords: tourism distribution, internet, hotel room booking, consumer behavior

### **INTRODUCTION**

The use of modern information and communication technologies (ICT) and Internet has led to revolutionarily changes in all aspects of life with starting a new marketing reality and changing the relations between market players (Monga and Kaplash, 2016). The widespread availability of the Internet and the accessibility of information and communication technology tools have been the requisites for the emergence of the present-day e-world. According to the latest data of the Hungarian Central Statistical Office (HCSO) in 2017, nearly three quarters of the Hungarian population were computer users. The number of Internet subscriptions continues to show significant growth, which is generated by the significant expansion of mobile Internet (KSH, 2015). According to the latest data of the HCSO, the number of Internet subscriptions was more than 9,8 million at the end of September 2018, which is 4,5% higher than in the same period of the previous year (KSH, 2018b).

In the tourism sector, electronic communication and e-commerce has also emerged, allowing rapid and direct exchange of information and product between market players and creating new business opportunities.

## **THEORETICAL BACKGROUND**

Online distribution channels as e-commerce platforms are virtual sales offices for hoteliers operating effectively, efficiency and budget friendly through the internet (Civak, Kaya & Emeksiz, 2017). Consumers on the online tourism market take advantage of ease of searching, booking. Websites insure the variety of product offerings, quick price comparisons for the consumers with in a small fraction of time that is, time savings too (Toh, Raven & DeKay, 2011).

The role of ICT in the tourism sales system has had a triple effect over time. Firstly, computer reservation systems, the so-called CRSs (Computer Reservation System) appeared in the 1970s, then the global distribution systems, the GDSs (Global Distribution System) in the 1980s, and the Internet in the 1990s (Sziva & Nemeslaki, 2016).

The widespread use of the Internet has had a twofold, contradictory effect on tourism sales. On the one hand, the process of disintermediation meant the elimination of the intermediaries, which contributed to the increase in the share of direct sales. However, in the process of re-intermediation, the rapid adaptation of intermediaries and the entry of new types of intermediaries can be observed. As a result of re-intermediation, the traditional travel businesses are also open to the Internet and have entered the 'brick and click' category, making their offers available on their websites. Besides, online travel agencies (OTAs) belong to the "click to click" category (Sziva & Nemeslaki, 2016).

The two main types of sales forms are direct and indirect channels. In the case of a direct channel, there is a direct relationship between the tourist service provider and the consumer, while in the case of an indirect channel some intermediary contributes to deliver the product to the consumer. In the tourism of the 21th century, both direct and indirect sales can be done offline and online. The distinction between offline and online modes is not based on differences from the technical side, but on the intrinsic differences between channels. Online channels require an interface (web page) where the complete process of searching and booking takes place in one place within a standardized framework, while offline channels do not. (GVH, 2015).

So basically, we can distinguish four typical categories of hotel reservation (Table 1).

**Table 1** Booking channels

	Distribution/Booking Channels	
	Direct	Indirect
Online	Hotel own Website Hotel mobile application Social media	Third-party websites: Global Distribution Systems (GDS) Online Travel Agencies (OTAs)
Offline	Mail/fax Telephone Walk-in Direct sales Consumer shows	Traditional travel agencies Tourist offices Trade shows, and conference

Source: own edition

Global Distribution Systems (GDS) are global, but not public systems – not open to end users – that can only be used by travel agencies. Their job is to provide information and manage bookings and payments. The best known GDSs are Amadeus, Galileo, TravelPort. The first Online Travel Agency (OTA) was Expedia. The OTAs are the fastest and most dynamic forms of sales today. Online channels include websites selling packages, and services, as well as price-comparison and opinion-gathering websites (Tripadvisor, Trivago). (Aubert, 2011; Civak, Kaya & Emeksiz, 2017; Sziva & Nemeslaki, 2016). Besides OTAs Masiero and Law (2016) highlights and examines the role of the Destination Marketing Organization (DMO) as a third-party actor.

According to Crnojevac, Gusic and Karlovcan (2010), the booking sales cycle often includes various intermediaries between the supplier (hotel) and the buyer (customer) using Web solutions. The number of intermediaries can be as high as, making the distribution more complex and expensive. Therefore, service providers must carefully choose the appropriate channel or combination of channels, not neglecting direct online channels and the use of their own website. Booking opportunities through the own website guarantee saving money on agency commissions, but make it more difficult to reach guests. At the same time tourists may also use a combination of channels organizing their own trip. Toh, DeKay & Raven (2011) highlight that many tourists prefer to use the Internet to search for hotel rooms and successively perform the actual booking through either the Internet or by a telephone call. According to the Hungarian National Tourism Development Strategy, due to the spread of the Internet and the development of information technology, the need for online information is clearly concentrated on searching for a destination and travel organization (MTH, 2005).

At the beginning of the 2000s, foreign online accommodation booking systems began to appear on the Hungarian market. They have been followed by Hungarian ones since 2004. The market for online accommodation systems is not a regulated market, not subject to specific



legislation, rules for e-commerce and data protection rules based on EU funds apply to it (GVH, 2015).

Online accommodation booking shows an increasing trend in Hungary, as proved by several previous research results, e. g. eNET and the Hungarian Hotel Monitor survey in 2013 (eNET, 2013). According to the data of the HCSO, the total domestic (net) accommodation income in 2012 was HUF 129 billion, of which, according to the results of the survey, about 58 billion HUF (45%) was received via online channels. At that time 96% of the hotels had their own website, and almost all of them had an online booking site. The rate for pensions was close to 90%, but in the case of apartments and guest houses, only slightly more than 60% had a web presence, each of which offered a booking option.

Based on EUROSTAT (2016) data, in 2014, Hungary had an estimated online booking rate of 64.7%. According to the results of consumer research conducted by the Hungarian Competition Authority on online accommodation search and accommodation habits in 2015, 86% of travellers use the Internet to plan and organize their trip, while 59% book their accommodation via the Internet. Hungarian travellers prefer their direct contact with the host during their domestic travel (GVH, 2015). 54% of the respondents had previously booked their accommodation via the accommodation's own website, 48% of them directly by telephone (multiple answers were allowed to this question). The third most popular channel for domestic hotel reservations - the online sites - was used by 42% of the interviewees. According to the results of the research, about one-tenth of the respondents have already booked accommodation on social media. The proportion of bookings made through traditional travel agencies is significant for foreign trips (31%), but not significant for domestic trips (8%). An interesting result of the research is that every second traveller uses OTAs to obtain the necessary information, but actual accommodation reservations are implemented directly (GVH, 2015).

The importance of digital technologies in tourism, providing opportunities for innovation and preparing the sector for the future is signified by the fact, that the UN World Tourism Organization (UNWTO) chose the theme 'Tourism and the digital transformation' for the last year World Tourism Day, which was celebrated in Hungary on 27 September. Implementation and development of digital tourism appears as a horizontal target in the Hungarian National Tourism Development Strategy 2030, related to which the Hungarian Digital Tourism Strategy is under development (MTÜ, 2017a).

Guest statistics are of great importance for hotels, as they can be used to analyze the characteristics of their actual guests and, at the same time, make better use of the knowledge gained to reach potential consumers more effectively. Guest statistics help businesses in future

planning and developing their marketing strategy. The characteristics of the guests (gender, age, nationality), travel habits (duration of stay, booking method, number of travelers) contribute to the selection of the appropriate distribution channels. The design of the appropriate channel mix is determined by the composition of the target group, and not only by the product.

## **DATA AND METHODS**

Although guest statistics and booking statistics are likely to overlap, we focused on booking statistics as part of the primary research in this study. Data collection took place in a Thermal and Spa hotel in Hévíz in 2017, covering 500 reservations.

We have chosen a hotel in Hévíz because Hévíz is one of the most popular destinations in Hungary for both domestic and foreign tourists. The Lake Balaton Region is the second most popular destination in Hungary, one of the main attractions of which is Hévíz. The turnover of guests at commercial accommodation also proves the fact that the Balaton Region is the second most popular resort among the guests (1,692,124 persons) and the number of guest nights (5,451,600) after the Budapest-Central Danube Region (MTÜ, 2017b).

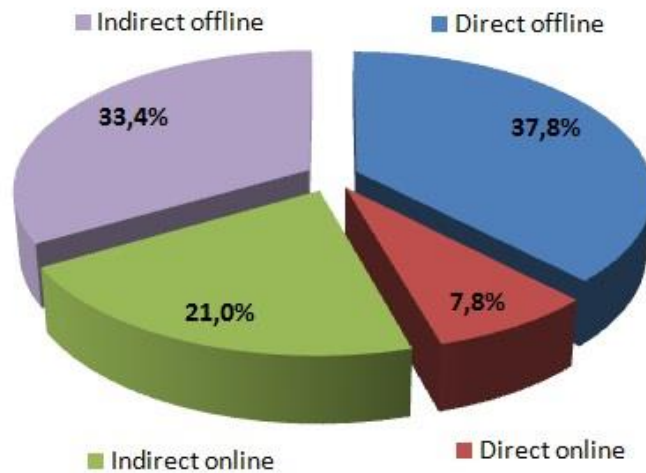
Based on the number of foreign guest nights, Hévíz was the second most popular town for foreigners - after the capital city, Budapest - with 697,000 foreign guest nights in 2017, and the fourth most visited town for domestic tourists (433,000 domestic guest nights) (KSH, 2018a).

In research the gender, age, nationality of the person making the reservation were examined, as well as the booking method (distinguishing direct/indirect and online/offline booking types), the guest night (reserved per person) and the number of reservations. Reservation statistics were analyzed by descriptive statistics as well as parametric and nonparametric tests.

## **RESULTS**

The distribution of the sample according to the booking methods is shown in Figure 1. Offline booking, personal contact is the typical form in the hotel, and only 28.8% of nights are booked through online channels. However, the proportion of direct (45.6%) and indirect (54.4%) bookings can be considered as balanced. The reason for the higher share of indirect bookings compared to the literature is due to the high proportion of foreign guests (85.6%) in the analysed hotel.

**Figure 1** Distribution of the sample according to the booking methods



Source: own edition

In the hotel, guests book accommodation in many ways from direct options to OTA portals to traditional travel agencies. The most popular OTA is booking.com (16.8%). Among travel agencies Robinson Tours delivers the most tourists (5.2%). This company organizes tours mostly from Russia and Ukraine to Hévíz.

Examining the proportion of domestic and foreign travel agencies within the indirect online and offline category, the results are the following: while the share of foreign OTAs in booking is 20%, that of domestic ones is practically negligible (1%). In traditional travel agencies, the share of foreigners is also decisive (24.6%) compared to domestic ones (8.8%), but this is probably due to the domination of the hotel and thus the dominance of foreigners.

Distinguishing domestic and foreign reservations (Table 2), it can be clearly seen that domestic ones (73.6%) are characterized by direct offline booking. Nearly a fifth of all reservations is indirect online booking, ie booking via OTA. In the case of foreign bookings, offline booking methods are the primary ones (direct 31.8%, indirect 38.6%), and indirect online hotel booking (21.7%) also shows a higher rate compared to domestic hotel registrants.

**Table 2** Share of the different booking methods in the analysed hotel in Hévíz

	Direct		Indirect		Total
	offline	online	online	offline	
<b>Domestic</b>	<b>73.6%</b>	6.9%	16.7%	2.8%	100%
<b>Foreign</b>	<b>31.8%</b>	7.9%	21.7%	<b>38.6%</b>	100%

Source: own calculation

The results of the  $\chi^2$ -test shows that there is a significant relationship between the nationality and the booking method ( $p = 0.000$ ) as well as between the gender and the booking method ( $p$

= 0.033). The share of males is significantly higher in the case of direct online (booking via hotel own website), while the share of females is relatively higher in case of indirect offline options (traditional travel agency) (Table 3).

**Table 3** Share of the gender by different booking methods

	Direct		Indirect	
	offline	online	online	offline
<b>Males</b>	<b>67.2%</b>	<b>79.5%</b>	<b>65.7%</b>	56.9%
<b>Females</b>	<b>32.8%</b>	20.5%	<b>34.3%</b>	<b>43.1%</b>
<b>Total</b>	100%	100%	100%	100%

Source: own calculation

Regarding the central location measures of reserver's age (Table 4), it can be clearly seen that the mean (51-52 years) and median (48-50) values are almost the same in the case of the direct and indirect online, as well as indirect offline channels. Independent-Samples t-tests testing the significance of the difference between two sample means, confirm this. The mean of reserver's age of direct offline bookings is slightly higher than that of other booking methods.

**Table 4** Central location measures (mean and median) of reserver's age and the results of the t-test

	Direct		Indirect	
	offline	online	online	offline
Mean	56.58	51.95	50.61	51.37
Median	57	50	50	48

p value	Direct - online	Indirect - online	Indirect - offline
<b>Direct - offline</b>	0.080	<b>0.000</b>	<b>0.002</b>
<b>Direct - online</b>	-	0.588	0.835
<b>Indirect - online</b>		-	0.668

Source: own calculation

Because of lack of normality – thanks to partly the outliers – Median test was applied to analyze the significance of the difference in the reservation number. There is no significant difference ( $p=0,223$ ) in the number of reservations, typical and middle values are 2 for each category.

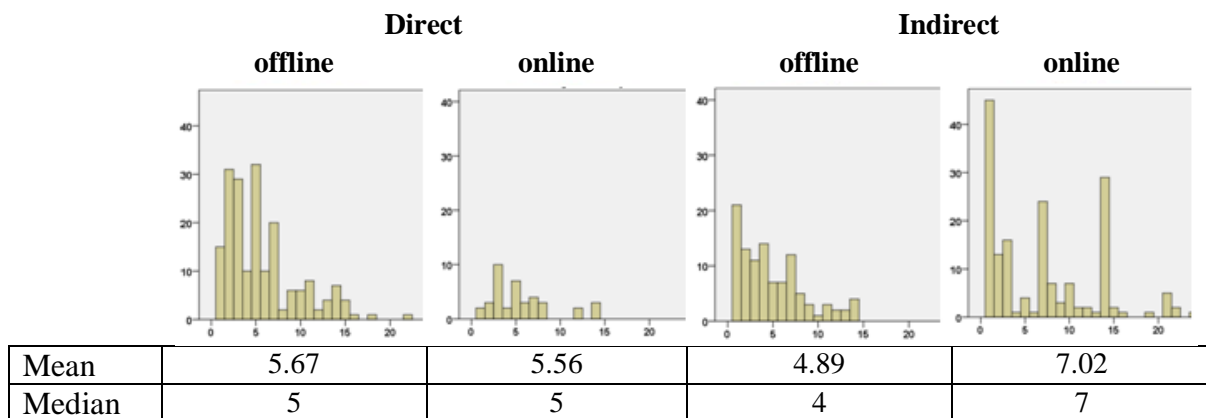
**Table 5** Central location measures (mean and median) of reservation number

	Direct		Indirect	
	offline	online	online	offline
Mean	2.03	1.82	1.80	2.05
Median	2	2	2	2

Source: own calculation

Because of lack of normality Median test was also applied in the case of the night reserved per person to test the significance of the difference. There are significant differences ( $p=0.018$ ) between the channels in terms of nights reserved per person. On the basis of the Mann-Whitney test results reservations booked through traditional travel agencies (indirect offline) provide a significantly higher ( $p=0.048$ ) stay compared to bookings made through OTAs (Figure 2). There is no significant difference between the central location measures of other categories. Regarding the histogram of reserved nights, it is clear that travel agents sell package tours, the number of one-day and one-and-two-week bookings is high (Fig. 2).

**Figure 2** Histograms with the central location measures (average and median) of the night reserved per person



p value	Direct - online	Indirect - online	Indirect - offline
Direct - offline	0.734	0.104	0.480
Direct - online	-	0.198	0.739
Indirect - online		-	<b>0.048</b>

Source: own calculation

## CONCLUSION

Online booking of hotels has an increasing tendency in the world as well as in Hungary. Based on EUROSTAT data, the estimated online hotel booking rate was 64.7% in 2014 in Hungary. According to the results of consumer research conducted by the Hungarian Competition Authority on online accommodation search and accommodation habits in 2015, 86% of Hungarian travelers use the Internet to plan and organize their travel and 59% book their accommodation via the Internet. The first three of the most popular and nearly equally mentioned booking methods are the website of the hotel, the direct telephone and an intermediary's webpage.

In our primary research, direct booking was the most important way for domestic reservers (nearly three quarters of bookings). The share of the OTAs was a remarkable 17%. The hotel's own website had a 7% share. In the case of foreigners, the role of the hotel's own website was also not decisive (8%), while traditional travel agencies (nearly 40%) and direct offline registration (around 30%) were of great importance. The weight of bookings made at OTA is almost the same for domestic and foreign bookings, accounting for nearly one fifth of all reservations.

Overall, the proportion of direct (45.6%) and indirect (54.4%) bookings is balanced, while 71.2% of reservations are linked to offline channels. Probably, online interfaces play an important role in searching and getting information, but not so much on making the actual reservation.

Our analysis highlights that bookings through traditional travel agencies provide a higher average stay. Most of the bookings were done by men. This rate is especially high for registrations via the hotel's own website, nearly 80%. The hotel has an interest in its own sales, and the future task is to increase the proportion of sales through its own website.

The examined destination, Hévíz, has specific characteristics:

- one of Hungary's most popular destinations for both domestic and foreign tourists,
- one of the most important thermal tourism destination with typically higher age guests and higher duration stay,
- however, there is a significant competition among the hotel owners, so it is very important for them to have an online experience (they can also serve as an example for other destinations).

Our future research goal is to study the booking characteristics of several accommodation types in Hévíz, on the one hand, and to compare the booking characteristics with other – thermal and non thermal – hotels.

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## **CROSS-BORDER DISPARITIES IN THE ASPECTS OF ENTREPRENEURSHIP AND PERSONALITY TRAITS OF FUTURE ENTREPRENEURS**

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### **Abstract**

Entrepreneurship is a source of financial, economic and social prosperity for countries as well as their regions. The objective of this article was to identify whether the young generation is interested in entrepreneurship, especially students of economics at public universities, and whether there are regional cross-border disparities in this respect (i.e., comparison of regional differences between neighbouring countries). 540 students of economics at public universities based in border areas were included in the survey group. The selected universities were the Faculty of Social Sciences in Ústí nad Labem (Czech Republic) and the Hochschule für Technik und Wirtschaft Dresden (Germany). Written interviews were selected as the research method. German students were established to be statistically significantly more interested in entrepreneurship. The second objective was to verify whether there are differences in the personality traits of students who are willing to set up their own business from those who are not. The personality traits tested representation of traits, such as independence, risk tolerance, creativity, initiative and responsibility. It was established using the chi-squared test, Saphiro-Wilk test, t- test, test for two binomial distributions and the Kruskal-Wallis test that different traits are not exhibited by students according to the region or country in which they live and study, but according to the criterion of whether they want to set up their own business or not. Accordingly, there are no differences between Czech and German students in the monitored traits but there are statistically significant differences between the traits of students who want to set up their own business and those who do not want to – both between German and Czech students.

Entrepreneurship, regional differences, personality traits, university student, economics subjects

### **INTRODUCTION**

Entrepreneurship undoubtedly brings socio-economic prosperity and business growth. Most countries feature a negative relationship between the rate of self-employment and unemployment rate (Blanchflower, 2000). The dependence between the functioning of small and medium-sized enterprises and economic growth in developing countries has been established (Obi et al., 2018). The level and development of entrepreneurship is differentiated in this way both interculturally and regionally. On top of that, the standard of entrepreneurship in a specific region features a significant persistence. Regional differences in the standard of self-employment and creation of start-ups tend to persist for a period of up to eighty years,



regardless of abrupt changes in the political and financial environment (Fritsch & Wyrwich, 2014).

Entrepreneurship is assessed differently in each country as a result of differing cultural values (Liñán & Chen, 2009). In the USA, for example, entrepreneurship is regarded as a prestigious and enhancing status activity, however, other countries may have different attitudes (de Pillis & Reardon, 2007). Entrepreneurship and the development of small businesses is considered a good solution in countries or regions with a high unemployment rate as it can improve the difficult situation (Amadi-Echendu, Phillips, Chodokufa, & Visser, 2016).

Entrepreneurship forms an integral part of economics in prosperous countries and introduces innovation and dynamic changes. Small businesses provide the most appropriate environment for enterprise and innovation, they do not necessarily need to support the know-how and resources characteristic for large businesses, but they require commitment and close co-operation among the company members (Sahut & Peris-Ortiz, 2014). Governments of individual countries usually seek to support entrepreneurship irrespective of the subject of business of the company. Entrepreneurship can be carried out in all areas, not only in manufacturing or industry, but also in agriculture (Wang, Chang, Yao, & Liang, (2016), arts (Lang, 2018; Friedrichs, 2018), or even in sport (Burmaoglu, 2018; Karabulut & Dogan, 2018). It is important to find out the attitude of young people to entrepreneurship in a specific country because it can to some extent forecast future stagnation or development, either at a local or regional level, which, as stated above, tends to persist for decades.

## **THEORETICAL BACKGROUND**

To set up a business, entrepreneurs must have an entrepreneurial intention upon which they develop a business. The research published so far shows that there is a relationship (dependence) between the entrepreneurial intention and other variables. These variables are divided into external and internal ones and their effects are usually synergistic. Family background (Farrukh, Khan, Shahid Khan, Ravan Ramzani, & Soladoye 2017), culture (Di Giunta & Pantanella, 2014; Minola, Criaco & Obschonka, 2016), education (Kautonen & Palmroos, 2010), prior entrepreneurial experience – even unlawful (Aidis & Van Praag, 2007), can be some of the external predictors, for example. The social environment can also positively influence the willingness to set up a business. Andersson and Larsson (2016) speak about the effects of social interaction, where entrepreneurs living in the neighbourhood influence other local people to become entrepreneurs. Similar conclusions were made by Westlund, Larsson and Olsson (2014) following an extensive analysis.

Apparently, there are particular negative variables as well which can influence entrepreneurial success. Prior unemployment may be such a predictor. People who set up a business when unemployed exhibit worse financial performance and they usually do not employ other persons (Andersson & Wadensjö, 2006). Their lower achievements may result from the fact that they regard entrepreneurship as a necessity. While people who set up a business who were formerly employed see opportunity and challenge in entrepreneurship (Block & Koellinger, 2009; Binder & Coad, 2013). However, the interesting idea that a potential predictor of entrepreneurship may be a hereditament or donation as financial capital necessary for doing business, has not been confirmed (Blanchflower & Oswald, 1998).

On the other hand, internal positive predictors are, for example, personal attitude, perceived behavioural control and perceived relational support (Ambad & Damit, 2016). Another internal predictor for entrepreneurship may be work values. However, the conclusions of the study by Espiritu-Olmos and Sastre-Castillo (2015) suggest that personality traits influence the entrepreneurial intention more than work values. Other authors, such as Karabulut (2016), Wang et al. (2016), Dinc and Hadzic (2018), etc., also refer to the personality traits of an entrepreneur.

Dimensions of personality leading to the development of an entrepreneurial intention most frequently contain an internal locus of control, the need for achievement, risk tolerance and entrepreneurial alertness (Karabulut, 2016). Apparently, personality traits are unique predictors of a successful entrepreneurial intention.

An individual's personality can be investigated in different ways. Relatively reliable psychological diagnostics can be used on the one hand, but their use in practice is limited as they place extreme demands on the time devoted to administration and evaluation as well as the special training necessary for a qualified evaluation and interpretation of the conclusions. On the other hand, researchers have developed a variety of questionnaires and inventories to measure dimensions of personality using tools which are not standardized but focus on identifying those traits important for entrepreneurship.

Big Five, or its modification, is the questionnaire of standardised tools most frequently used in practice, which measures five basic dimensions including Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (Zhao & Seibert, 2006; Brandstätter, 2011; Di Giunta & Pantanella, 2014; Farrukh et al., 2017). The second big group looking into personality traits are non-standardised questionnaires based on self-assessment by respondents. Such questionnaires feature a different scope and level of scale development and they can be successfully used in intercultural comparisons as well (Liñán & Chen, 2009). Some authors create tools that create models based on selected variables (Karimi et al., 2017).

Entrepreneurs must naturally have a certain knowledge of their industry as well as a whole set of general skills and traits to be able to succeed in the marketplace (Lazear, 2004). Prior studies designate the type of behaviour which predicts entrepreneurial success as Type A behaviour (Begley & Boyd, 1987).

## DATA AND METHODS

The objective of the paper was to identify whether university students in Czech-German border areas exhibit the same willingness to set up a business, and whether students who want to set up their own business manifest different personality traits than students who are not willing to. The traits included in this investigation were independence, risk tolerance, creativity, initiative and responsibility. These traits were selected upon the results of a number of studies which looked at traits typical of entrepreneurs (Alstete, 2008; Liñán & Chen, 2009, Burmaoglu, 2018). Consequently, the following hypotheses were defined:

H1 The willingness of university students of economics to set up a business does not differ in the border regions of both neighbouring countries.

H2 There is no difference in self-assessment of the monitored traits between Czech and German students with a similar study focus.

H3 Students who want to set up their own business exhibit statistically significantly different self-assessment of the monitored traits as opposed to students who do not want to.

H4 Self-assessment by students willing to set up their own business does not differ between Czech and German students.

The survey group consisted of students of economics from a Czech and German university. Both were regional public universities, the regions being separated by the state border. The distance between the selected universities is rather small (dozens of kilometres). The Czech Republic was represented by the Faculty of Social Sciences of the Jan Evangelista Purkyně University in Ústí nad Labem (the "FSE UJEP") and Germany by the Hochschule für Technik und Wirtschaft Dresden (the "HTWD"). The selected method was written interviews. The survey group included students of higher classes who already consider their future labour market prospect. The questionnaires were filled in by students during their lessons. Deliberately, the courses with compulsory attendance were selected in order to make sure the files are of sufficient size.

The meritorious questions looked at the interest of students in entrepreneurship and self-assessment of the traits (independence, risk tolerance, creativity, initiative and responsibility). The respective traits were rated on a scale of 1 - 4 (1 strongly agree up to 4 strongly disagree). Answer coding was analogically ascending (i.e., 1, 2, 3, 4). Consequently, lower scores 1 and 2 mean positive responses and 3 and 4 mean a different score of a negative response.

Czech students were provided with a questionnaire in the Czech language and German students with a questionnaire in German. Students filled in the questionnaires in classrooms during classes at both universities (upon prior agreement with the respective teacher). The questionnaires were anonymous. 540 questionnaires were included in the survey group once the data had been checked for correctness and incomplete or improperly filled in questionnaires had been disqualified. There were 269 questionnaires at the FSE UJEP (CZR) and 271 at the HTWD (BRD).

Data were developed using MS Excel and MS STATISTICA followed by the statistical methods: chi-squared test of homogeneity, binomial distributions test, Shapiro-Wilk test, t-test of mean value concordance and the Kruskal-Wallis test.

## RESULTS

### 1. Willingness in students in the Czech-German border areas to set up a business

Firstly, the questionnaires looked at whether there are differences between the groups of Czech and German students in their willingness to set up their own business. The following hypothesis was defined:

H1 The willingness of university students of economics to set up a business does not differ in the border regions of both neighbouring countries.

The Tab. 1 shows that total positive responses (i. e., the option strongly agree, agree and I have already set up a business) occur more frequently in German respondents than in Czech students, in the ratio 150:86.

**Table 1** Willingness to set up a business

Are you planning to set up a business?	FSE UJEP (Czech Republic)		Dresden (BRD)	
	frequency		frequency	
	absolute	relative	absolute	relative
Strongly agree	11	4.09	27	9.96
Agree	67	24.91	119	43.91
Disagree	142	52.79	104	38.38
Strongly disagree	41	15.24	17	6.27
I have already set up a business	8	2.97	4	1.48
	269	100.00	271	100.00

Source: own development

The binomial distribution test looked at whether the number of students of the FSE UJEP and HTWD who do business or who are willing to do business is different. If we designate the

probability of the willingness to set up a business in German students  $\pi_1$  and the probability of the willingness to do business in Czech students  $\pi_2$ , then the null hypothesis is the formula  $H_0: \pi_1 - \pi_2 = 0$ . The opposing alternatives is the formula  $H_1: \pi_1 - \pi_2 > 0$ . The test statistics value is 20.45. This value is higher than the 95% quantile of the standardized normal distribution of 1.645. It was established that the difference is statistically significant. The test confirmed that **there are more students of economics who consider setting up their own business after graduating at the HTWD (Germany) than at the FSE UJEP (Czech Republic)**. The willingness of university students of economics in border regions of both neighbouring countries shows statistically significant differences.

## 2. Self-assessment by students - differences between Czech and German students

The set of monitored personality traits comprised: independence, risk tolerance, creativity, initiative and responsibility. In the questionnaires, students evaluated in a scale from 1 (strongly agree) up to 4 (strongly disagree) whether they believe they exhibit these traits.

The second hypothesis was defined:

H2 There is no difference in self-assessment of the monitored traits between Czech and German students with a similar study focus.

To establish differences in both groups the chi square test was used to test the homogeneity of both groups (Czech and German students) in all five monitored traits, i.e., independence, risk tolerance, creativity, initiative and responsibility. To use the test, it was necessary to join negative responses into one. Firstly, all the students were assessed for whether they are willing to do business or not. The results are shown in Tab. 2.

**Table 2** Self-assessment by Czech and German students

trait	p-value
independence	0.27747
risk tolerance	0.35491
creativity	0.58469
initiative	<b>0.01384</b>
responsibility	0.97624

Source: own development

The results suggest that Czech and German students **assess themselves differently only in the initiative trait**. The homogeneity of both groups in all other traits is not rejected. The p-value shows that the largest concordance of both groups is in the responsibility trait. As Tab. 3 suggests, self-assessment by students is rather positive. Only a few students stated that they believe they are non-selfgoverning and irresponsible. Nearly the same quantity of negative self-assessment occurs in Czech and German students.

**Table 3** Self-assessment results - absolute frequencies

trait	Group	Strongly agree	Agree	Disagree	Strongly disagree
independence	German	127	128	12	4
	Czech	112	145	11	1
risk tolerance	German	74	143	53	1
	Czech	62	142	62	3
creativity	German	66	118	77	10
	Czech	61	132	69	7
initiative	German	67	163	39	2
	Czech	49	151	67	2
responsibility	German	174	87	7	3
	Czech	175	84	7	3

Source: own development

As for initiative, the differences in self-assessment by the addressed students in both countries are better shown in the relative frequencies listed in Tab. 4.

**Table 4** Relative frequencies in the initiative trait

	Strongly agree	Agree	Disagree	Strongly disagree
German	0.247232	0.601476	0.143911	0.00738
Czech	0.226766	0.490706	0.256506	0.026022

Source: own development

As for this trait, the addressed Czech students assess themselves as having less initiative than students from Germany. The probability concordance was tested using relative frequencies (see Table 4). The null hypothesis assumed the probability concordance that the number of students in the Czech Republic and Germany is equal in each of the 4 possible responses (strongly agree, agree, disagree, strongly disagree). The alternative hypothesis was bilateral, hence the rates are different. The test statistics values are listed in Tab. 5.

**Table 5** Test statistics – concordance of the initiative trait

response	test statistics value
Strongly agree	0.57902
Agree	2.60891
Disagree	-3.2936
Strongly disagree	-2.5261

Source: own development

The critical value is 1.96 (97.5% quantile of the standardized normal distribution). This value was exceeded by the absolute value of the test statistics in the response agree, disagree and strongly disagree. These responses exhibit statistically significant differences in the number of students in the Czech Republic and Germany. **It was confirmed that Czech students believe they have less initiative than German students.** It can be stated upon the established results that there is no difference between Czech and German students with a similar study focus in the self-assessment of independence, risk tolerance, creativity and responsibility. A statistically significant difference was established in the initiative trait.

### 3. Identification of differences in the personality traits in student “entrepreneurs” and “non-entrepreneurs”

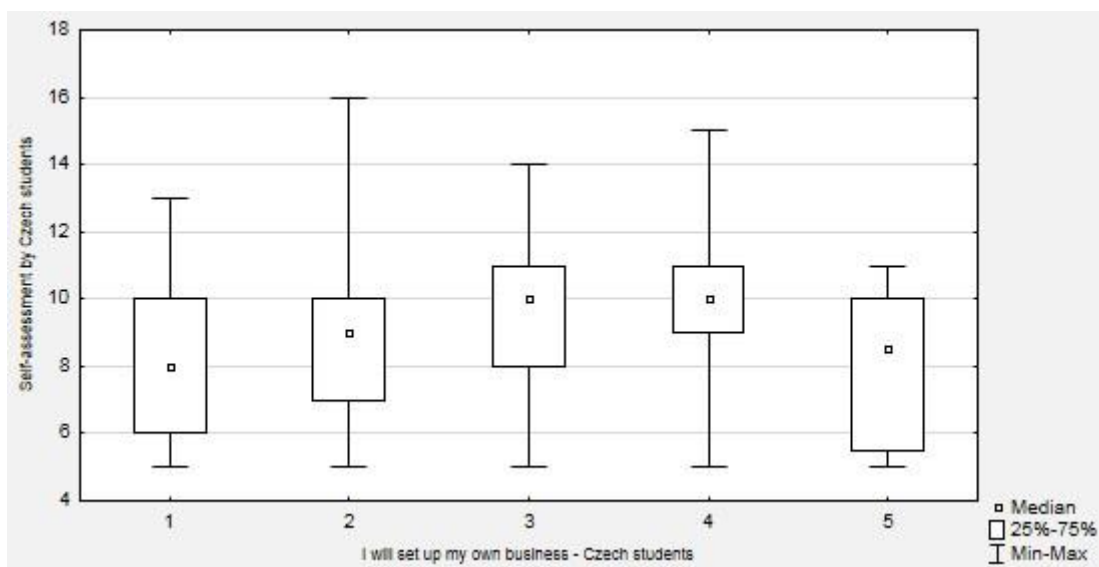
The continuous variable of self-assessment was created according to the following formula:  $S = a + b + c + d + e$ , where  $a, b, c, d, e$  stand for the investigated traits: independence, risk tolerance, creativity, initiative and responsibility. This variable can be considered continuous. The questionnaire looked at whether the mean value of students’ self-assessment varies depending on whether they want to set up their own business. H3 was defined:

H3 Students who want to set up their own business exhibit statistically significantly different self-assessment of the monitored traits as opposed to students who do not want to.

#### 3.1 Students of the FSE UJEP (Czech Republic)

Firstly, it was investigated how self-assessment by the FSE UJEP students varies in connection with their attitude to entrepreneurship.

**Figure 1** Boxplot of the self-assessment variable (FSE UJEP)



Source: own development

The chart shows whether the students' self-assessment varies according to their attitude to entrepreneurship (1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree and 5 = I have already started my own business). The lower the value, the more positive the self-assessment. Fig. 1 shows that lower median values appear in individual responses to entrepreneurship in the options I have already started my own business, I will definitely do business, I might do business. A higher median value of self-assessment appears in the responses I might not do business and I will definitely not do business. Apparently, students who are not willing to do business score higher in self-assessment, i.e., the investigated traits are not represented at such a level as in students who want to set up their own business.

Fig. 1 indicated that students who want to set up their own business feature different variables of self-assessment than students who do not want to; nonetheless, it is not apparent whether these identified differences are statistically significant.

The differences could be verified using the ANOVA test, provided that the data come from normal distribution. This was verified using the Shapiro-Wilk test (Tab. 6).

**Table 6** Shapiro-Wilk test verifying normality of the self-assessment variable – group of Czech students (FSE UJEP)

	SW-W	p
Strongly agree	0.9532	0.6852
Agree	0.9311	0.0011
Disagree	0.9678	0.002
Strongly disagree	0.9698	0.3388
I have already set up a business	0.8566	0.1412

Source: own development

The data did not convincingly prove normality in all investigated categories. A nonparametric test had to be used – the Kruskal-Wallis test. The test results with pair comparisons are shown in Tab. 7.

**Table 7** Kruskal-Wallis test – self-assessment of Czech students (p values)

self-assessment of Czech students	strongly agree	agree	Disagree	strongly disagree	I have already set up a business
Strongly agree		1	0.69989	0.420241	1
Agree	1		<b>0.001588</b>	<b>0.005708</b>	1
Disagree	0.69989	<b>0.001588</b>		1	1
Strongly disagree	0.420241	<b>0.005708</b>	1		0.692916
I have already set up a business	1	1	1	0.692916	

Kruskal-Wallis test:  $H(4, N= 269) = 21.39465, p = 0.0003$

Source: own development

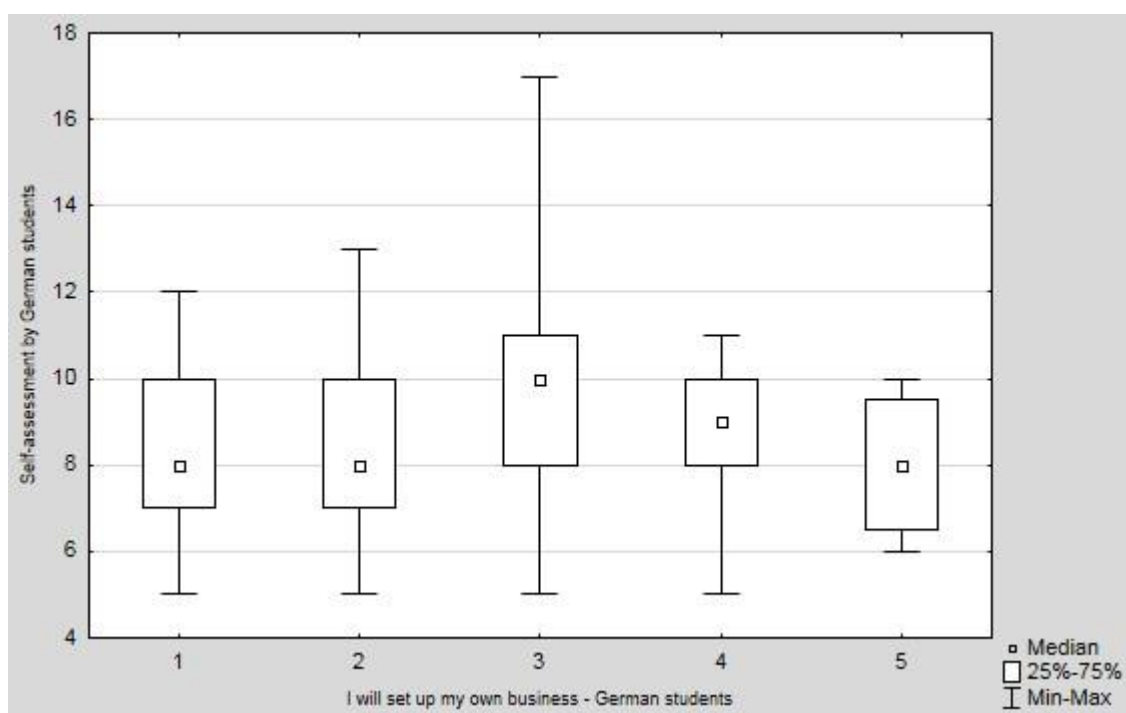


Tab. 7 suggests that the self-assessment variable medians **statistically vary in students who might want to set up their own business and students who might not or definitely do not want to do business**. It was confirmed that the willingness of Czech students to run a business links to a more positive self-assessment.

### 3.2. Students of the HTW Dresden (Germany)

German students studying a similar field of study were asked the same question. The questionnaire looked at whether the self-assessment by students who want to set up their own business vary from students who do not want to.

**Figure 2** Boxplot of the self-assessment variable (HTWD)



Source: own development

Fig. 2 also clearly shows that German students who want to set up their own business assess themselves in the monitored traits more positively than those who do not want to, although the established difference is not as significant as in Czech students.

The ANOVA test could not be used in this case either, as the data normality was not verified by the Shapiro-Wilk test at all levels.

**Table 8** Shapiro-Wilk test verifying normality of the self-assessment variable – group of German students (FSE UJEP)

	SW-W	p
Strongly agree	0.9339	0.086
Agree	0.957	0.0008
Disagree	0.9735	0.0352
Strongly disagree	0.9231	0.1663
I have already set up a business	0.9497	0.7143

Source: own development

Its nonparametric equivalent - the Kruskal-Wallis test, was used accordingly. The results are displayed in Tab. 9.

**Table 9** Kruskal-Wallis test – self-assessment by German students (p values of pair comparisons)

self-assessment of German students	Strongly agree	Agree	Disagree	Strongly disagree	I have already set up a business
Strongly agree		1	<b>0.017138</b>	1	1
Agree	1		<b>0.000012</b>	1	1
Disagree	<b>0.017138</b>	<b>0.000012</b>		0.832349	0.945033
Strongly disagree	1	1	0.832349		1
I have already set up a business	1	1	0.945033	1	

Kruskal-Wallis test:  $H(4, N= 271) = 27.66433$   $p = 0,0000$

Source: own development

Self-assessment medians in **German students who want to set up their own business and in students who do not want to statistically vary**. It was established that the monitored traits of German students are also represented more significantly in the self-assessment by students who want to set up their own business rather than students who do not want to.

Hence, the answer to the formulated H3 is that students who want to set up their own business exhibit statistically significantly different self-assessment of the monitored traits as opposed to students who do not want to, and this hypothesis was confirmed in both Czech and German students.

#### **4. Comparison of self-assessment by entrepreneurially- oriented Czech and German students**

The investigations of the last hypothesis verified whether the self-assessment by students from neighbouring countries who want to set up their own business or those who have already started business varies. H4 was defined:

H4 Self-assessment of students who want to set up their own business does not vary in Czech and German students.

The mean value concordance of self-assessment was established using the t-test.

**Table 10** T-test – mean value concordance in the self-assessment between Czech and German students who want to run a business

T-tests; Grouping: Group 1: Group 2: CZ									
Mean DE	Mean CZ	t-value	p	N DE	N CZ	S.D. DE	S.D. CZ	F-ratio Var.	p Var.
8.373	8.384	-0.038	0.970	150	86	1.961	2.154	1.206	0.318

Source: own development

The results suggest that the mean value concordance was not rejected. This means that **Czech and German students considering doing business assess themselves equally.**

For the sake of completeness, it was also tested whether the self-assessment by Czech and German students who do not want to run a business will statistically vary.

**Table 11** T-test – mean value concordance in the self-assessment between Czech and German students who do not want to run a business

T-tests; Grouping: Group 1: DE Group 2: CZ									
Mean DE	Mean CZ	t-value	p	N DE	N CZ	S.D. DE	S.D. CZ	F-ratio Var.	p Var.
9.702	9.607	0.416	0.677	121	183	2.088	1.886	1.225	0.215

Source: own development

The mean value concordance was not rejected in this case, either. **Hence, the self-assessment by German and Czech students who do not want to set up a business does not vary.** It suggests that there are statistically significant differences in the self-assessment of the selected traits between “entrepreneurially-oriented” students and those “not entrepreneurially-oriented”, irrespective of nationality. The identified differences will be quantified in the following part.

## 5. Identification of different traits between students who want to set up a business and those who do not want to

Finally, the statistical significance of the monitored traits in the varying self-assessment by Czech students who want to be self-employed and those who do not want to was verified. It

was necessary to join negative responses into one category for the test due to the small representation of responses in the “strongly disagree” category.

Tab. 12 shows the p-values of the chi square test of homogeneity of the group of Czech students willing to be self-employed and those who are not.

**Table 12** P-values of homogeneity tests of individual traits in Czech students

trait	p-value
independence	0.050992121
risk tolerance	3.63438E-09
creativity	0.035310906
initiative	0.000228594
responsibility	0.146471

Source: own development

The table shows that both groups of Czech students (who want to be self-employed and those who do not want to) vary not only in the responsibility and independence trait (however, its p-value is on the edge). Responses to all other traits vary in all other traits. The p-value clearly shows that **the largest difference** between both groups is exhibited in the **risk tolerance trait**.

Finally, the traits identified as varying were investigated in terms of where the possible scale responses vary. The binomial distribution test was used. It tested whether the number of students responding to individual traits varies positively or negatively. The null hypothesis was the concordance of the numbers, the alternative hypothesis was one sample. The following table shows the test criterion variables (Tab. 13).

**Table 13** Identification of varying self-assessments in the group of Czech students

Test criterion	Strongly agree	Agree	No
risk tolerance	5.953685	-1.93735	-3.59792
creativity	2.341049	-0.31402	-1.82864
initiative	3.500554	-0.07248	-3.01155

Source: own development

The table suggests that variables greater than the critical variable 1.65 in the responses strongly agree in all traits where a difference was established. The variable is most significantly exceeded in the risk tolerance trait. This means that Czech students willing to be self-employed **marked the option "strongly agree" significantly more frequently in the self-assessment** than students who are not willing to.

The “agree” responses exhibit significant difference only in the **risk tolerance trait**. There are demonstrably more students who are not willing to be self-employed, and as for the

creativity and initiative traits, the number of students who selected this response does not vary between "future entrepreneurs" and "future employees".

Negative scores (strongly disagree and disagree) were selected by a bigger percentage of those who are not willing to be self-employed than those who want to be self-employed in all traits where a variance was identified (risk tolerance, creativity and initiative).

The homogeneity of the groups of German students who want to be self-employed and those who do not want to was tested using the chi-squared test, similarly as in the group of Czech students. The disagree and strongly disagree responses were joined into one category, "no", due to the small representation in this case as well. Tab. 14 suggests that both groups are homogenous as far as responsibility, but both groups of students vary in the self-assessment of the independence, risk tolerance, creativity and initiative traits.

**Table 14** P-values of homogeneity tests of individual traits in German students

trait	p-value
independence	0.019815913
risk tolerance	2.72865E-08
creativity	0.006753055
initiative	0.01610666
responsibility	0.600191011

Source: own development

It was finally investigated which type of responses to the traits where diversity was established feature varied percentage in German students. It was monitored where the test criterion exceeds the critical value 1.65 (eventually -1.65).

**Table 15** Identification of varying self-assessments in the group of German students

test criterion	Strongly agree	Agree	No
independence	2.3764	-1.43154	-1.99909089
risk tolerance	4.1727	-0.2818	-4.86064
creativity	2.980278	-0.5702	-2.13437
initiative	2.52517	2.09703	-1.94159

Source: own development

Tab. 15 shows that students with entrepreneurial orientation select the yes response significantly more frequently in all traits where a difference was identified. The most significant was in the risk tolerance trait. As for the “agree” response, there was a statistically significant number of students willing to be self-employed only in the initiative trait. The number of “future

entrepreneurs” and “future employees” does not significantly vary in all other traits. On the other hand, there are significantly more students not willing to set up their own business in all traits in the no response. Lastly, both Czech and German students willing to set up their own business scored positively significantly more frequently in the self-assessment of the monitored traits (strongly agree, agree), whereas students not willing to be self-employed preferred negative scores more frequently. All the monitored traits play an important role and should be represented in the personality profile traits of entrepreneurs, while risk tolerance appears to be the fundamental monitored trait.

## DISCUSSION

This article investigated the rate of latent entrepreneurship between Czech and German students, with German students showing statistically significantly greater interest in entrepreneurship as an alternative for their labour market prospects. Blanchflower and Stutzer (2001) established a varying potential between both nations as well. Their conclusions suggest that the highest rate of latent entrepreneurship is in Poland, the USA and Portugal. A very high rate of latent entrepreneurship (80%) was established in Poland. On the other hand, the lowest rate was established in Norway, Denmark and Russia (around 20%). Another important finding made by Blanchflower and Stutzer was that for individuals the probability of preferring to be self-employed strongly falls with age, while the probability of being self-employed strongly rises with age). Singh and DeNoble (2003) also confirm that people who had retired return to the labour market as self-employed within a short time, which is designated as bridge employment.

The findings of this study should be interpreted in this context, where the preference of being self-employed was selected by only approx. 32% Czech students and 56% of German students. Accordingly, a different rate of latent entrepreneurship between individual nations has been confirmed regardless of the proximity (cross-border regions). Since the respondents were only young people, their attitude will probably change with age according to the findings made by Blanchflower and Stutzer (2001). Similar conclusions, i.e., the identification of differences in the preference for being self-employed between individual nations and cultures and the influence of age on entrepreneurship, were made by other authors as well, e.g., Minola, Criaco and Obschonka (2016). Giacomini, Janssen and Shinnar (2016) investigated the level of business optimism between American, Spanish and Amerindian students. The highest level of business optimism was noted in American students. Their optimism is frequently based on their expectations of unrealistic advantages following from being self-employed.

Education plays an important role in increasing the interest in being self-employed as well as eliminating the unrealistic expectations of students. Education in the field of entrepreneurship was proved to positively influence students' attitudes to entrepreneurship, particularly according to research conducted in less developed countries (Chaguay & García, 2016; Zubairu, 2016; Widayat & Ni matuzahroh, 2017; Kiyani, 2017; Ali Sher et al., 2017; Bako, Ajibode Oluseye, & Aladelusi, 2017; Ahsan, Zheng, DeNoble, & Musteen, 2018 and others). It is interesting to compare research into the benefits of entrepreneurship education in more economically developed countries where the effects of education are not so explicit (Welsh, Tullar & Nemati, 2016; Hayes & Richmond, 2017). The type of education has a completely different role, attention being focused on the development of creativity and innovation (Degen, 2013) or looking for new forms of education (Darnell & Means, 2017; Ramsgaard & Østergaard, 2018; Chang, Hsiao, Chen, & Tsung-Ta, 2018) rather than on the basics of entrepreneurship. However, some contemporary research warns that entrepreneurship education is necessary even in European countries as its possible influence on students' motivation towards entrepreneurship is often underestimated (Kourilsky & Walstad, 2017; Kamovich & Foss, 2017). It is also interesting to find out, that while Czech students are mostly willing to study in tertiary education in order to find employment (Skořepa & Pícha, 2012), they are often not ready to find employment through starting their own business.

One of the findings made in this study was that Czech and German students considering being self-employed have similar self-assessment. The same finding was made by other authors as well. Chan, Uy, Chernyshenko, Ho, and Sam (2015), for example, state that students motivated to entrepreneurship and management, seem to be more similar than others.

The risk tolerance was one of the traits investigated in this study. This trait appears to be fundamental for entrepreneurs. A risk can be perceived as a threat or potential loss on the one hand, or as an opportunity or challenge on the other. The tendency towards or aversion to risk then influences an individual's perception of barriers in entrepreneurship (Giacomin, Janssen, & Shinnar, 2016; Markowska, Grichnik, & Brinckmann, 2018).

Other traits of an entrepreneur's personality traits could be investigated in further investigations. Such a trait is stress resistance, for example. It was established that entrepreneurs who do not employ other persons exhibit substantially less stress than those who employ other persons (Hessels, & van der Zwan, 2017). Accordingly, creating larger businesses means greater stress resistance. Finally, it is important to note that not all students who declare their intention to start a business during their studies really set up a business in the future. One of the

latest studies (Ferreira, Loiola, & Gondim, 2017) compared two groups of students – one group comprised students who wanted to start a business, the second group comprised students who have already started a business. The groups exhibited different motivation to entrepreneurship (financial motivation in students – entrepreneurs as opposed to social motivation in students who intend to do business), but both groups exhibited the same traits equally (e.g., cautious risk tolerance). This study comparing Czech and German students could not verify similar findings as both groups comprised a very small number of students who already do business.

## CONCLUSION

Entrepreneurship plays an important role in all economies, so it is important to pay attention to the new generation of future entrepreneurs. The objective of this article was to identify whether current students of economics at a regional public university are willing to be self-employed and whether such willingness is the same in university students in neighbouring regions, even between countries, i.e., Czech Republic and Germany in this case. The willingness of university students of economics to start business in the border regions of both neighbouring countries shows statistically significant differences. German students exhibit significantly greater interest in entrepreneurship than Czech students. There is an opportunity for further research into how the situation can be changed. It could help Czech students if greater emphasis was placed on the extent and forms of entrepreneurship education.

At the same time, the research wanted to establish whether students willing to be self-employed exhibit different personality traits than those who are not. The total assessment of the differences between Czech and German students in the self-assessment revealed that Czech students assess themselves as having less initiative than their German peers, otherwise, the self-assessment by students does not show any significant differences. However, statistically significant differences in the self-assessment were identified between students who want to set up their own business and those who do not want to, if the group was divided according to interest in entrepreneurship (not according to region/country). Such findings confirm the presumption that the personality of an entrepreneur, apart from other aspects (financial, professional and social), is very important for entrepreneurship. Traits such as independence, risk tolerance, creativity, initiative and responsibility were investigated in this survey. These traits seem to differentiate the “entrepreneurial” profile from the “non-entrepreneurial” profile. Students willing to do business scored these traits positively in their self-assessment statistically significantly more frequently compared to students who do not want to be self-employed, who



scored the answers negatively. Risk tolerance plays a fundamental role among the investigated traits.

The findings have an important practical application. Governments of the countries and regional authorities create good conditions for entrepreneurship because it represents economic growth and prosperity. In their curricula, the schools (high schools and universities) seek to develop entrepreneurial thinking among their students and support their entrepreneurial intentions. This effort will be more effective if all the above mentioned entities respect the specific personality characteristics identified in this research. Personality traits are crucial variables that distinguish future entrepreneurs from “non-entrepreneurs”. It is necessary to take these variable into consideration when measuring the effectiveness of business support or education.

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## **IMPORTANCE OF MARKETING COMMUNICATION TOOLS WITH REGARDS TO THE COMPETITIVENESS OF MINI-BREWERIES**

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### **Abstract**

In accordance with the general world trend, a new form of breweries expands in the Czech beer market – mini-breweries. More than 220 new mini- breweries have been established in the period 2013-2016. This tendency does not let up. As the number of mini-breweries increases, we can inspect a strengthening competing pressure in this sector. Mini-breweries are supposed to start to really compete within among themselves and fight for customers. The data collection was done in January 2017 by means of an electronic survey on all population of mini-breweries (350 companies registered by December 31, 2017). The response rate was 41%. The aim of the paper is, by means of the descriptive statistics methods, to find out, what marketing tools the small breweries' managers or proprietors consider as most important with regards to the competitiveness of their business. The collected data were analysed by means of one-way classification according to the defined segmentation criteria. Most of respondents consider a good reputation (89%), recommendation of current clients (85%), and own website (60%) to be most important communication tools.

Keywords: mini-brewery, local, marketing, communication, promotion

### **INTRODUCTION**

In present days, the Czech beer market experience establishing of a new form of breweries – mini-breweries. The increase of the number very strong in recent years not only in the Czech Republic (Theuvsen, 2005; Ellis & Bosworth, 2015; Colen, 2016; Chlebicka, Fałkowski, & Lichota, 2018). Emerging mini-breweries represent an important factor of the economic development of regions or even rural areas (Ellis & Bosworth, 2015) and of their business activity. By the end of 2016, 350 mini-breweries operated in the Czech Republic, and some of them have already firmly established, with a progressively increasing volume of the beer produced and number of staff and they are extending their activity. Other mini-breweries do not intend and seek to increase their production even because of their short existence or due to their initial objective. Researchers show two main reasons for establishing a mini-brewery (Cabras, 2016). The first reason is a pure enthusiasm for bear and an intention to brew a beer according to meet requirements of themselves for taste and quality. The latter are particularly

caused by a volume of undesirable matters in beer. According to Belakova (2017), undesirable matters were revealed in 83% of beer samples from retail shops in the Czech Republic. The volume of such matters was inconsiderable, nevertheless. The second reason is a business plan. Similarly to other quickly growing markets (of more than 10% annually), the mini-brewery market is attractive for many investors, who observe an important boom in this sector. The paper deals with a perceived importance of marketing tools by proprietors or managers, in connection with building a market position and competing for clients.

## **THEORETICAL BACKGROUNDS**

Small and middle enterprises play a strong role in world economy (Beck, Demirguc-Kunt, & Levine, 2005; Lukács, 2005) and so they do in case of a regional economy and regional development. They are considered an important engine for economic growth in terms of both employment and gross domestic product (Bocconcelli et al., 2018).

Marketing communication is a term used to encompass every aspect of the visual, written, spoken or sensory interaction between a business and its market or markets (Cooper and Lane, 1997: 133)

It is mostly about a commercial communication, the objective of which is, based on the transmitted information, to influence cognitive, motivational and decision-making processes of those who we should address in accordance with our intentions (Vysekalová & Komárková, 2002)

Marketing communication in SMEs has its limitations issuing from the size of the enterprise and consequently from problems, such a lack of budget or lack of human resources. Some theories (Schmid, 2014) mention also limited information sources and experience.

Several theoretical bases could be used to systemize marketing communication techniques and tools, for instance a part of 4P as adopted by Kotler (2003) – communication mix – that in his conception comprises advertising, direct marketing, personal selling, public relations and sales promotion. Another approach is represented by De Pelsmacker's (2001) marketing communication tools – advertising, sales promotion, sponsorship, public relations, personal selling, direct marketing, point-of-purchase communications, exhibitions and fairs and internet.

All the above-mentioned techniques and tools are used in the brewery industry. Their employment depends always on the particular situation. One of the most important factors that influence constitution of the communication mix is the size of the brewery, or more precisely its financial power, then specifics of the administered segment of customers (Castilione, 2011).

From that point of view, we can distinguish a mass marketing communication that use mass communication tools and focus as big number of potential customers as possible. It is used by large industrial breweries. A targeted marketing communication use personal communication channels and focus a particular group of customers. This marketing communication serves to mini-breweries (Kotler, 2003). Industrial breweries that realize an expensive TV-advertisement lived a decrease of the volume of beer produced of 5% in 2015 and then again of 10% in 2016 (the expansion of mini-breweries could be a reason of this situation). On the contrary, some regional breweries decreased considerably their budget for a classic communication and yet they increased their volume of beer produced. For instance, the brewery Svijany used the word-of-mouth method and it increased its volume of beer produced twofold in 2013 (Kozák, 2014).

Mini-breweries are newcomers in the Czech beer market and they communicate with their customers particularly through their product – beer. Their main assets are uniqueness and localness (Toro, 2014). The word-of-mouth communications predominates in their promotion, and the information spreads thanks to satisfied visitors to breweries and fans of unconventional beers (Stoklasek, 2013) spread it. This phenomenon has an overlap – similarly to the wine tourism – the beer tourism (Duda, 2013; Kraftchick, 2014). A number of mini-breweries provide accommodation and catering services (Kozák, Bartók, & Honzková, 2017). and help thus strengthen tourism in the area and then further support local economies.

As already mentioned above, the most important factor influencing the mini-breweries' choice of marketing tools, is their budget (George, 2013). This is why mini-breweries mostly do not use the mass communication tools and channels (such expenditures would be very probably inefficient considering the target groups of customers). They use, however, personal, targeted marketing channels, such as regional press, social media or other more appropriate and less expensive ways to address regional or even local markets.

A very common approach also is to become a member in organisations that associate mini-breweries, for instance Association of small breweries, Club of small breweries, Czech-Moravian union of mini-breweries, etc. These associations organize common meetings and events through which they spread awareness of small breweries among potential customers and contribute this way to increasing customers' interest in the products of small breweries (Kozák, 2013).

Products of mini-breweries could mostly be considered as local or regional product. They usually influence local economy within their action radius, using local source (particularly manpower, but also some materials or ingredients), so they could be considered as an activation



of indigenous resources that can be a take-off point of long-term development (Káposzta, Ritter, & Kassa, 2015). Their production could also issue from local traditional procedures, to respond to the local taste specifics of consumers or else to contribute to the sense of belonging of inhabitants, and to strengthen their relation to their place of living, which was a longterm phenomenon in the traditional beer regions (which the Czech Republic historically is). Thus the small breweries could satisfy the recently increasing consumer demand for local products. The emergence of the boom of mini-breweries is then also encompassed with global trends – the search for “local” (Chlebicka, Fałkowski, & Lichota, 2018; Nezdeř, & Alpek, 2018; Pícha, & Skořepa, 2018). “Localness” should be communicated by means of the surveyed tools as it could be a strengthening element when attracting consumers (Pícha, Skořepa, & Navrátil, 2013; Pícha, Navrátil, & Švec, 2018). The aim of the paper is, by means of the descriptive statistics methods, to find out, what marketing tools the small breweries’ managers or proprietors consider as most important with regards to the competitiveness of their business.

### **Hypotheses**

Hypothesis 1: minibreweries use rather money-extensive communication tools

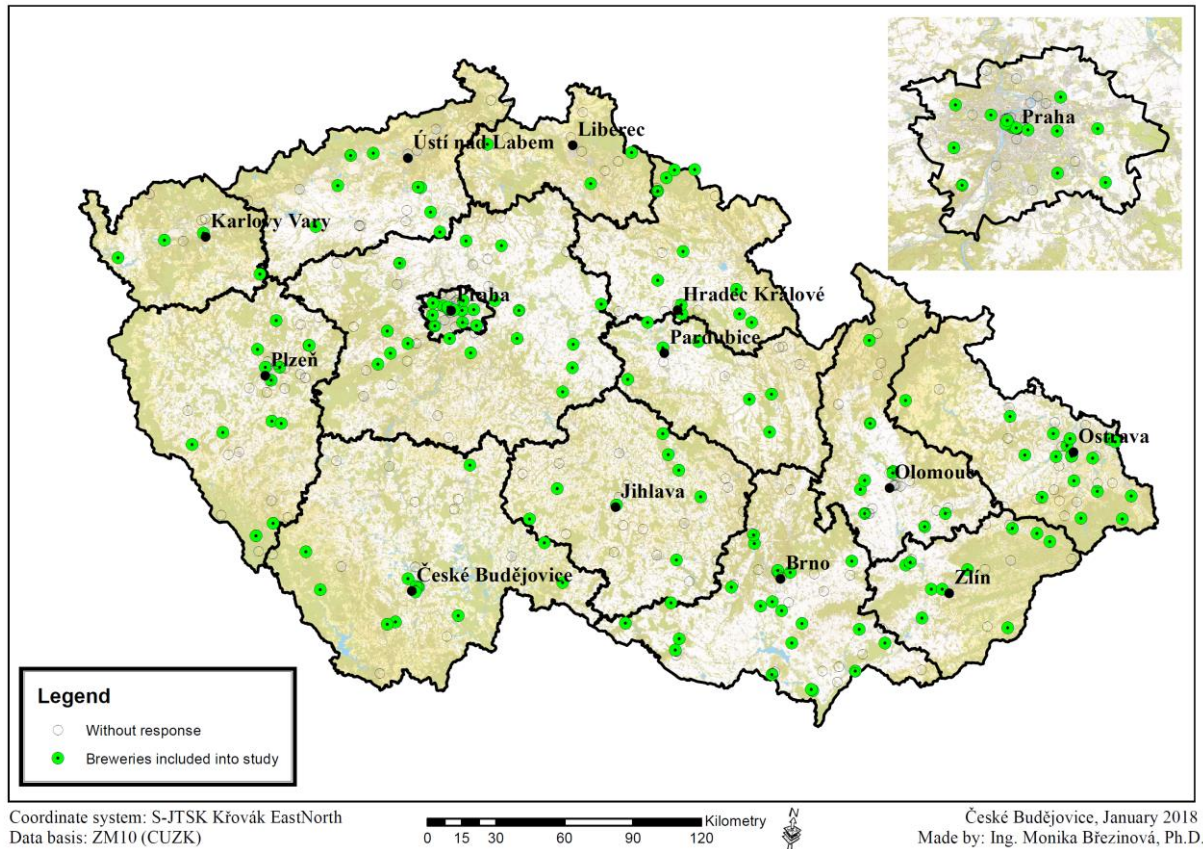
Hypothesis 2: minibreweries put the main emphasis on local media in their marketing communications

## **METHODS**

### **Data collection**

Method of electronic questionnaire survey was adopted to collect the data. The survey took place in January 2017. We addressed all population (350 mini-breweries), i.e. all mini-breweries that were registred at that moment in the Czech Republic. The response rate was 41% (145 mini-breweries). The geographical structure of the surveyed sample could be seen at the Fig. 1).

**Figure 1** Geographical structure of surveyed mini-breweries



Source: own research

## Data analysis

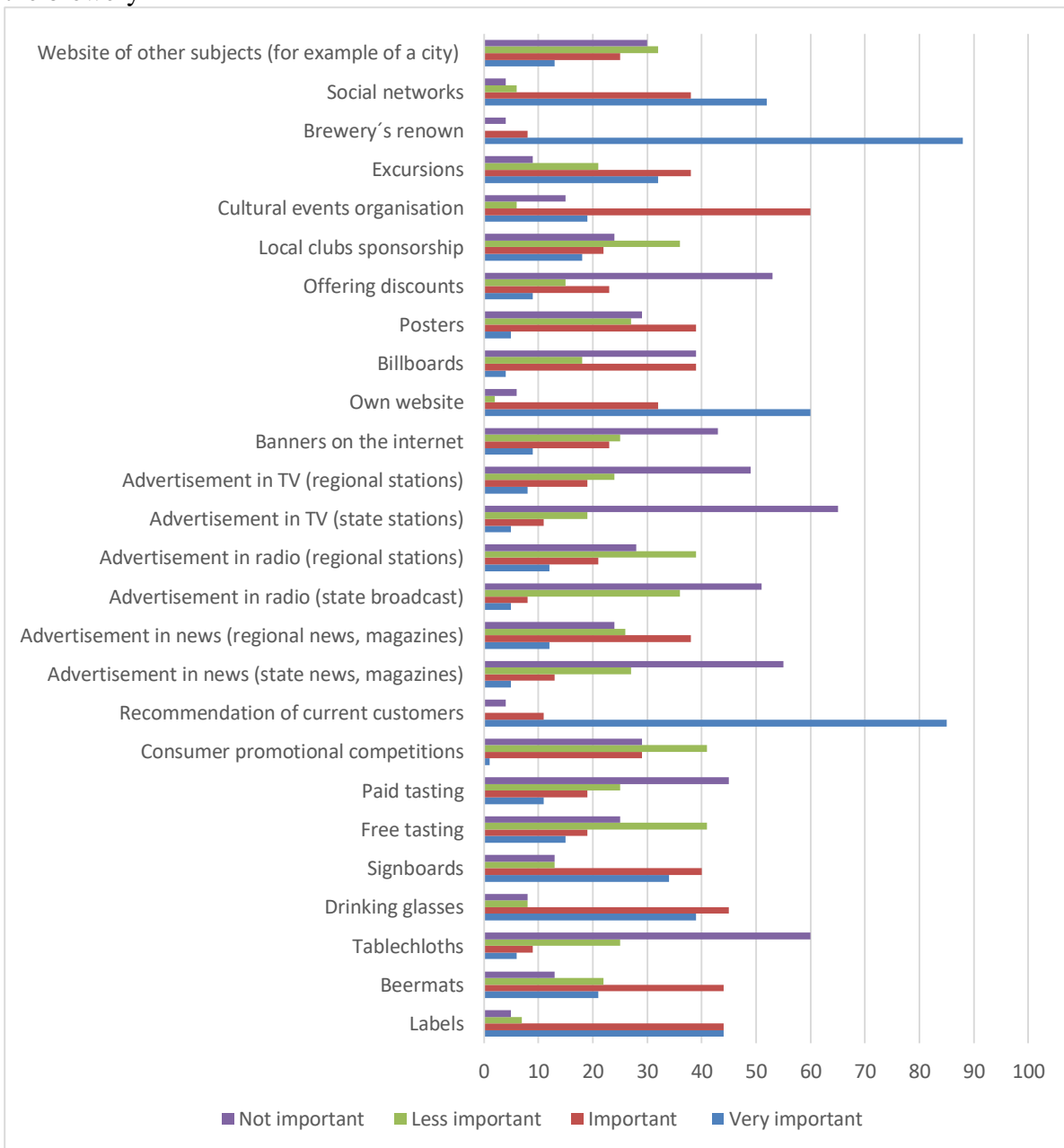
Descriptive statistical methods were used to analyse the collected data – absolute frequency and contingency tables. The results are presented by means of graphs and tables. The particular results were assessed according to the following segmentation criteria – year of company formation, location (inside of the town, at the periphery of the town, out of the town) and existence of the own restaurant or pub.

## Results and discussion

Fig. 2 shows the proprietors' evaluation of particular marketing communication tools in relation to the competitiveness of their mini-breweries. The proprietors perceive a good name/reputation of the brewery as most important (89%); the second most important is a recommendation of existing customers (85%) that is spread through word-of-mouth (WoM). The WoM technique do not require any costs to disseminate information – it is based on a quality product that costumers recommend among themselves. Further important marketing communication tools are social networks (53%) and their own website (60%) that represent other “low-cost” tools. They are followed by drinking glasses (39%), labels (42%) and brewery signs or restaurant signs (34%). These tools that help to identify the product are indispensable in the brewery sector. Another identified important factor are excursions (32%) that aim for one

thing to get visitors acquainted with the production in the particular brewery, with ingredients, with the types of beers and for another thing of course to offer the possibility to taste the beers. Taste and testing are an important element of so called sensory marketing (Géci, Nagyová, & Rybanská, 2017). Generally, we can conclude that proprietors do not perceive the marketing communication tools as strongly important for their competitiveness in the contrast to the quality and taste of the product. The exception is the good name of the brewery and recommendation of existing customers that are perceived as important by 90% of surveyed breweries.

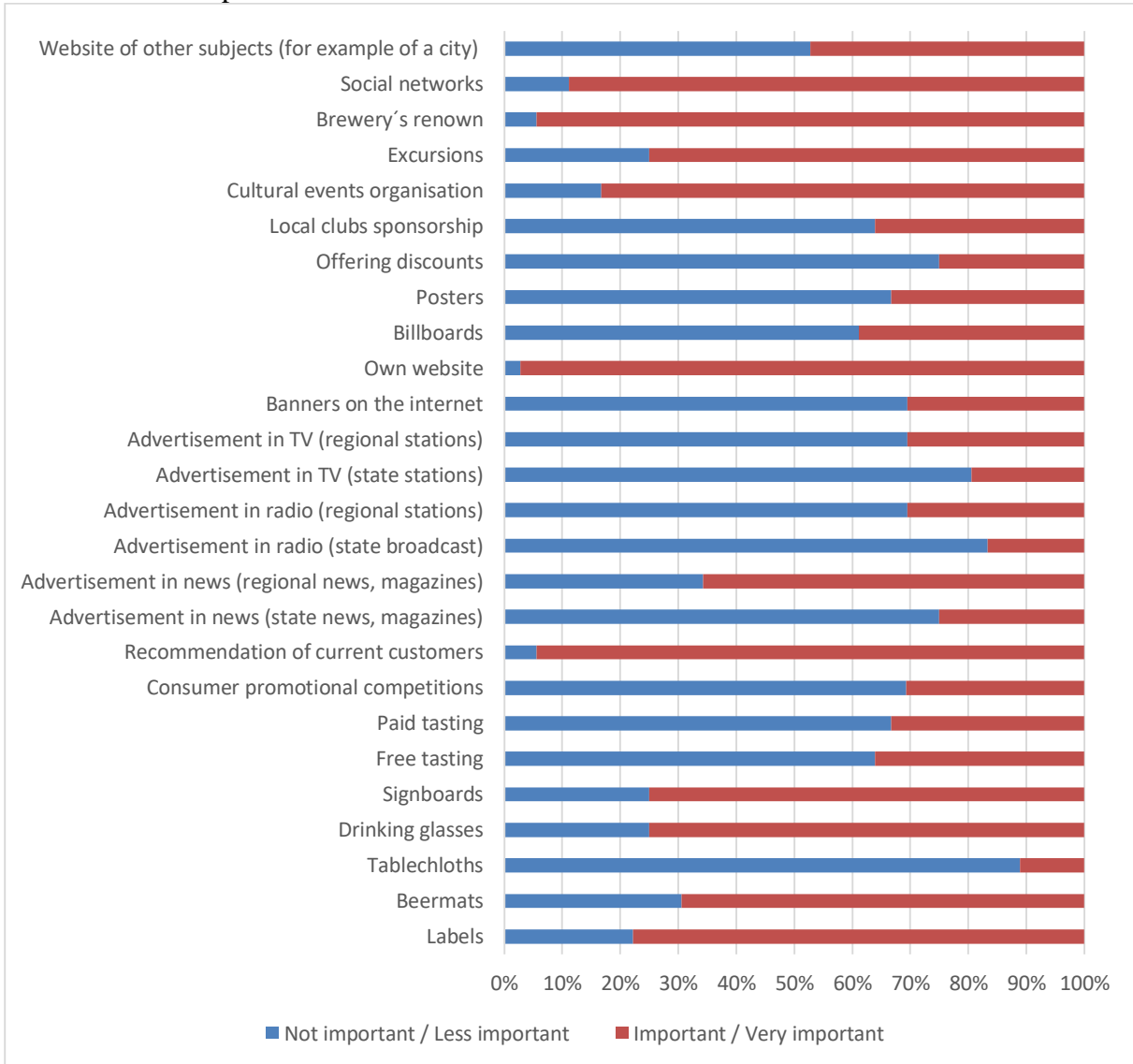
**Figure 2** Importance of marketing communication tools in relation to the competitiveness of the brewery



Source: own research

Further results according to the segmentation criteria are presented in subsequent parts of the paper in fig. 3 to 9. The answers “not important” and “less important” were grouped and so were even the items “important” and “very important”.

**Figure 3** Importance of particular marketing communication tools for mini-breweries with their own restaurant or pub

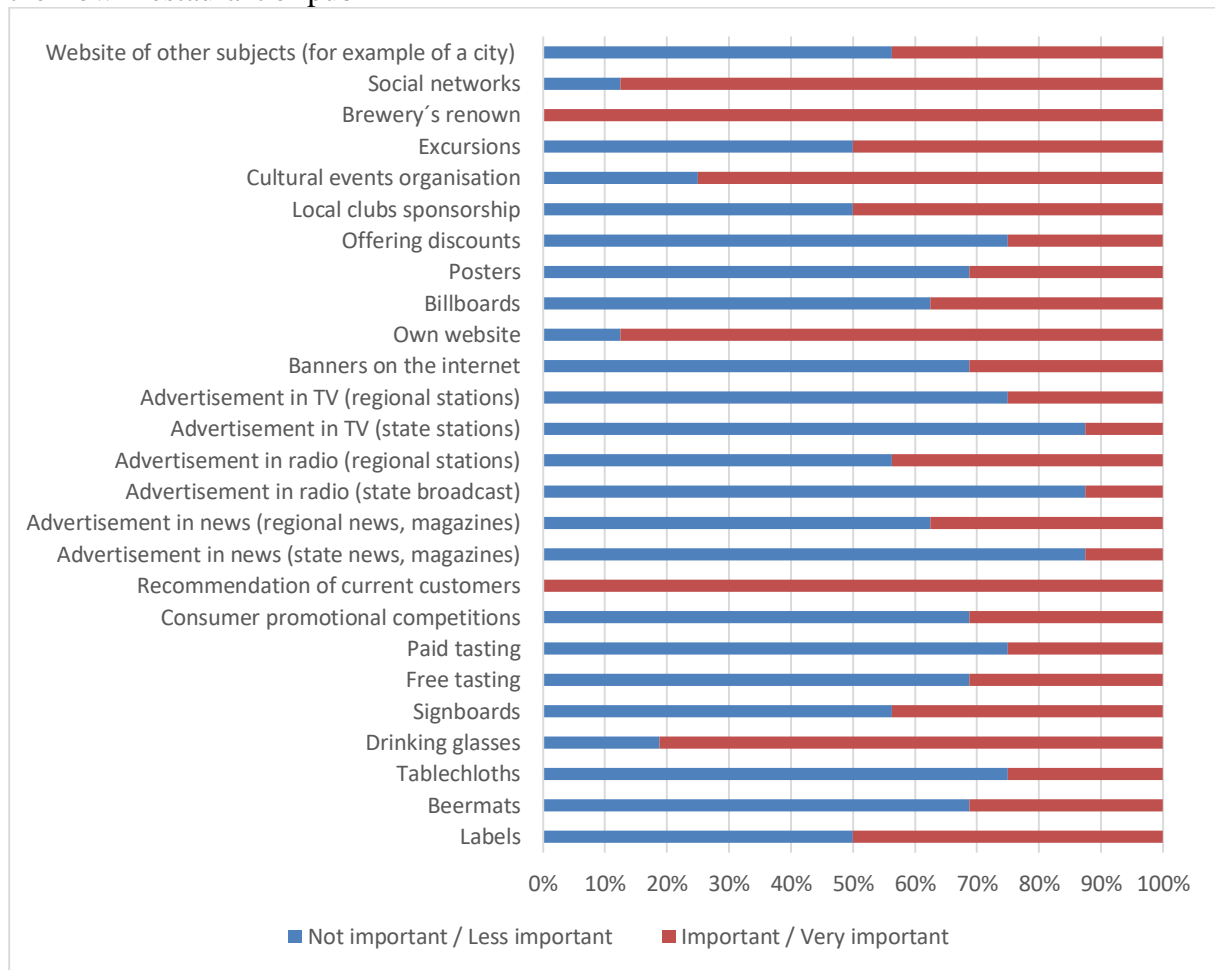


Source: own research

We have identified no important differences in perception of importance of particular marketing communication tools for breweries' competitiveness according to the existence of their own restaurant/pub. Fig. 3 and 4 show that there are no significant differences between perception of importance of marketing communication tools by proprietors of mini-breweries with their own restaurant and without their own restaurant, even in case of those tools where we have supposed substantial differences, such as drinking glasses or table cloths. Drinking glasses are important or very important for 75% breweries with their own restaurant and for 82% breweries

without their own restaurant; table cloths are important or very important for 11% breweries with their own restaurant and for 25% breweries without their own restaurant. The higher importance for breweries without their own restaurant is surprising. We can assume that those tools serve in this case as presents or promotional items. The assumption was confirmed in case of importance of beer mats (70% for breweries with their own restaurant, whereas 31% for breweries without their own restaurant). Even in this case the breweries without their own restaurant probably use the tool as a promotional item or a present, particularly for collectors.

**Figure 4** Importance of particular marketing communication tools for mini-breweries without their own restaurant or pub

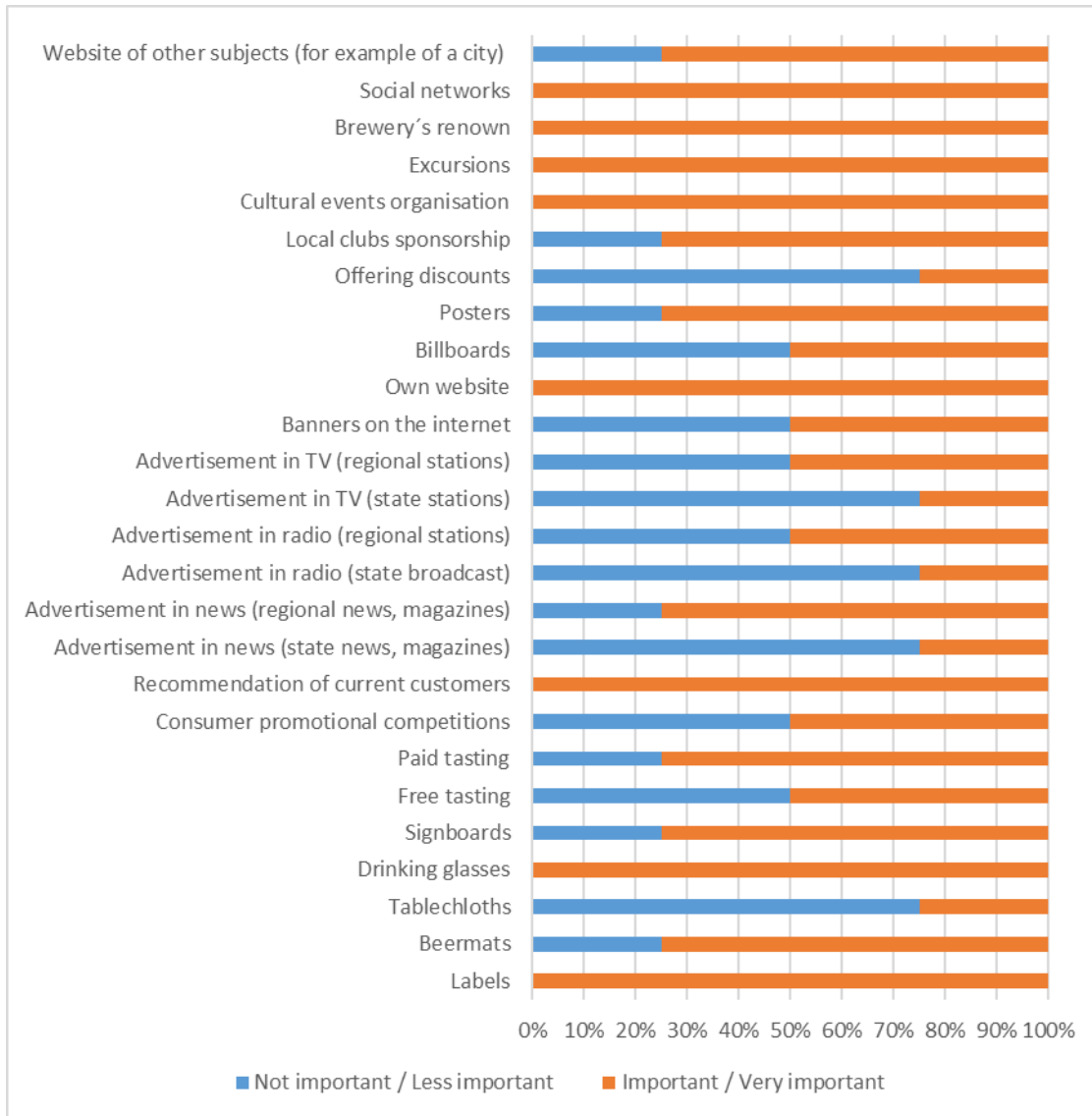


Source: own research

Further, we have found significant differences in perception of the importance of particular marketing communication tools according to the duration of the company. All mini-breweries that came into existence before the year 2000 perceive the importance or even strong importance of social networks, good name of the brewery, excursions, cultural events, their own website, recommendation of existing customers, drinking glasses and labels (Fig. 5). 75% of those breweries have mentioned sponsorship, posters, paid degustation, brewery signs or

restaurant signs, and beer mats. In case of the mini-breweries originating before the year 2000, there is no marketing communication tool that is not important for at least 25% of them. 21 out of 26 surveyed marketing tools are important or very important for at least 50% of this group of breweries.

**Figure 5** Importance of particular marketing communication tools for mini-breweries operating already before the year 2000

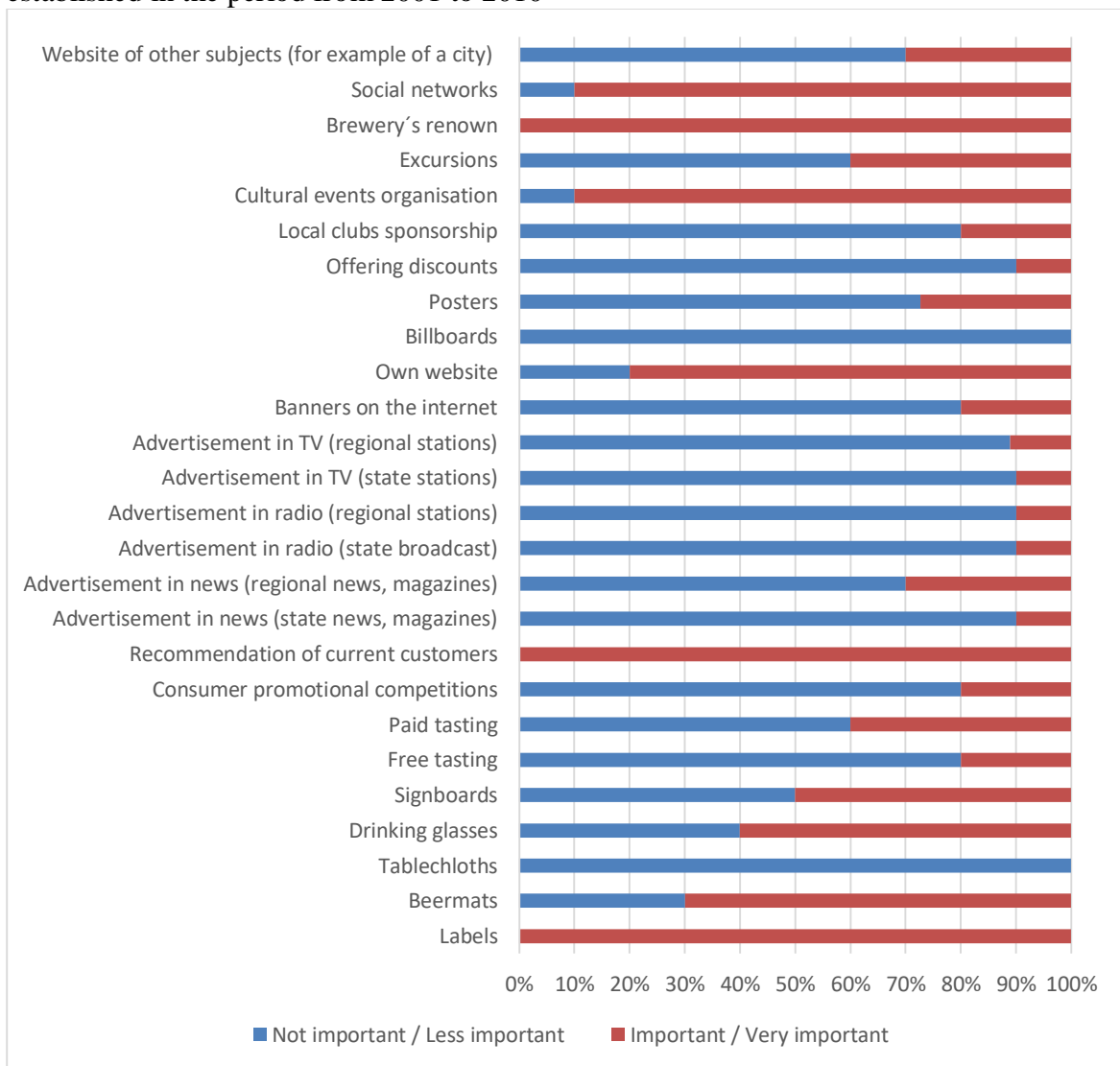


Source: own research

Good name of the brewery, recommendation from current customers and labels are important or very important for 100% of mini-breweries that were established from 2001 to 2010 (Fig. 6). Social networks and cultural events are important for 90% of them; their own website is important for 80% of this group, excursions only for 40% and sponsorship only for 20% of

these mini-breweries. On the other hand, billboards and tablecloths are perceived as not important at all.

**Figure 6** Importance of particular marketing communication tools for mini-breweries established in the period from 2001 to 2010

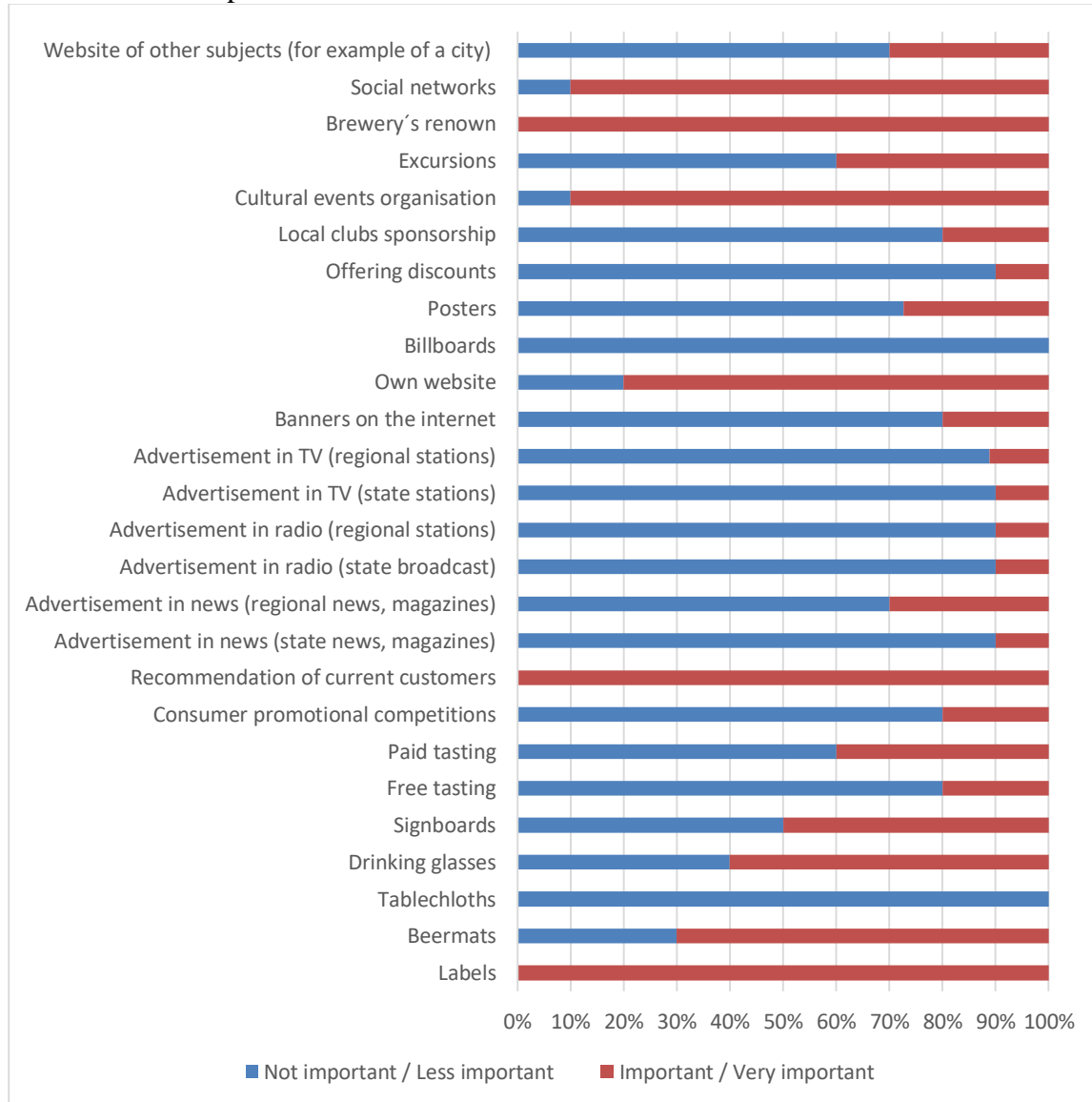


Source: own research

As for the last groups of surveyed breweries, more than 70% of them perceive as important or very important following marketing communication tools: social networks, good name of the brewery, excursions, organizing of cultural events, their own websites, recommendation from current customers, drinking glasses and labels. The perceptions and opinions of this third group of respondents is somehow in between the first two groups. The second group – breweries issued from the period 2001-2010 – perceives the least number of marketing and tools as important or very important, whereas the first group – breweries that came into existence before

the year 2000 found most of the marketing communications tools as important or very important.

**Figure 7** Importance of particular marketing communication tools for mini-breweries established in the period from 2011 to 2016

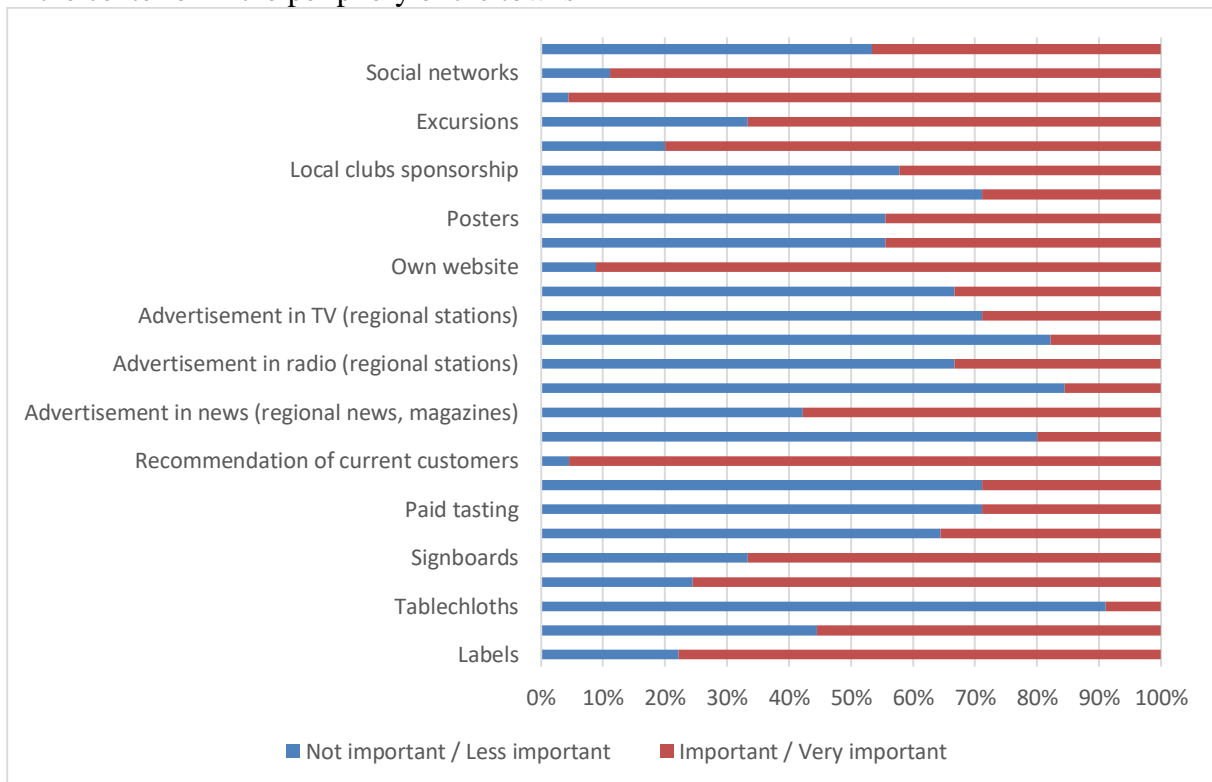


Source: own research

For reasons of clarity, we have divided the surveyed breweries into two groups according to the place of operation of the breweries (Fig. 8). First group comprises mini-breweries located in the center or in the periphery of towns and the second group represents mini-breweries located out of the towns. Presented results were also merged from four to two groups of answers (not important and less important vs. Important and very important).



**Figure 8** Importance of particular marketing communication tools for mini-breweries located in the center or in the periphery of the towns

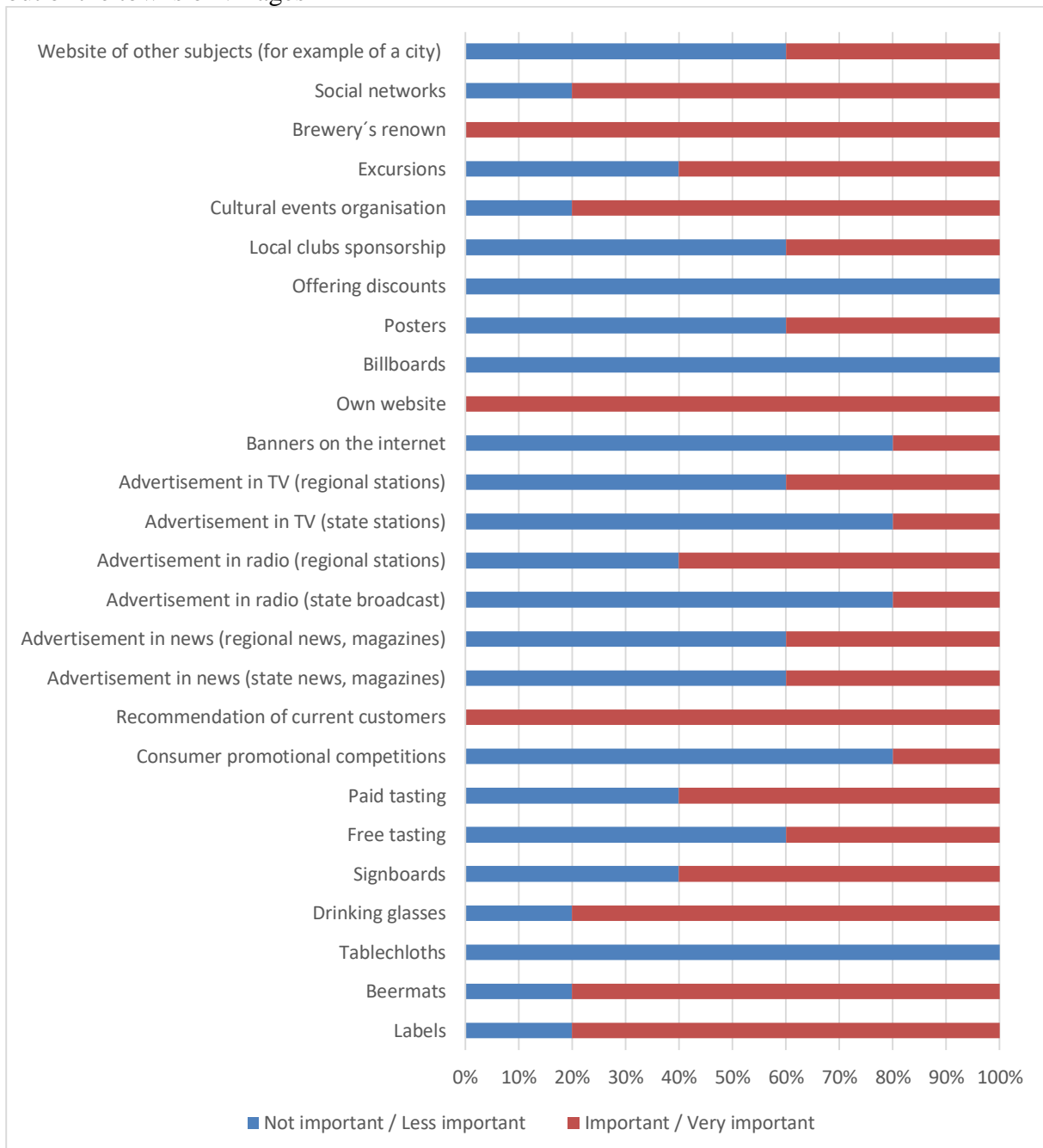


Source: own research

The most significant differences in the perception of importance of particular marketing communication tools occurred in case of offering discounts. This tool is very important or important for 30% of mini-breweries located in the center or periphery of the towns but less important or unimportant for all (100% mini-breweries located out of the towns and villages (Fig. 8, Fig. 9). Another tools with differently perceived importance was billboard that is unimportant for 55% of mini-breweries located in the center or in the periphery of the towns, but for all (100%) mini-breweries located out of the towns. On the other hand, own website is important for almost all mini-breweries – 100% of mini-breweries located out of the town and 90% mini-breweries located in the center or in the periphery of the towns.

Regional/local radios are also important for a considerable number of mini-breweries located out of the town (60%) compared to the group of mini-breweries in the town centers and peripheries (35%). On the contrary, regional/local press is important for a more of mini-breweries in the town centers and peripheries (58%) then breweries out of the town (40%). Offering discounts, billboards, regional press and tablecloths are generally more important for breweries located in town center or town periphery (Fig. 8) whereas good name of the brewery, own website, regional radios, national press, recommendation from current customers, paid degustations and beer mats are important for majority of breweries located of the town (Fig. 9).

**Figure 9** Importance of particular marketing communication tools for mini-breweries located out of the towns or villages



Source: own research

## CONCLUSIONS

We can confirm that the small breweries prefer the money-extensive communication tools, like support to a positive word of mouth or their own websites. On the other hand, we cannot confirm our presumptions that they will, as a local player, put more emphasis on local media compared to national media. Observing the development in the beer industry and especially in the segment of mini-breweries, we can assume that the competitive pressure will continue to grow. Owners of mini-breweries will be supposed to spend more money for promotion, if they want to

maintain or even increase the volume of beer produced. We can anticipate it at least based on the incredible increase of the number of mini-breweries in the Czech Republic in last two or three years. Given the financial possibilities of microbreweries, it is necessary to choose marketing tools that are meaningful and bring the effect of the money spent, whether in the form of greater turnover or profit. The most important factor will still be the quality and taste of the product itself, and in this context, the marketing tools that are most often used by microbreweries and are important or very important to microbreweries in terms of their competitiveness, as demonstrated by the presented. Tools that can be recommended on this basis are: microbrewery referrals and microbrewery reputation (WoM), internet-based microbrewery presentations, social networking and custom websites, on-site marketing tools, glasses, labels and mats. However, precisely in the period of increasing of competitive pressure in microbreweries, it will be necessary to support these tools by others, which are not currently important for microbreweries and are not used as abundantly as previous ones. Microbrewery owners should consider using local media, such as local radio and television stations, as well as presenting the brewery on websites of other entities such as the city where the microbrewery has its headquarters, sports and other local organizations and, last but not least, microbreweries (valid only for microbreweries with their own restaurant) should pick up the function of cultural centers of municipalities where joint actions of local citizens will be realized. Future research activity could focus the potential of mini-breweries or micro-breweries with their own restaurant to attract consumers by trying to play a role of a cultural center, especially in rural areas.

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## **COMMUNITY-LED PLANNING: THE KEY TO SUCCESSFUL SLUM UPGRADING?**

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### **Abstract**

As a result of the urbanization crisis taking place in the developing world, nearly a quarter of the Earth's urban population lives in slums (WUP, 2014), amounting to a total of 881 million people in the developing countries in 2014 (UN-HABITAT, 2016). Without effective intervention, these figures are expected to increase in the future, since the urban population of the developing countries will have risen by almost 1 billion people by 2030 (WUP, 2018). Slum upgrading is therefore an area of paramount importance that is realized in practice by taking one of two approaches: one of the most common procedures is external or expert planning, when identifying the problem and developing and implementing a solution is done by experts. In the case of the other approach, these steps are realized by members of the given community with a facilitator – this is called community planning. This paper compares these two planning approaches using two slum upgrading programs in Kenya as examples, and it aims to use the experiences gained from them to support the hypothesis that the key to efficient slum upgrading is the active involvement of the affected community in the planning process; that is, community planning.

**Keywords:** Community, Community planning, Expert planning, Slum upgrading, Urbanization crisis, Africa, Kenya

### **Absztrakt**

A fejlődő világban tapasztalható urbanizációs válság következtében napjainkban a Föld városi lakosságának csaknem negyede nyomornegyedlakó (WUP, 2014), ami a fejlődő országokban összesen 881 millió főt jelentett 2014-ben (UN-HABITAT, 2016). Hatékony beavatkozás nélkül pedig a jövőben ezen számok növekedése várható, ugyanis 2030-ra a fejlődő országok városi lakossága további, közel 1 milliárd fővel fog bővülni (WUP, 2018). A nyomornegyedfejlesztés tehát egy kiemelkedő fontosságú terület, mely a gyakorlatban kétfajta megközelítés mentén valósul meg: az egyik legelterjedtebb eljárás a külső, vagy szakértői tervezés, melynek során a problémafeltárást, megoldás kidolgozását és megvalósítást szakértők végzik. A másik megközelítés esetén ezeket az érintett közösség tagjai valósítják meg, egy facilitátor segítségével – ezt nevezzük közösségi tervezésnek. Jelen tanulmány e két tervezési megközelítést hasonlítja össze két kenyai nyomornegyedfejlesztési program példáján, melyek tapasztalatai alapján igyekeznek alátámasztani a hipotézist, ami szerint a hatékony nyomornegyedfejlesztés kulcsa az érintett közösség aktív bevonása a tervezési folyamatba, vagyis a közösségi tervezés.

**Kulcsszavak:** Közösség, Közösségi tervezés, Szakértői tervezés, Nyomornegyedfejlesztés, Urbanizációs válság, Afrika, Kenya

## **INTRODUCTION**

Slum upgrading is most often implemented in the context of international development cooperation, for local authorities usually have insufficient capacities for intervention. It is

therefore worth contextualizing how the participation of those affected appears in the narrative of international aid.

The emphasis and keywords of the international aid system, created and institutionalized after World War II, have gradually changed over the decades, mainly due to shifts in global politics and the global economy (Czirják, 2017). Ownership and the principle of partnership appeared among international aid's keywords during the decade following the dissolution of the bipolar world order, and it meant that recipient countries could play a more active role in planning and implementing aid (Paragi et al., 2007).

The principles of international development cooperation formulated since the turn of the millennium are evolving similarly to the 1990s, with further emphasis on ownership and partnership (Szent-Iványi, 2009). This means that in the 21st century it is increasingly important that recipients affected by the given problems actively participate in seeking solutions by developing their own strategies and operative programs.

This is reflected, for example, in OECD's 2005 Paris Declaration, which emphasizes the importance of the ownership approach, meaning that partner countries are obliged to come up with their own development strategies, divide them into operative programs, and play a leading role in coordination during aid implementation, too (OECD 2005).

The above might give the impression that involving those affected in problem-solving, that is, *participation* is the "invention" of the last two or three decades; however, its roots go back much further. The concept of participation was introduced to development professionals by *Pedagogy of the Oppressed*, a book written in the 1960s by Brazilian educator and philosopher Paulo Freire, which in the late 1980s and early 1990s led to the emergence of several practical models for the active involvement of recipients in development (Ciurlik, 2013). Through emphasizing the importance of partnership and ownership, participation eventually became part of the broad discourse of international aid in the 1990s and 2000s.

If we examine the practical realization of these keywords, we can conclude that based on the agents involved in the process, we can distinguish two main kinds of development activities: expert-led (also referred to as external planning) and community-led or participatory planning (internal planning). Despite the fact that *inclusion*, *partnership* and *ownership approach* have become key terms of developmental discourse, the expert-led planning remains the most common method of international development cooperation.

This paper compares these two planning procedures first theoretically, then through two slum upgrading programs realized in Kenya: the *Kenyan Slum Upgrading Programme* in Kibera (as an example of expert-led planning) and the *Building in Partnership: Participatory Urban Planning* in Kitale (as an example of community planning).

According to our hypothesis, the key to efficient slum upgrading is the active involvement of the affected community, that is, community planning. The hypothesis will be justified or disproved on the basis of the comparative analysis of the two slum upgrading programs.

### **COMMUNITY AND EXPERT-LED PLANNING – THE TWO WAYS OF SLUM UPGRADING**

The traditional method of planning an upgrading activity is external or expert-led planning, during which program-related research is conducted and information is collected by an expert or a team of experts. During this exploratory work to obtain information, the affected people – in this case the slum residents – may be asked (in interviews or questionnaires), but they are not actively involved. The whole process is driven by experts who develop plans, and the affected people only have temporary and limited access to information (Sain, 2010). Consequently, they are informed about the final result of the planning only at the end of the process, when the final form of the plan takes shape, or even later, during the implementation of the intervention. Therefore, the persons affected do not play a substantial role in the developmental solutions.

One of the definite advantages of this procedure is that due to the limited number of agents (or at least fewer than in community planning), the process is relatively fast and more predictable both in terms of time and costs. During the planning procedure, the experts attempt to draw up a plan in accordance with the client's demands and the professional requirements (Sain, 2010). Despite this, however, this approach has a pitfall: the experts' position and approach. As outsiders, they can hardly get a realistic picture of the problem merely from indirect data sources, even if the relevant people are interviewed or they fill in questionnaires regarding certain issues. Even in this case, experts remain outsiders who, as result of their position, cannot see the given problem the same way as the beneficiaries of the intervention. Consequently, it is rather improbable that the solutions offered will address the ideas and actual needs of the people affected.

Another drawback of this method is that the external approach might have a negative influence in the long term. This procedure is based upon the shortage model, that is, it examines what needs the given communities have and tries to satisfy them from external sources – this is what international development cooperation traditionally does. As a result, a servicing environment is generated, where the people in need receive aid and become passive dependents of the donors. They see themselves as victims of the system and do not become active. This approach is unable to actually solve the given problem, and after the termination of the aid, the community will be even worse off than before.

Besides external planning, the other approach is internal or community planning, which aims to address and activate the parties involved, survey their situation through their participation,

develop a solution/solutions to improve their state, and, if possible, have the solution(s) implemented by the community (SURE, 2012). This means that the relevant people get actively involved in the developmental process already from the initial phase and are not informed about the results only at the end of the planning. A solution-oriented plan, usually based on a consensus, is developed as a result of common thinking. As the plan is created by the relevant parties, it reflects their needs and potential utilizable for the development, and thus the intervention can offer a solution to the actual problems in accordance with the local conditions. Furthermore, since the people affected draw up the plan themselves, they feel that it is their own, which guarantees successful implementation and future sustainability (Sain, 2010).

Experts are also involved in the community planning process as facilitators. The facilitator is responsible for aiding the process, which means they coordinate and assist the activity of the community from the background (Bardóczi and Giczey, 2010). The facilitator asks questions during the planning process and the answers reveal the problems to be solved, the opportunities, developmental ideas etc. The facilitator is therefore not responsible for outlining actual proposals for solutions; their role is to motivate collective thinking (Bardóczi and Giczey, 2010).

Furthermore, the active participation of the relevant community in the planning process might have further advantages. First, it might considerably improve the quality of the plans – and thus the efficiency of the development interventions – because the people affected have expressed their needs. Therefore, the solutions focus on the actual problems; they are not distorted and do not result in a different focus or emphasis in the plans.

In addition, community planning channels the capacities and capabilities of the local community, because the suggested proposals are partly or entirely built on the internal resources of the affected people. It is therefore not solely the decision-makers (donors) who have to commit time, money and energy resources, but the invested resources and decision-making responsibilities are divided among the agents of the process (Paul, 1989).

This is beneficial both to the donor and the beneficiary community, because they take part in the process as active and effective participants. Internal planning therefore has a value-based approach (Sain, 2010), as opposed to the shortage model of expert planning. Internal planning focuses on the resources, capacities and internal values of the affected community, and attempts to draw up solutions based on them, with the active participation of the community. Thus, after the external agents (donors) finish their activities, the community will be influential, active, able to take responsibility for its own living conditions and formulate them in the long term, too.

Due to its value-based approach, its effective use of internal resources and its special characteristics, the community planning process is a joint learning process (Sain, 2010) during



which the values and knowledge of the stakeholders are explored and plenty of new competences acquired, from team work through the articulation of interests to communication. This, in the long term, might enhance the efficiency of the community in solving its own problems.

Nevertheless, similarly to expert planning, community planning also has its disadvantages. The active participation of the people involved makes internal planning a multi-agent process, which might result in several negative aspects. The process fundamentally aims to develop a consensus-based solution, but the large number of agents implies various interests, which increases the chance of conflicts; therefore, arriving at a solution that is acceptable to everybody takes more time than expert planning (Sain, 2010). The pace and direction of the planning procedure itself largely depends on the people involved – their capacities, inclination to participate, etc. Consequently, it is hard to plan the process in terms of schedule and potentially costs as well.

Furthermore, it is important to note that there is no empirical study that unambiguously proves that the results of community planned projects outperform interventions planned by experts (Jeffrey, 2003). This is because the process might reduce the efficiency of decision-making, since the solution that is acceptable to all may be suboptimal in terms of the problem to be managed (Beke and Jávora, 2013).

**Table 1 Strengths and weaknesses of external and internal planning**

	<b>Strengths</b>	<b>Weaknesses</b>
<b>External planning</b>	<ul style="list-style-type: none"> <li>- ease of decision-making (number of participants and time)</li> <li>- predictability (in time and cost)</li> </ul>	<ul style="list-style-type: none"> <li>- frequent misdiagnosis</li> <li>- lack of ownership (passive dependency)</li> </ul>
<b>Internal planning</b>	<ul style="list-style-type: none"> <li>- better diagnosis of the problem</li> <li>- ownership (responsibility)</li> <li>- distribution of invested energy and responsibility</li> <li>- enables members of the community (new skills and capabilities)</li> <li>- empowers members of the community (active and powerful community)</li> </ul>	<ul style="list-style-type: none"> <li>- coordination challenges (frequent conflicts among numerous agents)</li> <li>- unpredictability (regarding time and cost)</li> <li>- consensual, but potentially suboptimal solution</li> </ul>

Source: own elaboration

The advantages and disadvantages of the two planning processes are indicated in Tab. 1. Comparing the two methods, we can draw the following conclusions: one cannot categorically say that either procedure is better or worse. The selection of the preferred method always

depends on the given situation and problem to be solved. In cases when immediate intervention is required – for instance, in the case of humanitarian disasters–, expert planning might be the better solution thanks to its rapidness. Regarding slum upgrading, however, the aforesaid analysis suggests that community planning is the ideal procedure, because it leads to the development of solutions that react to the actual problems and fit the local conditions. In addition, this occurs with the participation of the local inhabitants, which creates ownership and ensures a more sustainable solution in the long term. Furthermore, the greatest advantage of community planning is that it enables and empowers the relevant people, through which the (successful) planning process transforms them into members of an influential and active community that is capable of managing their lives after the donors leave.

To support this hypothesis, two Kenyan slum upgrading programs will be presented in the following section.

## **THE CONTEXT OF DEVELOPMENT INTERVENTIONS: URBANIZATION CRISIS IN AFRICA**

Modern urbanization started with the industrial revolution, which created the conditions that enabled faster and more large-scale urbanization (Kovács, 2002). Until the second half of the 20th century, this process had been an indicator of economic development due to the strong correlation between GDP per capita and the urbanization rate until the 1960s and 1970s (Kovács, 2002). However, during this period the focus of urbanization shifted to the decolonized developing countries (Kovács, 2002), which saw the beginning of a population growth so rapid that neither urban infrastructure expansion nor economic growth could keep up with it. The speed of this boom is such that “the public service, housing and traffic supply cannot keep pace with the increasing demand, and the formal labor market cannot absorb the crowds flowing into the city” (Ricz, 2009), therefore the urbanization of the developing world can be defined as an urbanization crisis. Africa, the fastest urbanizing continent on the planet, demonstrates this clearly: urban population increased more than sixteenfold between 1950 and 2014, from 33 million to 547.6 million people. By the middle of the 21<sup>st</sup> century, their number might reach 1.5 billion (WUP, 2018).

The most striking symptoms of the urbanization crisis are slums, in which nearly a quarter of the Earth’s urban population lives. This amounts to 881 million people in the developing countries (UN-HABITAT, 2016). Compared to the world average, the situation is worse in Sub-Saharan Africa, where over half of the urban population (56%) lives in slums. This ratio may

even increase in the future, since the urban population of the developing countries will increase by nearly 1 billion people between 2018 and 2030 (WUP, 2018) – efficient solution procedures are therefore urgently needed.

The direct developmental context of the two case studies to be described below is Kenya, where urbanization has been increasing since the declaration of independence in 1963. While in the mid-1960s every twelfth person lived in cities and towns, today more than every fourth citizen is urban (WUP, 2018). According to the UN's forecast, the rate of urban dwellers within the total population might reach 46 per cent by the middle of this century (WUP, 2018).

In the beginning, urban population was concentrated in the two largest settlements of the country: in 1963 around 70% of the urban population lived in the capital city of Nairobi and Mombasa, the most significant harbor city of the country (Majale, 2009). However, their predominance within the settlement network has been decreasing for decades, and in 2018 they accounted for “only” about 38 per cent of Kenya's urban population (WUP, 2018). This shows the rapid growth of small towns with less than a million inhabitants.

Urbanization will remain a dynamic process in Kenya in the future. Although growth will slow over time, it will still remain considerable: the current 4.23% annual average growth of town-dwellers will have decreased to 3% by 2050 (WUP, 2018). This will still amount to an inflow of huge crowds to the urban regions of Kenya (due to migration and natural growth), presenting further challenges to urban planning and management. This population growth rate already exceeds the capacity of city management, therefore in Kenya – in accordance with the Sub-Saharan African average – 56 per cent of the urban population is forced to live in slums (UN-HABITAT, 2016). The developments presented below attempt to remedy this situation.

### **The two methods of the planning procedure: KENSUP and BiP:PUP in Kenya**

Following the theoretical introduction, I will now present the implementation of the Kenya Slum Upgrading Programme (KENSUP) in Kibera as an example of external planning, and the Building in Partnership: Participatory Urban Planning (BiP:PUP), a slum upgrading program realized with community planning in Kitale.

The case studies were selected on the basis of the following factors: Kibera, located in the capital city of Kenya, is considered the largest slum in Africa, therefore it receives considerable attention from the press, developmental agencies and non-profit organizations. As a result of this, plenty of accounts about life here are available, which are supplemented with interviews, conducted by the author, with volunteers and development professionals who have been to Kibera.

The BiP:PUP program realized in Kitale is referred to by international literature as a good example of community slum upgrading, with a well-documented methodological background. The two programs are comparable because both were carried out in Kenya, in identical historical, social, economic and legal environments. Nevertheless, it should be noted that the population of the two slums is different, which is a disadvantage when comparing the programs.

### **Handling the problem of slum upgrading in Kibera: KENSUP**

Kibera is situated 5 km southwest from the central business district of Nairobi and covers an area of 2.5 km<sup>2</sup> (Warah, 2007). It is hard to define the exact size of its population: various sources estimate it to be between 170,000 and 1 million people (MKP, 2018; Keserű, 2010: 70; Davis, 2006; UN-HABITAT, 2007a).

The vast majority of the buildings in the slum are mud huts with tin roofs, usually jointly rented by several tenants (Keserű, 2010). The whole district lacks basic urban infrastructure: there is no piped drinking water, sewage system, waste disposal or electricity (UN-HABITAT, 2010). Furthermore, the slum is overcrowded, therefore public hygiene is extremely poor: surveys conducted by healthcare organizations show that half of the inhabitants can be diagnosed with malaria, cholera, typhus or other serious viral diseases, and 40 per cent of children do not survive beyond their fifth birthday (Solymári, 2012).

In 2001 the UN-HABITAT initiated the Kenya Slum Upgrading Program (KENSUP), which aims to improve the living conditions of the citizens living in Kibera and other slums of Nairobi. The program applies a multidisciplinary, integrated approach to slum upgrading, which means that during its implementation, attempts were made to develop basic infrastructure such as water and public hygiene services, generate incomes for the slum-dwellers, implement governance that considers the interests of the poor, improve housing, ensure ownership and develop physical and social infrastructure (UN-HABITAT, 2007b).

KENSUP is based on the extensive partnership between the UN-HABITAT, the Kenyan government, the local authorities, the communities involved, non-profit organizations and the private sector. It should also be highlighted that the program is basically top-down (MacPherson, 2013), meaning that the decisions related to the development intervention were made by the UN without the involvement of the local inhabitants.

KENSUP was started in 2004 in five settlements of the country (in Nairobi, Kisumu, Mavoko, Mombasa and Thika) as part of eight projects. Three of these projects refer to Kibera: the Kibera Slum Upgrading Initiative, the Kibera Integrated Water, Sanitation and Waste

Management Project, and the Youth Empowerment Programme. The following section focuses on the Kibera Slum Upgrading Initiative (UN-HABITAT, 2008).

The implementation phase of the Kibera Slum Upgrading Initiative started in 2012 (Anderson and Mwelu, 2013), when one of the districts of Kibera (Soweto East) was divided into four zones (A, B, C, D) for the purpose of systematic reconstruction (Jones, 2015). While huts are demolished and houses built in a zone, their inhabitants are placed in temporary accommodation until their new houses are completed (Scruggs, 2015). The slum's former tenants can buy the one-, two- or three-room apartments below market value, for \$5,000-11,250 (Anderson and Mwelu, 2013).

However, during the implementation of the development, structural problems arose, fundamentally questioning the success of the intervention. The affected people feared not being able to pay the costs of the new apartments, since they had to pay for public services established here, but the program generated no additional income for them. Since then these fears have turned out to be justified (Minja, 2017).

As a kind of management of the problem, and as an exploitation of the economic “opportunity” created by the development, it can be observed that the inhabitants of Kibera often move back to other districts of the slum and rent out their newly-built apartments more expensively (Jones, 2015). Although this generates additional income for them, it is not a solution to the problem of slums. Therefore, the results of KENSUP cannot be considered an obvious success.

The local inhabitants did not participate in the planning of the project – despite the keywords “partnership”, “participation” and “involvement” in the project documentation –, so their actual needs could not be revealed. They were only informed about the aspects and realization method of KENSUP, which, as the UN put it, meant “sensitization” realized as part of “social mobilization actions”, during which the inhabitants were informed about slum upgrading (MacPherson, 2013). This means that only the lowest level of social involvement, informing the residents was realized during the program.

Therefore, this approach is unable to manage the problem of the local people, and it seems that the investment could not solve the problem of housing for the poorest. Instead of improving the living conditions of the locals, the building projects have most likely worsened them.

We believe that two – basically pessimistic – scenarios seem to be realistic. According to the first version, the new houses result in gentrification in Soweto East, thus the original inhabitants will not only not get a decent home, but their original living space will significantly decrease owing to the new housing districts. As a result, they will have no other choice than to

move to another place, losing contact with the well-known local community, which functions as a safety net.

According to another possible scenario, even if it is really the previous citizens of Soweto East who move into the new apartments, these apartments will sooner or later be in a similarly poor condition as the other parts of the slum, because there are insufficient resources for the maintenance and development of the properties. Although in this case we can speak about some improvement in infrastructure terms – as the new stone houses are better homes even in this poor state than the tin-roofed mud huts –, the breaking up of the local community due to being moved apart might result in negative social and economic effects that the project managers could not foresee.

Overall, this element of KENSUP is a project realized in a wide-ranging partnership, elaborated and implemented with external planning. Although it tried to react to the needs of the beneficiaries, it failed due to being controlled by external actors, since it proposed solutions to problems that lacked the observations of those affected. These proposals – as it turned out during their implementation – did not solve the problems, and even made them worse.

### **Community planning in Kitale: BiP:PUP**

The second case study is about the Town of Kitale, situated northwest of the Kenyan capital city and functioning as the administrative and economic center of Trans-Nzoia District, Rift Valley Province. In the settlement of over 200,000 inhabitants, 65% of citizens live in slums (Majale, 2009), their living conditions being similar to those in Kibera. In this region that is suitable for agricultural production, a large migration flow has started from the rural areas into the cities and towns because drought and decreasing economic opportunities offered by farms made subsistence impossible for locals (Chege and Majale, 2005). As the center of the district, Kitale is particularly affected by this process, and its local government is powerless and its capacities insufficient for appropriate planning and management to keep pace with the growth of the city.

In order to improve the slums in the city, the UK DFID (Department for International Development) initiated a program entitled Building in Partnership: Participatory Urban Planning, realized between 2001 and 2004. The overall aim was to “enhance the efficiency of the city’s operation and the local governmental planning”, which in practice means the introduction of the partnership approach in urban planning so that poor men, women and children, as well as community-based organizations and public and private institutions might

take part in this process, and developments that are sustainable in the long run in economic, social and environmental terms might be implemented (Majale, 2009).

Focusing on the elaboration of the Local Authority Service Delivery Plan (LASDP), the BiP:PUP formed an integral part of the management and planning system of the Kenyan settlement. It is the document the local governments have to draw up to receive central governmental funds. In principle, this document is to be prepared during a structured annual cycle with participatory planning; nevertheless, this process is generally ad hoc, policy-oriented and non-transparent, so the aspects and needs of the poor cannot be considered and integrated in the developmental documents as they lack appropriate influence and power to enforce their views in this unequal process (Chege, 2006).

The BiP:PUP attempted to change this situation by realizing participatory planning with an appropriate methodology during a transparent process, within the institutional framework of the existing public administrative system.

As the first step of the process, the local government conducted settlement-level public opinion research to find out about the main issues in the city and help the local communities to identify and map their development needs (Chege and Majale, 2005). During this survey a „participation inventory” was also prepared, including the potential partners of the project (Chege, 2006).

As the following step, consultations based upon the results of the general opinion research were started in twelve election districts in order for the residents to rank the intervention areas by mutual consent. As a result of this process, three intervention areas of the project were chosen (the slums of Tuwan, Kipsongo and Shimo la Tewa), where the neighborhood plans were elaborated and implemented with community planning (Majale, 2009).

This project was realized with the cooperation of over twenty agents, including public administrative, church and non-profit organizations, researchers, grassroots groups and private sector agents. The implementation and management of the BiP:PUP was the responsibility of the Intermediate Technology Development Group–Eastern Africa (ITDG-EA), a non-profit organization providing technical assistance in the fight against poverty (ITDG.org), in cooperation with numerous other partners – including the local government of Kitale –, while the overall management was the task of the UK Department of ITDG (Chege and Majale, 2005).

Due to limitations of space, only the development realized in one of the three slums is presented here.

## **Tuwan**

With nearly 65,000 inhabitants, Tuwan is the largest slum in Kitale. Most local homes are made of wattle and daub, covered with tin roofs – like in Kibera. Before the project's implementation, the public hygiene situation was largely similar to that in Nairobi, described above; like in Kibera, it was also difficult to access healthy drinking water in Tuwan. There was no access to clean drinking water in the slum and the local sources were contaminated, imposing significant health risks; there were no appropriate toilets or bathrooms either, which led to the widespread use of “flying toilets” (Majale, 2008), meaning toilets were replaced with plastic bags, thrown away after use.

In cooperation with ITDG and the local government of Kitale, the residents of the slum created the Tuwan Neighborhood Plan as part of community planning, as well as the Strategic Action Plan for the practical implementation of the development identified in the neighborhood plan (Majale, 2009). The planning process was related to the town's above-mentioned LASDP process, therefore the development could be implemented in partnership with the local government and the relevant community (Chege and Majale, 2005).

The local citizens identified as a priority of development the establishment of a sanitation center to handle public hygiene problems. This center is a two-story building with separate bathrooms and flush toilets available for men and women. In addition, a laundry and a multifunctional room have also been established to provide consultation and screening examinations for residents as a HIV/AIDS center (Majale, 2008).

The construction site was offered by the local government of Kitale, and the local inhabitants were involved in both the planning and the building works. They were acquainted with various alternative building technologies, which proved to be a considerable cost-reducing factor. The sanitation center is a closed and environmentally friendly system recycling both sewage water and methane. Water is heated with the resulting gas and sewage water is used as manure in the pot garden operated by a group of local women. These solutions promote local efficiency by reducing the operational costs and generating income (Majale, 2008).

Economic sustainability is also facilitated by the fact that the inhabitants have to pay a small amount of money for the infrastructure services. An elected committee is responsible for the operation of the center (Majale, 2008).

In Tuwan the local inhabitants could participate in the planning process of the local government (LASDP), and the ideas generated this way have partly been realized through the partnership relation. An important aspect of the process was that the construction works were



carried out by the affected people themselves. This way they acquired new knowledge (about the building technique, as well as organizing and coordinating the process, etc.) and the successful implementation made them feel more self-confident (Majale, 2008); on the whole, their acting and entrepreneurial capacity developed, which greatly advances their later prosperity. This is the most important benefit of community planning.

### A comparison of KENSUP and BiP:PUP

In the following, the two slum upgrading programs are compared on the basis of the aspects below:

**Table 2** A comparison of KENSUP and BiP:PUP

Aspects	KENSUP	BiP:PUP
<b>Initiating actor</b>	External: UN HABITAT	External: Department of International Development (UK)
<b>Aim of program</b>	Improving living conditions	Enhancing the effectiveness of city and municipal planning
<b>Definition of the problems by</b>	External actor	Affected residents (local community)
<b>Level of social involvement</b>	Informing (external planning)	Partnership (participatory planning)
<b>Nature of intervention</b>	Complex: mainly infrastructural (with soft elements)	Complex: infrastructural and soft elements
<b>Sustainability</b>	Questionable	Economically, ecologically, socially sustainable
<b>Long-term social influence</b>	Rather negative	Positive

Source: own elaboration

A program is considered successful if it offers a real solution to the problems defined by the local community, the intervention is sustainable both in economic and political terms, and thus the invested resources are exploited appropriately.

Based on the aspects of the examination, we can establish the following about the UN KENSUP program: the developmental program was initiated by an external institution, i.e. the UN-HABITAT with the aim of improving the living conditions of the people living in slums.

During the process the problems of the slum were identified by an external agent (UN) and the community affected by the problems did not actually take part in the planning process; therefore, there was only a low level of social participation, namely informing. Consequently, in the case of KENSUP we can talk about external or expert-led planning.

The developmental intervention was complex, mainly including infrastructure elements and focusing on the question of housing. As a result of the project, new residential buildings were constructed (Anderson and Mwelu, 2013), but their maintenance and preservation is questionable. In terms of the economic and labor market dimensions, KENSUP did not manage to offer an efficient solution for the affected parties; moreover, the large-scale construction works reacting to the housing issue increase the housing expenses, so the sustainability of the final result, primarily from an economic perspective, is questionable.

The social effect of the project in the longer term is also rather negative. The increasing housing expenses and the lack of additional income are expected to worsen the state of the new apartments to the level of the other parts of the slum after a while, because there are insufficient funds for the maintenance and potential development of the properties. Although in this case we can observe some improvement in infrastructural terms –because new stone houses are better homes even in a bad condition than tin-roofed mud huts –, the breaking up of local community due to the moving apart might result in much more negative social and economic effects than the project managers might have even thought about before.

The implementation of the program can be interpreted as a kind of “alien element” because it was not an integral part of the local area development and arrangement system. Therefore, following the program’s conclusion, there seems to be no guarantee from local authorities in terms of continued appropriate operation and maintenance, such as subsidized housing or a system of social housing. This means that after the external agent leaves, the development is likely to get under the influence of the local political and market conditions, which will in all likelihood result in processes not favorable to the poor.

In the case of BiP:PUP, the following can be concluded: the program was initiated by an external agent, DFID, with the aim of making the existing planning mechanism of the public administration system more efficient and thus improving the conditions of the people living in the slums.

The planning process was carried out with the active involvement of the relevant community; that is, the level of social participation was partnership: the community defined the existing problems and elaborated the solution proposals. Therefore, we can talk about community planning.

The program was integrated into the Kenyan public administration system and the statutory requirements were efficiently exploited, which means that BiP:PUP did not set up a new system but figured out the way the existing framework can be operated efficiently. This way long-term sustainability is ensured within the political context.

The intervention was complex, including infrastructure elements among others. As part of BiP:PUP, various training sessions aiming to improve hygiene, health and labor market conditions were organized (Chege, 2006). However, people acquired similar or even more important abilities and knowledge during planning and implementation, because they got an insight into the operation and planning mechanism of the public administrative system, and they learnt to express their needs in a multi-agent system and find a solution to them based on their resources, in cooperation with external agents and each other (Lyons et al., 2006).

As well as the capacities of the local communities, the program also managed to mobilize the resources of the market agents, which considerably decreases the costs for the local and central management. Decision-makers are therefore interested in applying the methods of the program more extensively and in the longer term.

Consequently, the results are more sustainable in social, economic, political and environmental terms. The program's long-term social effects are positive, since it has led to an active community that is able to act for its own prosperity.

Making an assessment on the basis of the aspects of comparison, we can establish that BiP:PUP realized with community planning definitely appears to be better and more efficient than KENSUP implemented with external planning, as it offered a sustainable solution to the actual problems defined by the local community, with the active participation of the people affected.

The Kitale program can be considered successful not only from the perspective of the local inhabitants, but it has also generated favorable effects for the local authorities and the central decision-makers. In the context of international development cooperation, it can be stated that the program has appropriately utilized the donors' resources – money, time and expertise – and has offered an optimal solution to the recipients too, since, on the one hand, interventions reacting to the actual demands were carried out, and, on the other hand, the developments launched long-term processes in the local community that made it flourish after the donors left.

At the same time, a weakness of BiP:PUP is that its results are not spectacular. The political agents of either the donor organizations or the recipients are unable to demonstrate mega-investments or big figures, and neither party can say that it has managed to eliminate a slum. BiP:PUP is therefore unsuitable for political maneuvering. However, if the objective is not to obtain the highest tax amounts possible or maximize votes with populist tools, but to support the most fragile class of society, BiP:PUP has definitely proved that community involvement and the approach and method of community planning are suitable tools for this purpose.

## CONCLUSION

This paper compared the two methods of slum upgrading: traditional external or expert-led planning with community planning or internal planning, which is realized with the active involvement of the community. According to our hypothesis, the key to efficient slum upgrading is the active involvement of the community affected by the planning process, that is, community planning.

To examine this statement, after a theoretical introduction we presented and compared two Kenyan slum upgrading programs, KENSUP and BiP:PUP. The procedure we considered successful was the one that offered a real solution to the problems defined by the local community and was sustainable both in economic and political terms, meaning the invested resources could be utilized appropriately.

The findings of the research show that the successful procedure was BiP:PUP, implemented with community planning. This is because the active involvement of the affected parties helped the agents find solutions to the pressing problems, and the procedure has induced long-term social processes enabling the local community to act for its prosperity even after their donors' departure.

However, it has to be mentioned that pre-conditions are necessary for successful community planning, which this paper does not cover. Although BiP:PUP is a good example, further investigation is necessary to explore what social, cultural, historical, etc. factors determine the success of social mobilization and participation. The author's aim is to deepen research in this direction.

Although BiP:PUP is considered a successful development, its achievements might seem to be only a drop in the ocean compared to the scale of the core problem, urbanization crisis. Eliminating slums from one day to the next is not a realistic aim, because almost 1 billion people can only be lifted from insufficient living conditions after the elimination of the mechanisms generating slums. However, considering the relations of inequality in the global economic system, unfortunately this seems to be a naïve objective. This recognition, however, must not make the part of society that is willing and able to help apathetic. After all, the societal participatory processes aiming to activate local communities are tiny steps that can slowly but surely improve the living conditions of more and more people.

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## **EARLY TREATMENT OF ACUTE MYOCARDIAL INFARCTION AND ITS REGIONAL DIFFERENCES IN BÉKÉS COUNTY**

### **AZ AKUT MIOKARDIÁLIS INFARKTUS KORAI ELLÁTÁSA ÉS ANNAK TERÜLETI KÜLÖNBSÉGEI BÉKÉS MEGYÉBEN**

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#### **Abstract**

Similarly to Western Europe, our country is also fighting against cardiovascular diseases. The fight is strongly influenced by the prevention and early treatment of the evolved disease which define overall chance of survival of the patient beside life saving.

The study examines this early treatment with statistical analysis. The aim is to form a comprehensive image of the current situation of Békés County of Hungary focusing on both the cardiovascular diseases (such as infarction) and the field of pre-hospital and hospital care. During my research I have leant on secondary data analyses relying on the data given by the National Ambulance Service in Békés County and the Invasive Cardiology Department of Békés County Central Hospital's Pándy Kálmán Member Hospital.

In view of modern treatment, Békés County has a situation to be examined as both the pre-hospital and hospital treatments have been improved in the last period. Two new ambulance stations were opened in the county, moreover, since 2013, an invasive cardiology unit has been operating in the Békés County Central Hospital's Pándy Kálmán Member Hospital.

As the result of the research, we can state that the investments of the previous period have promoted the decrease of health and accessibility inequalities, however, the data of mortality rate show that there is a need of further investments. At the same time, these investments have to deal with the complex procedure from the appearance of the symptoms to the treatment.

**Keywords:** healthcare treatment, availability, accessibility, acute myocardial infarction (AMI), regional inequalities

#### **Absztrakt**

Nyugat-Európához hasonlóan hazánk is jelentős küzdelmet folytat a kardiovaszkuláris megbetegedésekkel. A küzdelmet a prevención túl számottevően befolyásolja a már kialakult megbetegedés korai ellátása, mely a konkrét életmentésen túl az egyén további életesélyeit is meghatározza.

A tanulmány ezt a korai ellátást vizsgálja statisztikai elemzéssel, a cél átfogó kép kialakítása Békés megye jelenlegi helyzetéről, mind a szív- és érrendszeri megbetegedések (főként infarktus), mind pedig a prehospitalis, illetve hospitalis ellátás területén. Kutatásom során elsősorban másodlagos adatelemzésre, az Országos Mentőszolgálat Békés megyei kirendeltségének, valamint a Békés Megyei Központi Kórház Pándy Kálmán Tagkórház Invazív Kardiológiai Osztályának adataira támaszkodom.

A korszerű ellátás tekintetében Békés megyének több szempontból vizsgálatra érdemes helyzete van, az elmúlt időszakban mind a prehospitalis mind pedig a hospitalis ellátás területén fejlődést figyelhetünk meg. Két új mentőállomás került átadásra a megyében, 2013 óta pedig a Békés Megyei Központi Kórház Pándy Kálmán tagkórházában is működik invazív kardiológiai részleg.

A kutatás eredményeként elmondható, hogy az elmúlt időszak fejlesztései elősegítették az egészség-, és a hozzáférési egyenlőtlenségek csökkentését, azonban a halálozási adatok azt mutatják, hogy további

fejlesztésekre van szükség. Ugyanakkor a fejlesztéseknek a komplex folyamatot kell átfogniuk a tünetek jelentkezésétől a gondozásig.

Kulcsszavak: egészségügyi ellátás, elérhetőség, hozzáférhetőség, akut miokardiális infarktus (AMI), területi egyenlőtlenség

## INTRODUCTION

Epidemiological or health transition means a replacement of infectious diseases by chronic diseases over time due to increased life expectancy as a result of improved health care and disease prevention (Porta, 2014). This transition has been occurred in more developed countries from the middle of the 20<sup>th</sup> century. The most important health consequences of health transition are based on civilization harms and lifestyle risk in the most developed countries (e.g. unhealthy nutrition, stress, sedentary lifestyle, addictions etc.). These harms and risks have resulted increasing number and rate of non-communicable diseases (chronic non-infectious diseases). These diseases are especially cardiovascular diseases, tumors, chronic diseases of respiratory and digestive system. They can be traced back to high blood pressure, high level of cholesterol, obesity, health effects of smoking etc. (OECD, 2018). The previous decades basically were about the fight against chronic non infectious diseases (non-communicable diseases) both in Hungary and the developed Western European countries. The biggest challenge is the cardiovascular mortality, as it is responsible for more than 50 per cent of all death (Kaszás et al., 2012, WHO, 2018).

Among cardiovascular diseases one of determinative death causes is so called Acute Myocardial Infarction (AMI is briefly) which can give comprehensive information about survival chances and access to health care according to different phases of infarction treatment (Maxwell, 1999). Early treatment – which is one of the most important phase of infarction treatment – has equal or more importance in the improvement of the health status than prevention, and early treatment determines the survival rates significantly beside life saving. Early treatment contains pre-hospital treatment (e.g. ambulance care) as well as emergency care which is the part of in-hospital treatment. In this study I intend to show early treatment in two sections which are in interaction, built upon one another, but there are marginal differences. The first section is the so-called pre-hospital treatment in which the early arrival of the ambulance and the provision of the professional treatment is significant. The other section is the hospital treatment where the emergency units and invasive cardiology units have important roles due to the Percutaneous Coronaria Intervention (PCI) which is the modern medical care of AMI (Best, 2011).



The paper also discovers regional inequalities regarding early treatment of AMI within Békés County. These inequalities can show us the primary possibilities and barriers to access to early treatment. The medical status of a region is extremely significant as it is not only in a strong relationship/connection with the inhabitants' living standards, but the economic development of the area, as well. Better medical status means higher productivity and wider pool of employees (Egri, 2017, Egri, Tánczós, 2015). Notwithstanding this, modern societies have to face a number of health and healthcare issues, recently. This is the main cause that there are many approaches which are examining the connection between health inequalities and regional inequalities. Moreover, health inequalities not only imply social or spatial inequalities, but also socio-spatial inequalities as a whole (Black et al., 1985, Jones, Moon, 1987). It is also important to recognize that health inequalities have spatial aspects that reflect the social context of health inequalities. In Hungary, many authors have already addressed this issue particularly at county level (e.g. Kiss, 2016, Uzzoli, 2016 etc.). Some other Hungarian authors prefer using local case study at micro-regional level to examine spatial aspects of health inequalities (e.g. Vitrai, 2011, Pál, 2017 etc.). Among primary results of these researches we have to mention that many authors could point out the disadvantaged health position of Békés County in comparison with the national averages according to the main health indicators (e.g. life expectancy, cause and age specific mortality rate etc.).

## **OBJECTIVES AND METHODS**

Our project is aimed to analyze the connection between health inequalities and access to health care through its regional inequalities. To identify the role of accessibility in regional disparities of health inequalities we use a case study. In this case study we define health inequality with morbidity and mortality data of Acute Myocardial Infarction (AMI), while we can examine the possibilities and barriers in access to infarction care (cardiological care). The spatial framework of this statistical examination is based on national, county (NUTS-3) and micro-regional level (LAU-1).

This article intends to give a comprehensive image of the current health situation of Békés County focusing on cardiovascular diseases such as Acute Myocardial Infarction, and its pre-hospital and hospital treatment. I have used secondary data analysis relying on the data given by the National Ambulance Service in Békés County, the Cardiology Department of Békés County Central Hospital's Pándy Kálmán Member Hospital. All statistical data is suitable to analyze current situation and temporal changes in Békés County between 2000 and 2017.

The following data were used in statistical analysis: number of ambulance and ambulance stations and its territorial coverage, type of rescue team, number of Coronarography cases etc. The basic reason to use them was to describe infrastructural conditions of early treatment and to discover their regional differences within Békés County. Furthermore, some computations also have been done in order to answer the questions see below. For example, cause-specific death rate was calculated or ambulance stations were categorized according to its type of rescue team etc. However, some difficulties also were encountered during the data collection, because basically there are three main types of ambulance care (primary ambulance, ambulance transport, guarded patient transport). After 2008 the ambulance task of guarded patient transport was separated from official ambulance tasks (primary ambulance, ambulance transport) from the National Ambulance Service in Békés County. So, all data before 2008 were cleared by the cases of guarded patient transport. It means all used data were based on cases of primary ambulance, ambulance transport.

To study features of early treatment of AMI is important to define PCI as a modern cardiology intervention. Percutaneous coronary intervention (PCI) is a non-surgical procedure used to treat narrowing (stenosis) of the coronary arteries of the heart found in coronary artery disease.

The questions to be answered during this study are the following:

- How can we describe the situation of Békés County according to the health state?
- What regional inequalities can be seen in the AMI treatment of Békés County?
- How can we describe the availability of AMI during early treatment?
- What is the size and direction of the progress experienced in the last 5 years focusing on AMI in early treatment in order to reduce regional inequalities?

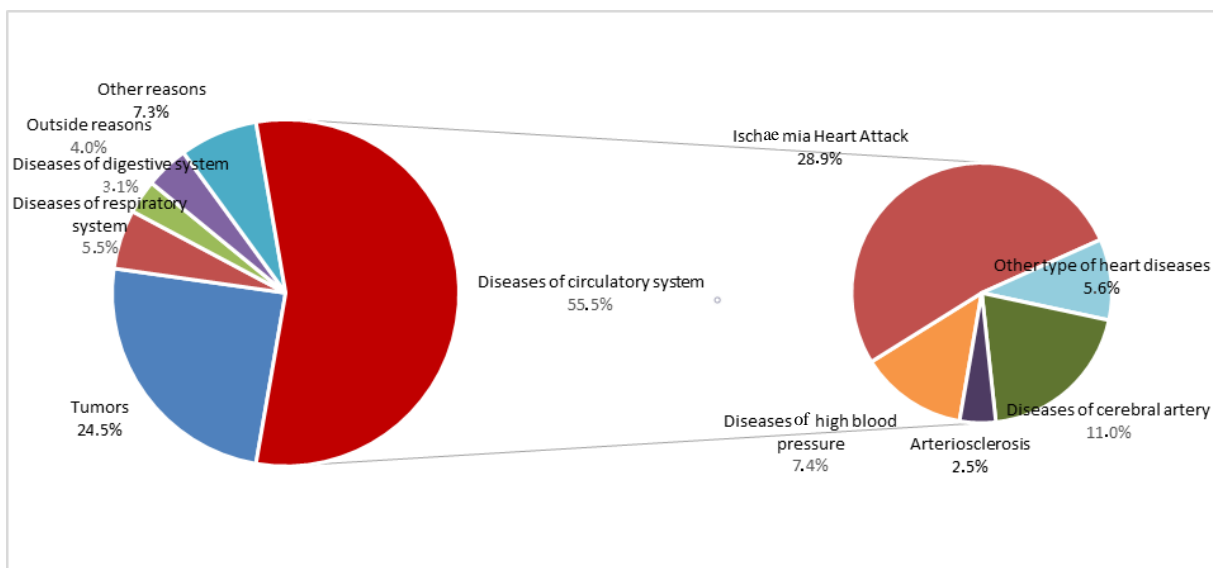
Besides statistical analysis I also applied other examination techniques as the part of desk research to answer these questions. Thus, I prepared literature review as well as document-analysis. In this later case, I could analyze the most important strategies and other local policy documents realized in Békés County. All results and experiences of this paper can be use to make some proposals for decision-making.

All results of statistical analysis as well as all experiences of desk research can draw attention to paradox health situation of Békés County.

## RESULTS

The health state of a county is significantly determined by its demographic situation, and the same is observed in Békés County, as this county is the most aging one in Hungary, which is influenced by the rising rate of the non-communicable diseases. In Békés County the rate of inhabitants over 65 years is 19.4 per cent, while the number of inhabitants under 14 is 13.3 per cent. That is why the data of mortality in Békés County is higher than in any other counties, as its figure was 15.9 per cent in 2015, while the national figure was 13.4 per cent per one thousand inhabitants (Beke, 2017). The reasons of mortality can be seen in Fig. 1 which presents that 55 per cent of mortality is due to cardiovascular diseases and nearly one third of that rate (28.9%) is caused by ischemic cardiovascular diseases. AMI is a typical ischemic heart disease and it occurs when the heart's tiny arteries do not function normally.

**Figure 1** Percentage rate of mortality according to the causes of death in Békés County



Source: Statistic Annals of Békés County, 2015

The improvement of mortality rates can be achieved partly by using prevention and emphasizing healthy lead of lifestyle, and partly by the development of treatment and the use of PCI in early period. However, the way which led to the improvement of the treatment in cardiology and the reduction of regional inequalities of healthcare due to infrastructural development has been long.

The specialized treatment of cardiologic diseases has been introduced half a century ago, as the first coronary intensive units were established, where the methods of intensive patient observing and treating were introduced. It was followed by the use of thrombolysis, where

timing got a significant role in treatment. Introducing medicine like thrombocytia aggregation impeding medicine and statins decreasing cholesterol level together with secondary prevention meant a great development in the frame of treatment (Kiss et al., 2014).

The appearance of telemedicine in the field of treatment and the use of TTECG machines which are found in ambulance at every level shows another step forward and they have become a process targeting the reduction of time (Bán, 2017a, 2017b). Nowadays, the most modern method of treatment is the revascularization, which plays an important role not only in rescuing the patient's life, but it affects the further living standards, as well. At the same time, timing determines the effectiveness of treatment and its possibilities (Rácz et al., 2010). That is why opening the invasive cardiology department in the county in 2013 was significant, because before that, patients suffering these problems were taken to another hospital almost 100 kms away (Szeged, Debrecen).

Many factors influence the early treatment besides the existing capacities, and they are important participants of this period, such as the experts on duty, the paramedics, the ER workers and, last but not least, the patient itself, because the time of hesitation negatively affects the experts. When a patient with ST-elevation acute myocardial<sup>6</sup> infarction cannot be taken directly to PCI laboratory, instead, (s)he is taken to the ER by an acquaintance, the mortality can be risen by 20 per cent (Kiss et al., 2014).

Observing the regional treatment, this study is not suitable to describe the above mentioned last factor, because it is defined by many subjective factors felt and experienced by the patient. On the other hand, the regional inequalities of the objective treatment factors are important to study. Fig. 2 shows the ambulance stations in Békés County and their areas covered. At micro-regional level Békés County is evenly covered by ambulance stations. Many of them are relative smaller ones but they can provide ambulance care spatially balanced. Ambulance stations in Békéscsaba and Orosháza cover the largest area within the county.

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<sup>6</sup> On the EKG line P, Q, R, S, T waves are separated and the abnormal changes in this line is the ST elevation which are called STEMI, while the heart attack without it is called non-STEMI (NSTEMI)

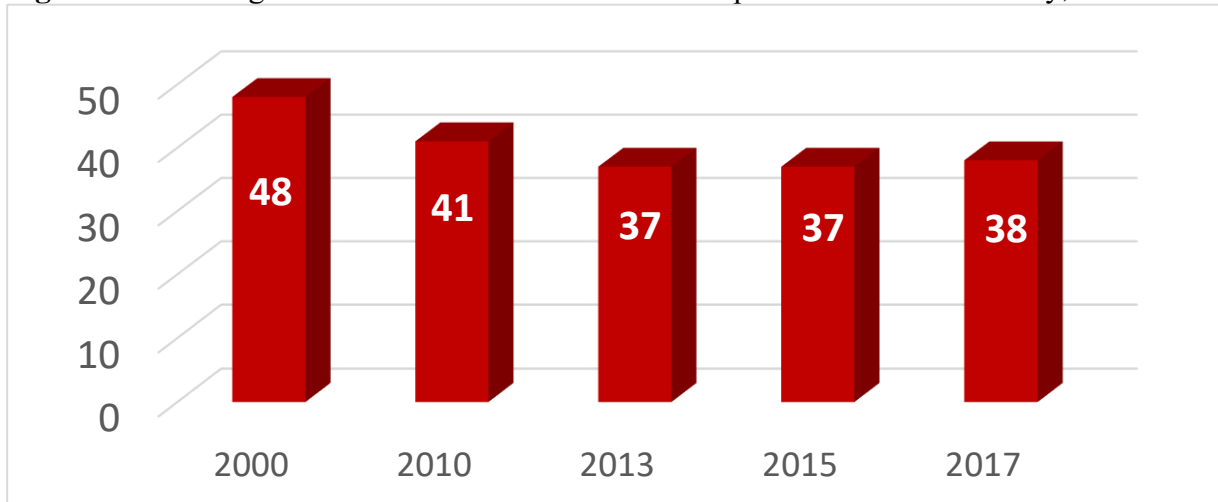
**Figure 2** Working territories of the ambulance stations in Békés County, 2018

Source: Author's elaboration using the data of the National Ambulance Services' Branch Office in Békés County 2018.

Two ambulance stations were opened in Mezőberény and Tótkomlós in 2015 (Fig. 2), before that time, these two areas were operated by the stations of Orosháza and Békéscsaba (MTI, 2017). There are not any ambulances in the stations of these settlements but TTECG can be found in the ambulance which can send the signs using radio waves to the ER of Gyula, therefore, the regional inequality has been greatly reduced. The most important aspect of the TTECG sign receiver units was that they have to be near to PCI centres in order to act fast (Bán, 2015). The accessibility inequalities were decreased more as a rescue point operates at the highlighted spot. Currently, there is only one in the county in Dévaványa. Because of the longer arrival time of the ambulance, there is a permanent ambulance between 8 a.m. and 4 p.m. at the settlement.

The number of ambulances in operation is indicated in Fig. 3, according to which, there is a slight decrease, although it is due to the fact that the transfer of patients has been out of the tasks of the National Ambulance Services, and they deal with rescue tasks, exclusively. In 2000 there were altogether 48 ambulances in operation in Békés County, while in 2017 the number of them was only 38. This slight decrease tendency has happened mainly during the 2000s.

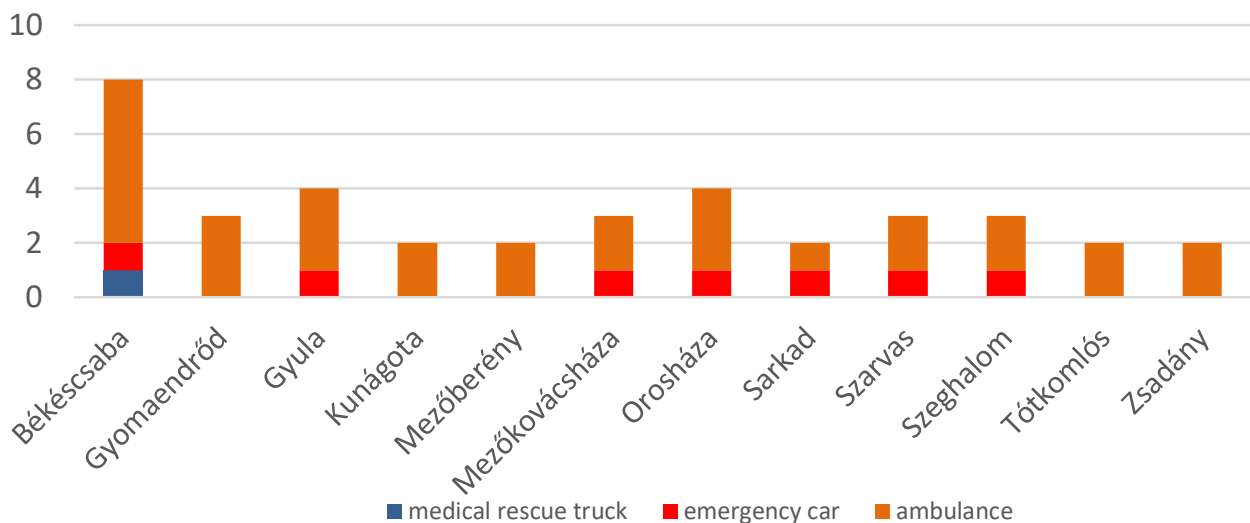
**Figure 3** The changes of the number of ambulances in operation in Békés County, 2000-2017



Source: Author's elaboration using the data of the National Ambulance Services' Branch Office in Békés County 2018.

In 2015, 748 ambulances operated and 170 paramedics worked. If we study its regional data, we can state that the county has a suitable provision compared to the national rate. Between 2010 and 2015, 23 new ambulance stations were opened across the country and 2 of them were in Békés County. In 2011, the average age of the ambulances was 8.9 years, while today, due to the investments, it has reduced to 6.9 years. Fig. 4 shows the ambulances and their quality of equipment. The largest ambulance station with its diverse rescue team can be found in Békéscsaba in the seat of Békés County. The smallest ambulance stations are standing in Kunágota, Mezőberény, Tótkomlós, Zsadány where there are not any medical rescue track or emergency car. The other ambulance stations in the county are middle-sized and have at least one emergency car.

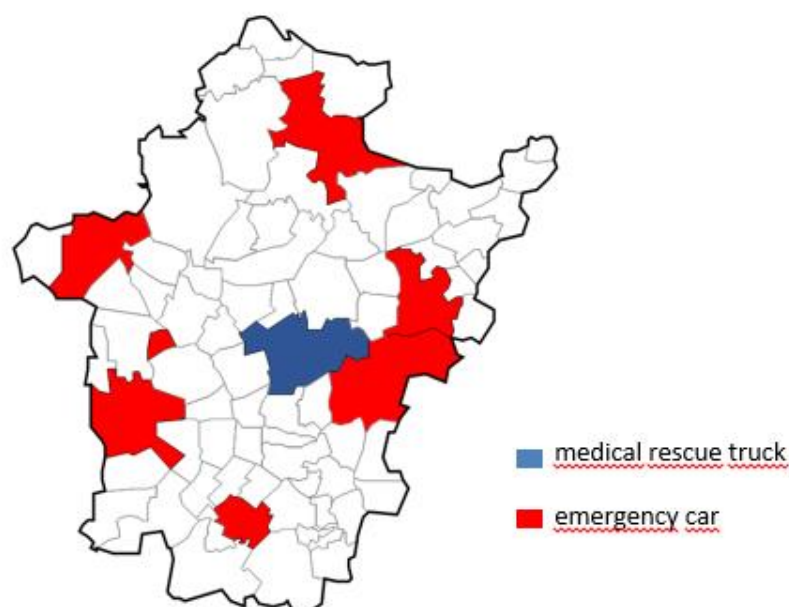
**Figure 4** Types of rescue teams in the county



Source: Author's elaboration using the data of the National Ambulance Services' Branch Office in Békés County 2018.

By studying these data that focus on the regional aspect, one can observe that those settlements situated in the middle line of the county are well supplied, and when there are more cases demanding higher level of treatment simultaneously, they can be provided, while the provision of the southern regions is not sufficient (Fig. 5). The situation has become more difficult, as there are no rescue points in these areas. According to the leading ambulance officer, they constantly observe the cases, and as a result, they are thinking of Medgyesegyháza as a possible rescue point, although there have not been any negotiations on building one. The only one medical rescue truck is in the seat of Békés County (Békéscsaba).

**Figure 5** Medical rescue truck or emergencies case works garages in Békés County, 2018.



Source: Author's elaboration using the data of the National Ambulance Services' Branch Office in Békés County 2018.

These can be satisfied with the above mentioned use of TTECG, which provides the experts with the patient's ECG immediately, and after analysing it, they can decide how the patient could be treated later. In this case, more dilemmas can emerge, as when there is a so-called myocardial infarction with ST elevation, the decision is clear, but the case with these symptoms requires a treatment with different process. It is a fact that according to the data of the National Heart Attack Register, the surviving data of patients with both STEMI and NSTEMI are better if they have had revascularisation (Jánosi, Offner, 2015). That is why the quality of treatment and its possibilities determine the patients' further life for a long time.

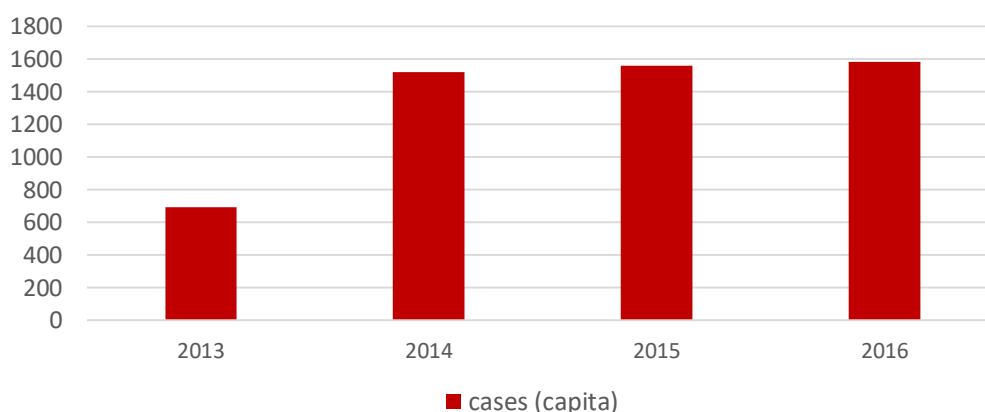
Similar studies have been conducted at an international scale in 555 hospitals of about 20 countries, where patients with Acute Coronaria Syndrome were followed both in the short and

the long term. In these cases, the effectiveness of anticoagulant therapy was studied beyond revascularisation, which highlighted the significance of revascularisation (Annemans et al., 2016, Ertaş, Tokğözoğlu, 2016).

Focusing on the rescue data of Békés County, there was no possibility to tighten the data, especially to the calls of myocardial infarction. Nevertheless, it can be stated that annually there are 350 to 400 calls of the ambulance because of circulatory failure, and experts start resuscitation in 280 to 300 cases and their primer success is about 15 per cent, while the permanent success is only about 5 per cent (National Ambulance Service in Békés County, 2018).

According to the information given by the National Ambulance Service's Békés County Branch Office, they are able to provide the arrival time within 20 minutes to any settlement in the county. After arrival and the professional treatment on the spot, the next step is the revascularization as soon as possible, which is done by PCI laboratories. The PCI lab in Békés County was opened in 2013, which satisfied the need of cardiology, as before that, the patients were taken to Szeged, Debrecen or Szolnok, and that enlarged the timing significantly. Currently, the cardiology invasive unit operates in 24 hours, and it is provided that the time is no more than 20 minutes from the gate of the hospital to the operating table. Fig 6 shows increasing number of coronarography cases – such as AMI – supplied in PCI centre of Gyula. In 2013 there were approximately 700 cases while now there are almost 1600.

**Figure 6** Coronarography cases of Békés County Central Hospital Pándy Kálmán Member Hospital since 1<sup>st</sup> July 2013.



Source: Author's elaboration using the data of the BMMK Pándy Kálmán Member Hospital's PCI Laboratory 2013-2016.

As shown by the data, slightly over 1500 patients are treated here annually (Fig 6). There was a comparative study in 2013 elaborated by the colleagues of the cardiology department in



which they focused on primarily the changes of treatment and timing in the region. That study revealed the following observations:

- During a study elaborated in 1985-86, the time of making a decision means the time which elapses until the patient enters the healthcare from the appearance of symptoms, which took 3 hours and 25 minutes, but the same time period was 58 minutes in 2015. It partly refers to the better knowledge of the patients and their ability to recognise the symptoms.
- The time period entering to hospital was 12 hours, but it has reduced to an average of 2 hours and 23 minutes.
- There were not found any significant differences with respect to the time when heart attack appeared, as it happened in the early morning hours (Márk et al., 2015).

It should be emphasized that this comparative research studied the data between 2011 and 2013, which was before the opening of the PCI laboratory. Experts state that these positive changes are due to the patients' health awareness and the regular trainings in the general practitioner's system (GP), as well as the improvement of the organization of the ambulance system.

According to these findings there are numerous positive changes, but new questions have been raised:

- What changes at any levels of prevention will improve the current status further?
- How can be the time of hesitation further reduced?
- How far can be the telemedicine expanded in the field of treatment, rehabilitation and care?
- Where, how long and what forms do the colleagues have to ask for the urgent changes in order to enlarge the effectiveness? What is the region which needs urgent investment, improvement?

In general, in the last period there have been many positive changes in the AMI treatment with respect to providing the chances of availability of treatment, thus, more patients are given PCI in the county (Uzzoli et al., 2017). At the same time, it is only the beginning of the way on which we should not stop, but we have to step forward, thinking in a complex process from the appearance of the symptoms to the treatment. To summarize all results of this examination see above in this paper, I can emphasize the role of infrastructure developments in early treatment

in health care of AMI, because after opening a new PCI centre in Gyula AMI mortality data could begin to improve in Békés County.

## SUMMARY

The study intended to show the current situation of Békés County focusing on pre-hospital and hospital treatment in connection with Acute Myocardial Infarction (heart attack). The current improvements have promoted the reduction of health and availability inequalities, although the mortality rates show that there is a need of further improvements. Developments have to influence the complex process from the appearance of symptoms to the process of treatment, which means the introduction of a comprehensive practice supported by specialized protocols. This study is not suitable to observe it, but the results clearly show the fact that the recent practice is only the first step towards providing a more effective treatment.

The primary results of this paper give more information about general conditions of health care regarding infarction. These results can confirm that infrastructural developments in early treatment in Békés County (new PCI-centre or new ambulance stations) can increase survival chances after infarction. The consequence is to emphasize the determinative role of early treatment in the entire health care which improves the conditions of accessibility. The other important result is marked improving tendency has happened in early treatment infarction care of Békés county in the latest years which went together with stronger cooperation between pre-hospital and hospital care of infarction as the part of early treatment. Based on these results and consequences the proposal for decision-making is that integrated health care can strengthen the possibilities of accessibility.

The further step in our research project is to evaluate the characteristics of hospital care regarding infarction based on making semi-structured interviews made with medical professionals and patients, too.

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