CHANCES AND CHALLENGES FOR THE EUROPEAN RURAL DEVELOPMENT (2021–2027)

4TH INTERNATIONAL SCIENTIFIC CONFERENCE ON RURAL DEVELOPMENT

Peer-reviewed Scientific Conference Proceedings

SZIU

Szent Istvan University
Institute of Irrigation and Water Management

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INTRODUCTION

In the new planning period, the Multiannual Financial Framework and the Next Generation EU are designed to mitigate the socio-economic consequences of the Covid19 pandemic in the European Union. In addition, these two instruments together will help the EU to strengthen the mainstreaming of key Community policies and climate considerations, as well as the digital switchover and regional cohesion, resilience building and the management of the BREXIT situation.

But what does this mean for us? What do the European countryside, especially in Central and Eastern Europe, experience from these effects? To what extent do the resources of the new planning period contribute to the retention of rural capacity, the development of local opportunities and sustainable development?

The aim of the conference was to provide practitioners, creators of rural development and representatives of scientific community with scientific tools and methods to practise common thinking and outline effective problem-solving methods.

The answers and solutions were outlined in the sections of the 4th International Science Conference on Rural Development.

We are proud that our conference has now grown into a Central and Eastern European event. Beside the local partners (Hungarian Academy of Sciences Regional Committee in Szeged, Logistics Working Committee, Government Office for Békés County), several foreign universities participated in the organization of the conference and raised the scientific standards.

The cooperation with lecturers and researchers from UTP University of Science and Technology (Bydgoszcz, Poland), University of Novi Sad (Serbia) and Banat's University of Agricultural Sciences and Veterinary Medicine (Faculty of Agriculture and Faculty of Management and Rural Tourism) is a significant opportunity to work together for our common future in the CEE region and in Europe.

We hope that our conference will continue to provide a forum for exploring and resolving the problems of the Central and Eastern European countryside.

Yours Sincerely,

the Editors

Szarvas, 26 November 2020

THE ANALYSIS OF THE AGRITOURIST POTENTIAL OF BREBU-NOU LOCALITY, CARAS-SEVERIN COUNTY

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Abstract

Over a long period of time, the activity and existence of rural communities was based on the existence and abundance of resources. At the same time, the numerous technological, political and economic changes, specific to the twentieth century, have generated profound changes in agriculture, affecting the economy of rural communities, the way of life of the inhabitants, but at the same time the rural-urban environment. Forms of rural tourism can be representative economic activities for the future development of the rural environment, dependent on the existing resources in each community, connecting to the notion of rural development.
Rural tourism has developed over time, being a form of sustainable tourism, because it supports the preservation of the natural environment, traditions, customs and culture. The environment in which it takes place is clearly established and defined, being a supporter of rurality, authenticity, so in a word of sustainability.
The effects generated by the practice of tourism in rural areas must be graded, taking into account the level of development of the community but at the same time the level reached by rural tourism as a "business". Therefore, in the early stages, if the forms of rural tourism are expected to be "a success", it first contributes to the development of the entrepreneur by ensuring additional income, generating a job for him and family members, stimulating investment in their own material basis, supporting a pluricalification. After the rural tourism "business" develops, it is able to train other entities within the community, generating and supporting a series of related services.
Having at the base the motivation for nature, for returning to traditions/customs, rural tourism can be a solution for sustainable development of rural areas, even if initially has supported the economic use of resources only at a small, family level.

Introduction

Located in the southwestern part of Romania, Caras-Severin County is the third largest county in the country, a county with a remarkable tourist potential at regional and national level of great value and attractiveness, this potential being due to the natural environment, given by the mountainous relief, but also the anthropic resources, the spa resources, the historical and art monuments, as well as the richness of the folk tradition.

Brebu Nou is a commune in Caras-Severin County, located on the northeastern slopes of the Semenic Mountains, in the source area of the Timis River, being formed by the villages of Brebu Nou and Garana. Garana is a village in the commune of Brebu Nou and is distinguished by the architecture specific to German mountain villages, the village being once inhabited by a population originally from the Southern Mountains of the Czech Republic. The tourist potential of the village consists in the fact that it is a rural mountain settlement, with ski slopes recently opened for the winter season, suitable for nature walks in the summer season, but also in the fact that this is where the famous International Jazz Festival takes place. since the beginning of July, as well as folk and blues festivals.

Literature review

Rural settlements, due to the main components - hearth, population, estate, occupations, traditions, customs, have important tourist values that, despite modernization and landscaping, remain equally attractive through the new elements of folk technique and artistic creation.

Rural tourism responds to a large number of travel motivations of tourists such as: spending a holiday in another way, favorable to contact with nature, return to origins, coexistence, knowledge of local traditions and customs, knowledge of flora and fauna, establishing relationships emotional with the inhabitants of the villages, the possibility of consuming fresh and quality food, the development of human-nature relations, the discovery of new places and people, the awareness of the need to lead a healthy life, the search for peace, interest in natural and rational food.

The World Tourism Organization considers rural tourism "tourism where rural culture is a key component of the recreational tourism product, the distinctive feature of rural tourism products is given by the fact that visitors are offered personalized contacts, enjoy the physical and human environment of rural space and participate, as much as possible, in the activities, traditions and lifestyle of the local population".

Rural tourism represents a way that can save agriculture and cultural heritage, being a booming activity, with a positive impact on local development. Fernard Boden - Luxembourg's Minister of Tourism and Rural Development - stated that "*in the next period of time, tourism in general will become an essential component of the economy, and forms of rural tourism in particular can become the tourism of the future*".

The development of the rural area represents a relevant and important activity, the statement being justified first of all through the surface of the rural area, and later by the rather high percentage of the population that lives and is employed in various activities. A sustainable community is one that maintains control over development activity, through the decisions which it creates and implements, supporting local sustainability. This sustainable community must have various actors and institutions with the capacity to mobilize resources and support some common actions that support the continuous development process.

A high percentage of rural localities are considered to be good keepers of traditions, customs, and for the creation of a tourist product "brand of rural areas" to these are added natural and

human resources, but requiring careful coordination so that they are capitalized emblematic elements such as: representative natural resources; the agricultural farm itself; various tourist resources, known as "curiosities"; rural way of life, manifested by: existing traditions and customs, traditional crafts, rural architecture and local gastronomic products.

In conclusion, in today's conditions, where consumers are visibly interested in eco-friendly tourism products, the quality of the rural product, and its capitalization through tourism activities, can be a chance to support the economy of many rural areas. The recovery of the rural economy would in fact mean a benefit both for the inhabitants of the rural areas and for the population of the cities.

Material and methods

Rural tourism is a form of tourism that has a decisive role in the development of rural localities and the development of existing resources in the respective region, but which cannot be capitalized as resources, in other sectors of activity than tourism. Brebu Nou commune, with its two belonging localities (Brebu Nou and Garana), is a model of mountain village, preserving traditions and customs, but which has few development possibilities, other than those through tourism.

In order to highlight the tourist potential of this commune and the possibility to develop it by capitalizing on the available resources, we used, as a research method, the analysis of existing statistical data on the main indicators of analysis of tourism. In this sense, we used the data provided by the National Institute of Statistics, mainly targeting the number of agritourism guesthouses, tourist arrivals and their number of overnight stays, as well as the average length of stay.

Results

The analysis of the agritourism potential of Brebu-Nou commune consists in a detailed analysis of both the tourist offer and the demand, specific to the area.

Analysis of the agritourism offer, Brebu-Nou commune

The materialization of the supply and consumption of agritourism products actually takes place in the households of the rural inhabitants, transformed into farms or agritourism guesthouses. The peasant household, used for tourist purposes, represents an agro-economic microspace, which includes the house itself, auxiliary spaces (summer kitchen, warehouses, etc.) and some household annexes (stables, haylofts, huts, etc.).

The analysis of the agritourism offer is very well highlighted through the accommodation units. In the period 2000-2019, at the level of Caras-Severin County, there was a significant increase of tourist accommodation structures, their number increasing over 3 times.

Table 1.The evolution of agritourism guest houses, by localities, in Caras-Severin County

	2005	2010	2015	2016	2017	2018	2019
Berzasca	:	:	3	3	3	3	3
Bozovici	:	:	1	2	2	2	2
Brebu Nou	**3**	**7**	**11**	**11**	**13**	**12**	**12**
Coronini	:	2	5	5	5	4	5
Ezeris	:	:	:	1	1	1	2
Mehadia	2	3	3	3	3	4	5
Pojejena	:	1	1	2	2	2	2
Sasca Montana	:	2	4	5	6	6	6
Sichevita	:	1	2	2	2	3	3
Teregova	1	1	2	3	3	2	2
Turnu Ruieni	6	3	7	7	7	7	7
Valiug	1	3	4	6	6	6	7
Zavoi	3	8	12	11	11	13	12
Total	**16**	**36**	**71**	**79**	**82**	**90**	**86**

Source: http://statistici.insse.ro/shop/

Regarding the accommodation structures, the rural tourism uses a wide range of reception structures (rural mini-hotels, holiday houses, chalets, villas, rural tourist pensions, agritourism pensions, rooms rented in farmers' houses, agritourism farms, campsites and arranged spaces for camping, etc.), located in rural areas, but which are not at the quantitative and qualitative level of demand, for this form of tourism.
In the area subject to research, there is an increase in the number of accommodation units, specific to rural tourism. Considering the expansion of the rural tourist activity and, the specificity of the rural localities, in Caras-Severin County, the agritourism offer showed in the analyzed period an ascending trend.

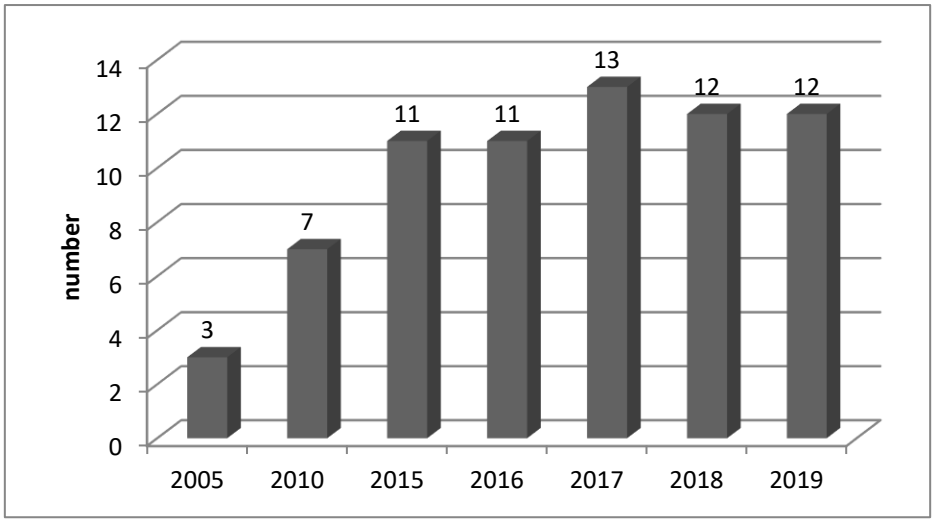

Figure 1. The evolution of agritourism pensions, Brebu-Nou commune

Garana locality is a village in Brebu Nou commune, a commune recognized as an agritourism destination in this part of the country.
In the period 2005-2019, the number of agritourism guesthouses increased 4 times, figure 1. In 2019, the existing agritourism guesthouses in this locality represented 13.95% of the total number of agritourism gueshouses registered in Caras-Severin County, figure 2.

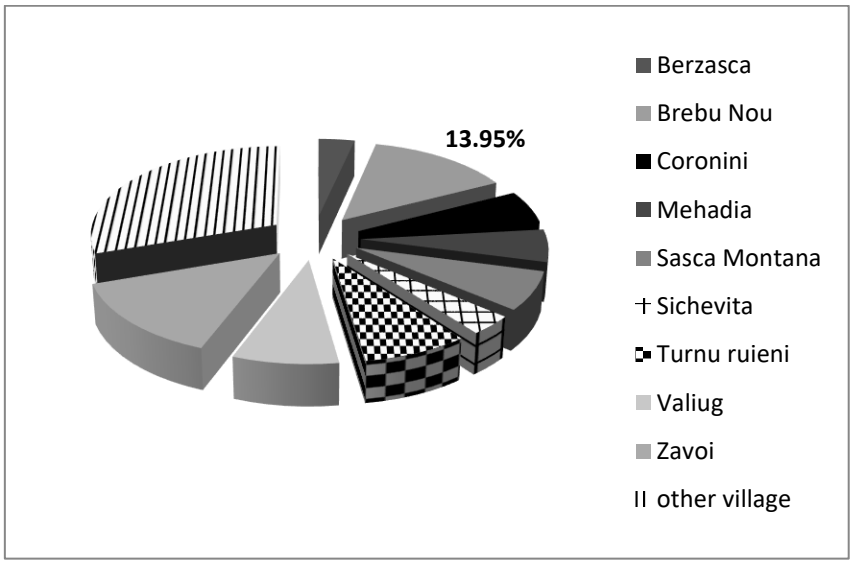

Figure 2. The structure of the distribution of agritourism guesthouses, on the localities of Caras-Severin County

The tourist accommodation capacity represents an important indicator of the agritourism offer, which allows us to evaluate the intensity of the agritourism activity. This indicator is presented in the form of two distinct indicators: the existing accommodation capacity, which

identifies the number of accommodation places made available to tourists and the accommodation capacity in operation, which indicates the number of registered places-days, at the level of the accommodation unit, being determined by its duration of operation, during a year.
Regarding the existing accommodation capacity, in the agritourist gueshouses, at the level of Caras-Severin County, Brebu Nou locality, concentrates the largest number of places-231, at the level of 2019, thus holding 14.09% of the total number of accommodation, included in this type of tourist structures.
The accommodation capacity in operation indicates an increasing trend, also the capacity in operation, in 2019, with a slight decrease. Regarding the value of this indicator, registered at the level of localities with agritourism potential, from Caras-Severin County, Brebu-Nou commune, it is on the second place, with a total number of 40,466 places-days, after, Sasca Montana, 40,866 places-days.
The degree of utilization of accommodation structures is analyzed on the basis of the indicator "net index of capacity utilization". This indicator provides information about the ability of accommodation units to retain tourists for as long as possible.

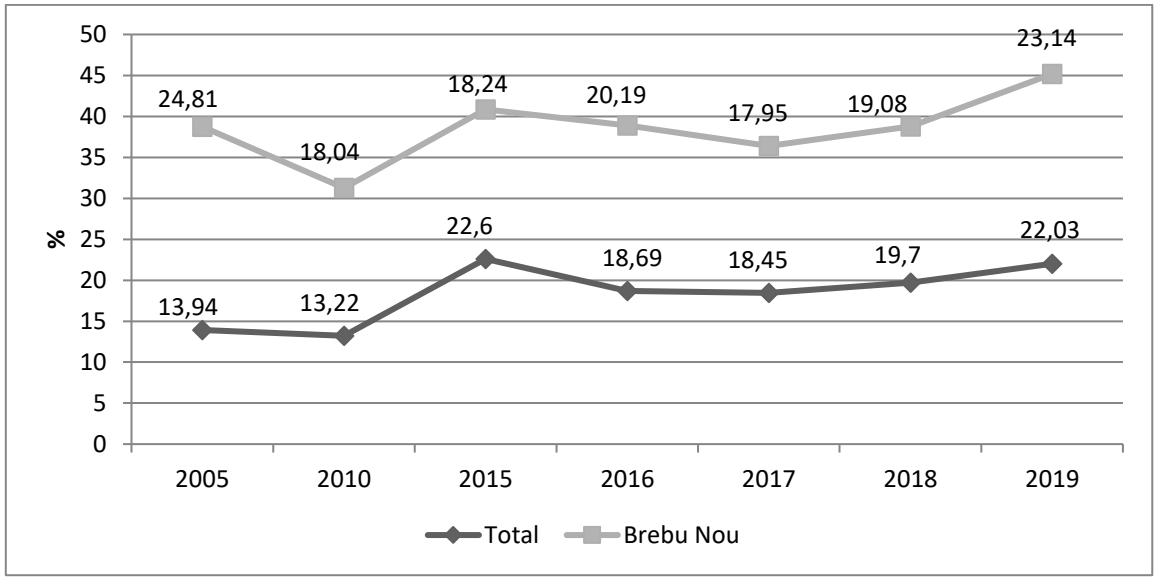

Figure 3. The evolution of the index of the accommodation capacity in operation, for agritourism guesthouses, 2005-2019

In the period 2005-2019, at the level of Caras-Severin County, a fluctuating evolution of the utilization index of the accommodation capacity in operation is observed, due to the overall evolution of the number of overnight stays spent in these accommodation structures. The highest degree of use was registered in 2015, the value of the indicator being 22.6%. At the level of 2019, the degree of use of agritourism guesthouses at the county level was 22.03%.
In the case of Brebu Nou commune, the evolution of the index of net use of agritourism guesthouses is a fluctuating one, marked by increases, increases and decreases. In 2019, the net

use index registers the value of 23.14%, value, higher than the county average, 22.03%.

Agritourism demand analysis, Brebu-Nou commune

The movement of tourists in rural localities, known as tourist villages, is based on multiple motivations: recreation, contemplation of landscapes, desire to know the culture and social life specific to the areas visited, participation in activities on the farm, orientation to a healthy diet, etc.

The agritourism demand has a pronounced heterogeneous character, determined by the diversity of consumers' needs determined by a series of socio-economic and conjunctural factors, specific to the area of origin.The manifestation of the tourist demand represents the tourist circulation, meaning the domestic and international tourist flow, represented by the actual number of tourists, both national and foreign.

Table 2 presents the situation of the evolution of tourist arrivals in the agritourism guesthouses from Caras-Severin County.

Table 2.The evolution of tourist arrivals in agritourism guesthouses in Caras-Severin County

	2005	2010	2015	2016	2017	2018	2019
Berzasca	:	:	1305	1558	1294	1831	1301
Bozovici	:	:	500	783	752	682	646
Brebu Nou	346	1440	2267	2055	3273	3882	3546
Coronini	:	603	971	1567	428	611	346
Ezeris	:	:	:	948	1857	2704	2085
Mehadia	389	1424	668	717	766	1204	2218
Pojejena	:	148	359	1609	1898	1517	2141
Sasca Montana	33	753	2436	3760	3589	3581	4277
Sichevita	:	528	1427	1361	1719	1744	1839
Teregova	78	53	16	159	328	296	135
Turnu Ruieni	44	233	1081	817	1119	1232	750
Valiug	26	1121	3039	2389	4174	4383	3387
Zavoi	393	575	2345	2007	1983	2273	2046
Total	1309	8166	20394	24457	26615	28874	28269

Source: http://statistici.insse.ro/shop/

Known as an agritourism destination, Brebu Nou commune is an important player in the agritourism market in Caras-Severin County. During the 14 years subjected to the analysis, the number of tourists arriving in the agritourist boarding houses, existing at the level of Brebu Nou commune, increased permanently, the average growth rate being 924.85%. This is due to the intensification of agritourism activity in this area and at the same time, the involvement of local communities in the development of the specific offer of rural tourism, which would offer guests the opportunity to spend their free time in peace.

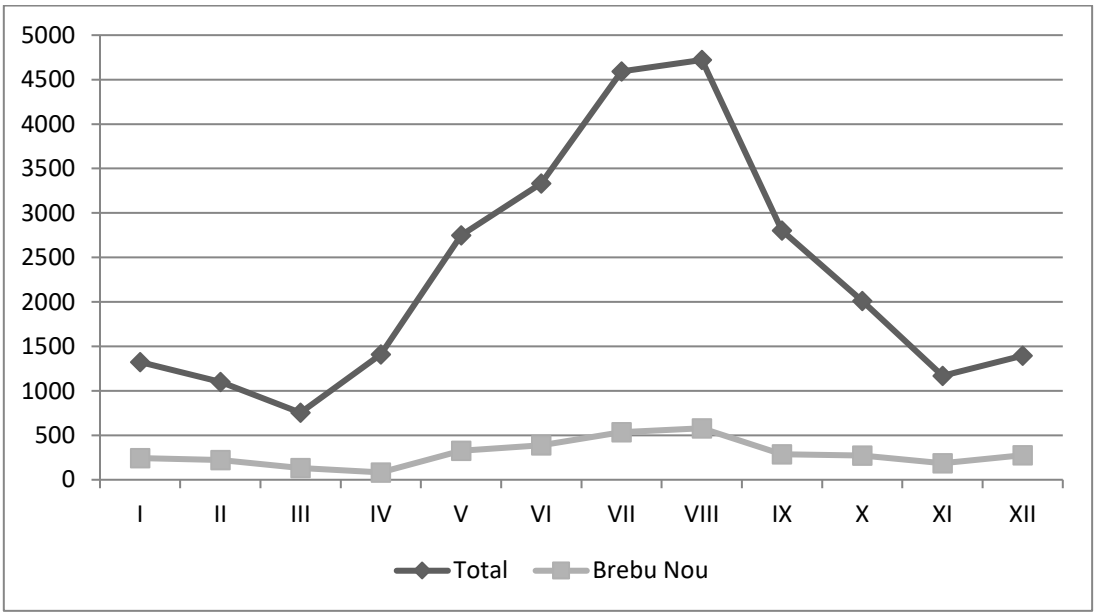

Figure 4. The evolution of tourist arrivals, in agritourism guesthouses, Caras-Severin County, on Monday, 2019

At the county level, Brebu Nou commune is the second largest agritourism pole, with a total number of 3546 tourists, registered in 2019, after Sasca Montana commune, which registered a total number of 4277 tourists. These two localities, together with Valiug commune, registered, in 2019, 39.65%, of the total number of tourists accommodated in the agritourism guesthouses in the county (Sasca Montana - 15.13%, Brebu Nou - 12.54% and Valiug - 11.98%).

The number of nights or the number of days-tourist indicates the number of nights that a tourist spends in an accommodation unit.
The situation of tourist arrivals, on Mondays, allows us to identify the seasonality of the tourist demand. Thus, both at the county level and for the commune of Brebu Nou, it is possible to observe an intensification of the tourist circulation, in the warmer period, May-September, but also on the occasion of the winter holidays, December-January.
Regarding the evolution of overnight stays in agritourism guesthouses, from Caras-Severin County, by localities, we present table 3.
Table 3. The evolution of overnight stays of tourists in the agritourism guesthouses from

Caras-Severin County

	2005	2010	2015	2016	2017	2018	2019
Berzasca	:	:	2393	3318	2614	3029	2922
Bozovici	:	:	1502	2295	1602	1342	1715
Brebu Nou	1930	3250	6855	6412	8278	10736	9364
Coronini	:	1776	8902	6915	2120	1761	1776
Ezeris	:	:	:	1163	3046	3809	4587
Mehadia	1217	3689	2798	2183	2701	4744	5940
Pojejena	:	376	2606	4311	3448	2233	3207
Sasca Montana	136	1412	6700	5870	6765	7382	9759
Sichevita	:	528	5440	4500	5424	5605	5920
Teregova	280	196	23	230	1305	1239	548
Turnu Ruieni	238	631	2708	2190	3321	3926	1730
Valiug	89	2142	6457	4941	7216	8375	6707
Zavoi	815	1434	4441	4172	4277	4518	4559
Total	4705	17241	64396	63616	62353	66608	71014

Source: http://statistici.insse.ro/shop/

In the period 2005-2019, the number of overnight stays in agritourism guesthouses increased by 385.18%. In 2019, the number of overnight stays registered in the agritourism guesthouses from Brebu Nou commune, represented 13.17%, from the number of overnight stays in these accommodation units, registered at county level.

The indicator, the average duration of the stay, provides information on the intensity of the tourist activity, in a completed period, in a tourist reception unit, with accommodation function. This indicator is determined as the ratio between the number of overnight stays and the number of tourist arrivals.
The analysis of this indicator, for the agritourist guesthouses, from Caras-Severin County, indicates a decreasing tendency. This aspect is the result of the fact that agritourism is a form of tourism, practiced, especially on weekends.
In the case of Brebu Nou commune, the average length of stay for agritourism guesthouses is higher than the county average. Thus, in 2019, at the commune level the value of the indicator was 2.64 days/tourist, and at the county level the average was 2.51 days/tourist.

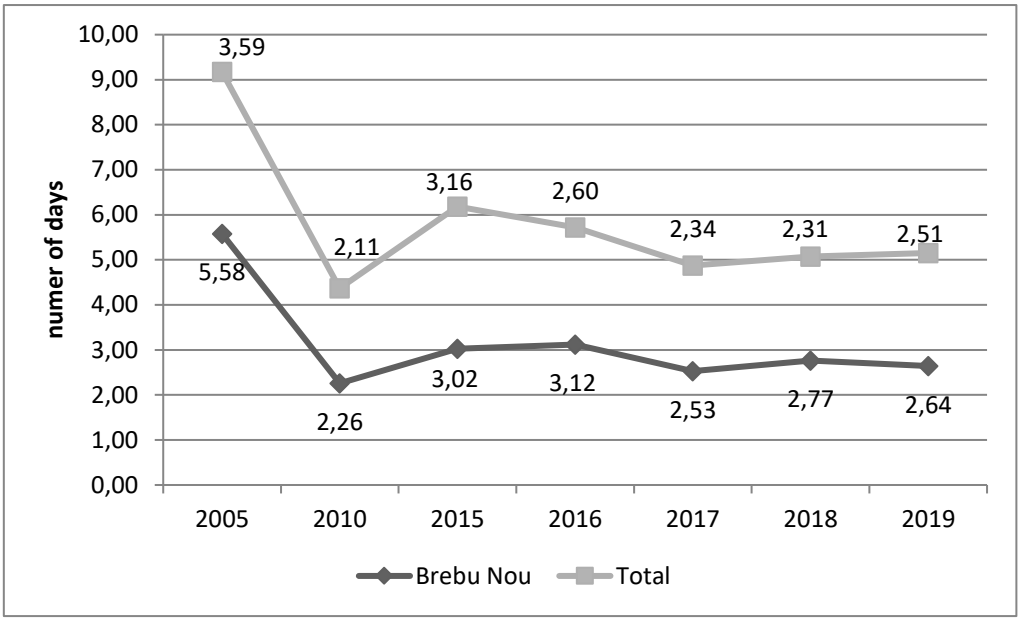

Figure 5. The evolution of the average length of stay, in the agritourism guesthouses, Caras-Severin County, 2005-2019

Conclusions

As a final conclusion, we can say that Caras-Severin County has a huge natural and anthropic tourist potential that could attract many Romanian and foreign tourists, if it were capitalized and promoted, and this, in order to be achieved, is the involvement of people, both in the public and private sectors, is needed.

One of the main socio-economic phenomena of our century is the development with a remarkable speed and continuity of domestic and international tourism, both in Romania and in a geographical region, areas, and villages.

The tourist values of the studied area are given by a very rich and varied natural environment, with a multitude of types of relief, climate elements under oceanic and sub-southern influences, a representative hydrographic network and a rich and varied forestry and hunting background, all of which are tourist destinations with a high degree of attractiveness.

Being endowed with a natural environment favorable to the practice of rural tourism and agritourism, Caras-Severin County acted in the direction of preparing and promoting the rural tourist offer trying to align with European standards.

The intensification of the agritourism activity determined the knowledge of the rural area of Carasesti, the tourism being thus an invisible ambassador of these places. The commune of Brebu Nou, with its component villages preserving traditions and customs specific to the area and the old German settlers, is a real agritourism area, specific to the western part of the country.

The chance to develop the rural area in the mountainous area of Caras-Severin County is represented by the organized extension of agritourism, thus having the possibility to capitalize at a higher level of natural and anthropic resources, specific to these places.

Summary

Over a long period of time, the activity and existence of rural communities was based on the existence and abundance of resources. At the same time, the numerous technological, political and economic changes, specific to the twentieth century, have generated profound changes in agriculture, affecting the economy of rural communities, the way of life of the inhabitants, but at the same time the rural-urban environment. Forms of rural tourism can be representative economic activities for the future development of the rural environment, dependent on the existing resources in each community, connecting to the notion of rural development.

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*** http://statistici.insse.ro/shop/

THE SOCIAL JUDGEMENT OF THE M44 MOTORWAY

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Abstract

In my research, I examined the social perception of the M44 motorway, for which I interviewed people registered on various social media sites in the form of an online questionnaire. The M44 motorway is has a determining importance for Békés county, Jász-Nagykun-Szolnok county and Bács-Kiskun county as an infrastructure element catching up with the countryside, which has been needed by the inhabitants of the surrounding settlements for a very long time.

Introduction

The development of systematic research in the countryside started in Hungary with a delay compared to Western Europe. Although some disciplines (agricultural geography, rural sociology) affected these areas, the spread of rural sciences in the modern sense only took place in the period after the change of regime. Studies targeting the countryside revived in the second half of the 1990s, as there was already a strong interest in politics in Hungary. Addressing the growing territorial disparities has made legislation more and more urgent, resulting in the adoption of the law XXI of 1996 on Spatial Development and Spatial Planning. The Spatial Development Act already used the term “rural area” but did not defined it. In contrast, it described “agricultural rural development areas (rural areas)” as “where there is a significant proportion of those who are employed in agriculture and those who are engaged in agriculture in the occupational structure of municipalities and small towns”.

Similarly, the competent Ministry of Agriculture put it somewhat inaccurately and in practice without further guidance, stating that the countryside is “an area dominated by agricultural activity, green space (forest, natural landscape) and small-village settlement structure, low population density and population density. " (FM 1997). Meanwhile, based on the recommendations of the OECD, the delimitation and categorization of rural areas was carried out in Hungary in 1995. This typification took place at the micro-regional level, according to the proportion of the population of rural (below 150 people / km^2) or urban settlements (where the population density is above 150 people / km^2) of the micro-region was distributed within the given micro-region. At that time, taking into account the low population density threshold of 150 people / km^2, the area and population of the country were almost entirely rural. The study entitled Rural Development in Hungary compiled for the OECD (based on the KSH's classification of micro-regions) found that 97.7% of the country's territory is rural and 75.4% of the population lives in rural micro-regions.

Literature review

The interpretation of the infrastructure and the body of knowledge about it is already extremely complex in itself. In the research of infrastructure several disciplines, in its practical issues several activities, a whole range of professional fields are involved; thereby involving professionals with different perspectives and knowledge. When discussing the topic of infrastructure, the difficulties start at the definition, Fleischer T. (1994) states. Indeed, a universally accepted, uniform definition of the term has not been born to this day. Thus, almost every author gives his own definition, often explaining his approach in detail in his work, or referring to the position closest to his opinion, which is absolutely necessary for further detailed examination of the infrastructure. Thus, the interesting situation may arise that in the introduction to the regional development and settlement development program documents, a typically voluminous part deals with the definition of the concept and the division of the infrastructure into parts.

After that, it is almost natural that in theoretical works and scientific articles discussing infrastructure in more detail, the concept itself is discussed in almost all cases: the concept of infrastructure (Füzesi Z. 2007; Abonyiné Palotás J. 2006). Infrastructure is simply the finest structure, the finest final structure. The development of the concept in the Second Worldwar its spread to the capitalist economy in the 1950s. However, it has not been precisely, unambiguously defined since then, as different disciplines place it in a different light, assigning different essential content to it. Therefore, we can also say: "as many disciplines as there are definitions", sometimes even more, as we can often experience significant conceptual differences even within individual disciplines. The concept of infrastructure first appeared in a military context, meaning that the definition used today comes from military terminology.

The concept of military relevance refers to the set of buildings, equipment and communication networks that were necessary for the supply - in particular for the transmission of materials and news. Due to the above, the borrowed Latin term was initially used only to denote fixed components of the transport system (eg track network, airports). Concerning the concept, Fleischer (2009) states that the term infrastructure itself comes from the military and is based on the recognition that there is a need for supply lines to have a general set of equipment that can be used to make equipment in occupied areas smoother; ensure a reliable connection with the hinterland. At the beginning of the use and introduction of the infrastructure, the work of economists can be observed. Naturally, they initially approached the concept in a very rough, general way. Rosentstein-Rodan, P. (1970) gives a very general formulation of infrastructure. On the infrastructure, the so-called it means additional social expenditures that are productive and their realization requires a longer period of capital maturation. Infrastructure is a complex of general conditions that provide a favorable basis for private capital in the main economic sectors (industry, agriculture) and meet the needs of the entire population. Today, a number of schools have been established, so in order to review the conceptual approaches, it is first worth discussing the characteristics, role and perception of the so-called infrastructure schools.

Relying on the works of Abonyiné P. J. (2004) and Kerekes I. − Péterfalvi J. − Wimmer J. (2007), I collected and systematized the characteristics of the concept of infrastructure. Of course, there are no sharp boundaries between the groups formed from each characteristic. All in all, it seemed expedient to put quite a few characteristics (criteria) in the group to which they

belonged the most. In particular, the boundaries between economic factors and territorial and settlement development factors may be blurred. Knowledge of these criteria contributes greatly to the understanding of the conceptual issue of infrastructure. In my opinion, the infrastructure characteristics formulated by Mrs. Abonyin and, to a lesser extent, the Kerekes-Péterfalvi-Wimmer trio are so diverse that it is not easy to add new criteria. I would definitely highlight from the multitude of characteristics the change in the concept of infrastructure (at the same time expanding, but in a sense decreasing vertical), where not only interpretive features (theoretical-scientific framework) but also socio-economic development and change must be taken into account. elements, infrastructure areas. I would note here that the category of infrastructure is not only expanding, but at the same time certain elements may be demolished, even dismantled, or peripheral.

As an example, I can mention the extremely developing, changing category of infrastructure, the field of telecommunications and informatics. Within this, the breakthrough of mobile communications over the past decade has been particularly striking. Nowadays, the expansion of mobile applications, the opportunities provided by social networks and the intertwining of individual communication areas can be highlighted. At the same time, declining or even peripheral infrastructure elements can be observed even within such a dynamic sector: although fixed telephony is not a means of communication at the beginning of the new millennium, it has not (and cannot) drift into the fate of so-called personal call service. Fax machines, whose role has also faded with the advancement of online communication, are essentially descendants of telexes, drawing more and more advanced forms of text data transmission. What are today's applications in this field? In addition, it should be noted that road infrastructure is a serious factor in rural spatial structure (Egri-Tánczos 2015, Egri 2020), but its existence does not necessarily result in economic catching-up (Egri-Kőszegi 2020).

Material and method

In the course of my research, I collected data from a primary source, for which I prepared an online questionnaire. I published the questionnaire on various social media sites, which was completed by a total of 516 people in anonymous form.

I made various diagrams and figures from the incoming data so that I could represent the answers as much as possible. During the questionnaire, there were closed and open questions to get the widest possible picture of the respondents ’opinions about the M44 motorway.

The questionnaire survey is the most commonly used primary research and information retrieval technique, suitable for descriptive, explanatory and exploratory purposes. A method often used, especially when examining concepts such as e.g. satisfaction, pain, stress, quality of life. Information can also be gathered about attitudes, knowledge, opinions, expectations, experiences about the behavior of patients or caregivers. Its advantage is that it is relatively easy to implement, it usually does not burden the respondents, and properly designed and completed questionnaires can provide relevant information to the researcher. For some research topics, it is often the only option available. The disadvantage is the subjectivity of the researcher and the interviewee, sometimes the lack of honesty.

Results

Figure 1 shows that 51.2 per cent of those who fill out travel alone by car to their workplace, 13.6 per cent also by car with their colleagues, and 14 per cent by public transport, so they use motorways and highways on a daily basis. Then I wondered how regularly those who live within a 30 kilometers radius of the M44 use the highway. It turned out that the majority of them drive quite often, 65.7% use the M44 motorway 1-2 times a month, 15.9% several times a week, and 3.3% use the M44 motorway on a daily basis.

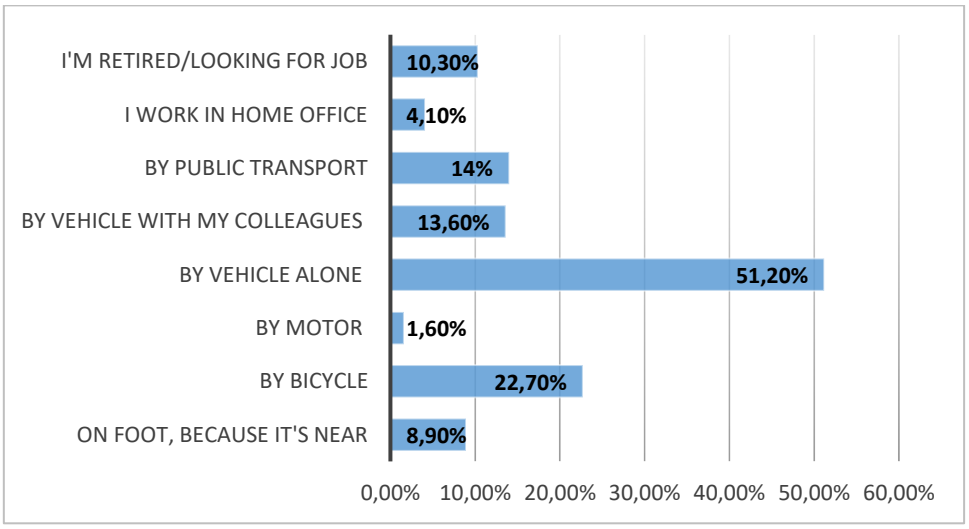

Figure 1. How do you go to school / work?
Source: Own edition

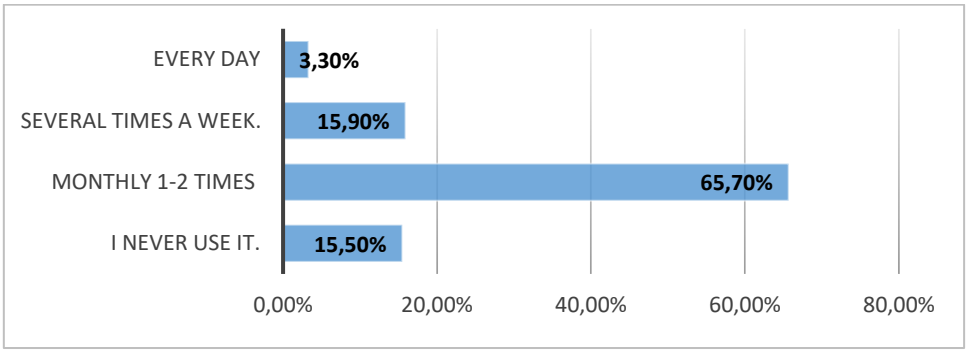

Figure 2. If you live within a 30 kilometers radius of the M44, how often do you use it?
Source: Own edition

Figure 3 illustrates whether respondents say the M44 highway meets the quality requirements of the age. 22.5 percent said they were fully compliant, 54.8 percent said they were compliant,

21.7 percent said they were partially compliant, and only 1 percent of respondents said they were not compliant at all. Those who said they only partially or not at all gave the following answers as to why they did not think it was worthy of today: Lack of gas station, The width of the highway is not enough. If someone crashes, it becomes dangerous in the absence of a stop lane, there is no driveway nearby, there is no gas station yet, the road is undeveloped and wavy, there is no restaurant, the Szarvas driveway is far from the city, there is a lack of drinking water at some resting places / Cserkeszőlő / horrible driveway / Szarvas /, there is no ramp to Békésszentandrás, more information boards would be needed.

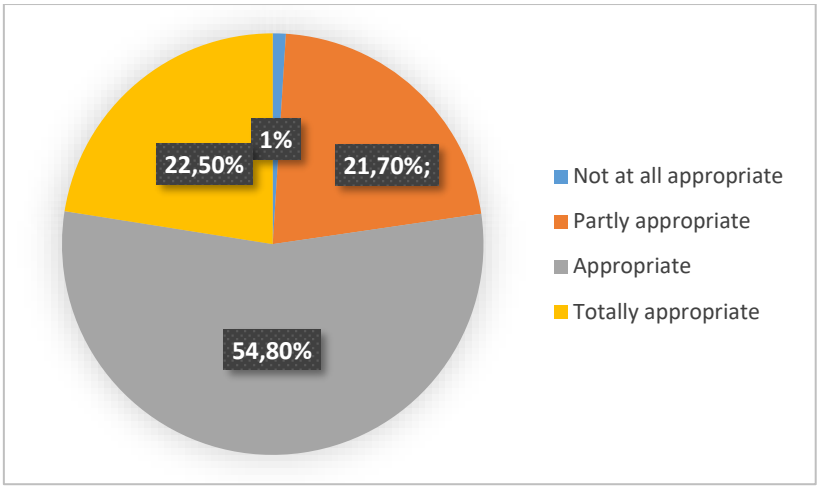

Figure 3. Do you think that the M44 motorway meets today's quality requirements?
Source: Own edition

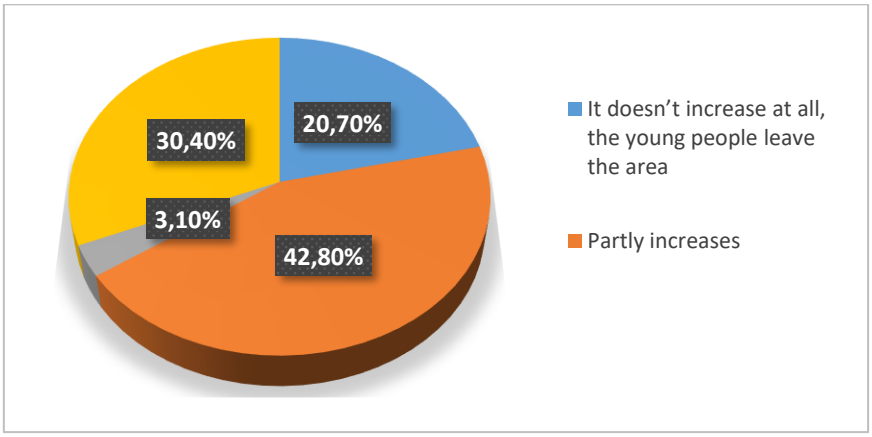

Figure 4. Does the M44 motorway increase the population retention power of the countryside?
Source: Own edition
According to 30.4 percent of respondents, the M44 motorway may become a more attractive place to live and / or work in nearby settlements. 6 per cent say it increases completely, 42.8

per cent say it partially increases, while 20.7 percent say it does not increase the population retention force at all, and even more so leaves the area for the population, especially young people.

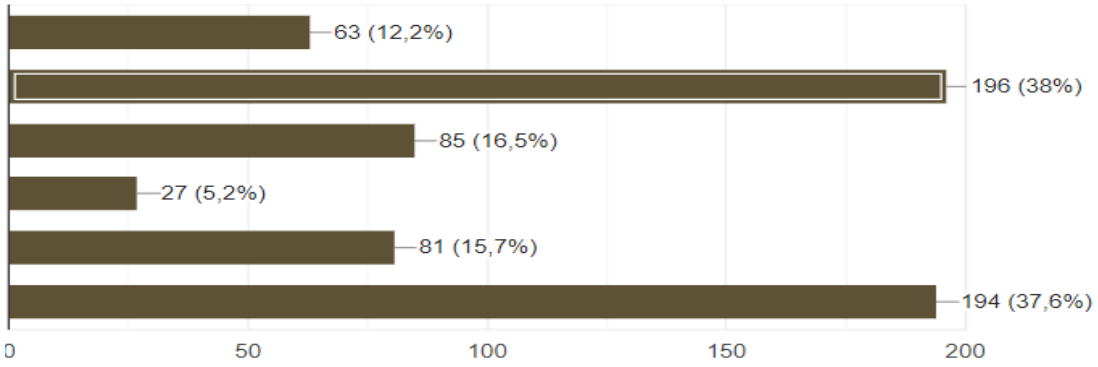

Figure 5. The impact of M44 on tourism in the Southern Great Plain
Source: Own edition

When asked how the M44 motorway will affect tourism in the Southern Great Plain, 38 percent of respondents say there may be a minimal increase in the number of guest nights. According to 37.6 percent, growth and development will be seen in the lives of only a few settlements. 16.5 per cent say that many more domestic tourists will come, 15.7 per cent are very optimistic and according to them the number of investments for tourism purposes will jump, e.g. hotels, hotels, boarding houses can be built. 5.2 percent of them think that the number of foreign tourists will also increase. 38 percent say there may be a minimal increase in the number of guest nights, yet 12.2 percent say it will have no effect on tourism.

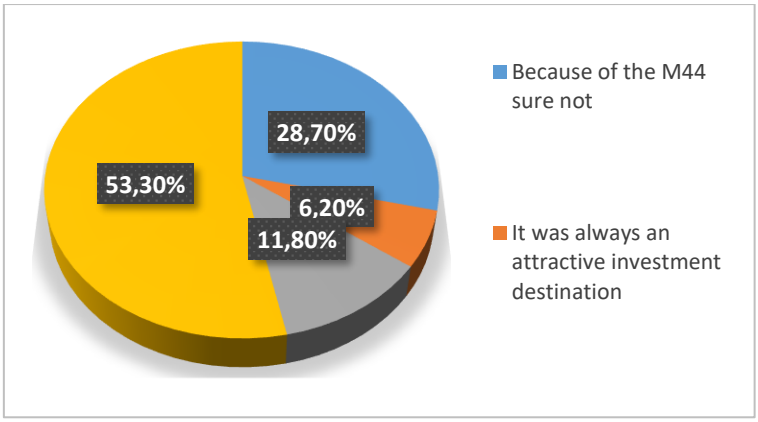

Figure 6. Do you think that settlements next to the M44 can become an attractive investment target?
Source: Own edition
According to 53.3 percent, surrounding municipalities could become a perfect investment destination because companies want to take advantage of cheap labor. According to 11.8

percent of them, the companies settling here also pay higher wages, and according to 6.2 percent, the Southern Great Plain region has been an attractive investment target so far. In contrast, 28.7 percent of respondents say M44 is sure to prevent companies from settling here.

On the issue of the branch node, most of them argued that it would have been more appropriate to designate the connection and connection nodes more carefully because they are not "residence-friendly" for several settlements and many are largely avoided by the nearest connection point. Among the proposals, it mostly emerged in the case of Békésszentandrás and Öcsöd settlements that it would have been expedient to establish a junction to connect to the M44.

Summary

In my research, I examined the social perception of the M44 motorway. A total of 516 people completed the primary research on various social media sites. It turned out that many people considered it very timely to build a motorway in the Southern Great Plain, which would now be able to get from Békéscsaba to Budapest. Although the construction will be completed only in the second half of 2021, the section already in use will help a lot of residents and travelers in the area between Kondoros and Cserkeszőlő. Many people can even take a job away from their place of residence, which is why, according to the answers recorded in the questionnaire, they would like to use it even after the motorway has been paid for. Based on the answers, in addition to the many positives, there are also negatives, such as the lack of a gas station and a stop lane. The connection points were not renovated after the renovation, and it is necessary to switch to inferior roads in a rather bad condition after the detour, for example at Szarvas. After the completion of the entire section of the M44 motorway, I consider it justified to collect information in another survey on how the population will judge the M44 motorway.

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APPLICATION OF PESTICIDES BY DRONES FROM THE POINT OF AUTHORITIES

(Presentation of the legal consequences of illegal agricultural activity with drones through a legal case)

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Abstract

It can be said that it is no longer just a strong interest in using drones as plant protection machines, but the use of these machines in agriculture has actually begun. As though drone spraying has been granted social legitimacy. However, for the time being, the exercise of the activity constitutes an infringement that the authorities – following the existing legal requirements – may only consider as fine to be imposed on the person carrying out the activity.

Introduction

In 2019, at the III. Rural Development Conference, in my publication entitled"The Use of Drones in Plant Protection" („Drónok használata a növényvédelemben") I analysed how –as part of precision agriculture – farmers are increasingly encouraging the use of drones as plant protection machines, in particular for the application of plant protection products, however, the domestic legal environment of this activity is still being developed and the exercise of this activity is therefore still illegal. Meaning by this that plant protection treatments with a drone should be sanctioned by the imposition of plant protection penalty. The legislative process has not progressed by the time this study was written. The use of pesticides by drones continues to be illegal activity. Meanwhile, not only has the interest in drone plant protection increased, but the plant protection authority had been informally aware from the beginning of 2020 that drone treatments were becoming more common. In the end, it was inevitable that by the end of August 2020 a drone treatment is officially on the authority's radar and an official administrative procedure is therefore initiated for the imposition of a fine. The study seeks to demonstrate how the authority interprets existing legislation, and in the light of that how legally assesses the plant protection activity with a drone and what sanction it applies.

Literature review

The authority carried out its procedure for the application of pesticides by drone on the basis of the legislative provisions referred to below.

1. In accordance with Paragraph 1. (4) of the Act No CLXV of 2013 on Complaints and Public Interest Disclosures:

„Any person may lodge a complaint and public interest notification with the body entitled to take action in the matter relating to the complaint or to the public interest notification (hereinafter: competent body). The public interest notification made orally shall be recorded in writing by the competent body and shall be provided in a duplicate to the public interest notifier.”.

According to Paragraph (1). 2. of Act on Complaints:

„The complaint and the notification in the public interest must be dealt with within 30 days of receipt of the complaint by the competent body, unless provided otherwise by law.”.

According to point d) Paragraph (1) 3. of Act on Complaints:

„In the light of the complaint or the public interest notification - if it proves to be valid – provision should be made for the initiation of Liability where appropriate.”.

2. According to Paragraph 99. of the Act CL of 2016 on the Code of General Administrative Procedure (hereinafter: GAP.):

„The authority shall – within its powers – verify compliance with the provision of law, and compliance with the enforceable decision.”.

According to point a) of Paragraph (1) of 101. GAP:

„If the authority finds an infringement during an official inspection, it shall initiate proceedings,”.

According to Point a) in Paragraph (1) of 104. GAP:

„The authority initiates the procedure ex officio in its area of competence if it becomes aware of the circumstance giving rise to the initiation of proceedings,”.

3. According to the Decree 43 of 2010 of the Ministry of Agriculture and Rural Development on the rules of plant protection 5. Paragraph (1)-(2):

„5. § (1) Plant protection products shall only be used as authorised in full compliance with occupational health and chemical safety rules.”

„(2) Plant protection products shall be used in accordance with the requirements of the marketing and use authorisation (hereinafter: licence), in compliance with its labelling requirements for the prevention of risk to man and the environment and in accordance with its instructions for its use and plant protection technology. ”

According to Paragraphs (1), (2) of 32 and Paragraph (1) of 34 of the Decree 43/2010:

„32. § (1) Plant protection machines with tanks bigger than 5 dm3 – except plant protection machines for research, testing, experimenting or exhibition purposes - shall be subjected to the type-approval procedure in accordance with Annex 3 for droplet formation and spraying technology before marketing.

(2) Plant protection machines that have legally binding international quality assurance certification documents may be approved administratively. The producer, or the distributor must declare to the Institute of Agricultural Engineering National Agricultural Research and Innovation Centre (hereinafter: the Institute) that the plant protection machinery meet the marketing requirements specified in this regulation.

34. § (1) If, as a result of the type-rating procedure a plant protection machinery does not comply with the requirements set out in Paragraph (1) 32. § (1), the Institute shall not grant the marketing authorisation, or withdraw the authorisation already granted.

4. According to Paragraph (1) 17/B of Act XLVI of 2008 on the food chain and the official supervision thereof (hereinafter: Act on Food Chain):

„Plant protection machinery shall be subject to type rating before marketing and periodic technical inspection (hereinafter: technical inspection) during use in accordance with the legislation issued for the implementation of this Act."

According to Paragraph (1) 56 of Act on Food Chain:

"In case of infringement of this Act, or the legislation issued for the implementation of this Act, as well as the infringement of the Act of the European Union which is directly applicable, and in the event of infringement of the provisions of an official decision the Food Chain Inspection Body may take action, impose a fine or give a warning to the legal person subject to the proceedings, an organization or natural person without legal personality (hereinafter in this chapter: the person subject to proceedings."

According to Point d) of Paragraph (1) of Act on food Chain 60:

„A plant protection fine shall be imposed on persons who market, advertise, offer to the public or use a product that is subject to prior authorisation without authorisation, by way other than authorisation, without registration or by way of derogation of registration, or without the qualification or certification for the activity;"

According to Point i) of Paragraph (1) of Act on Food Chain 60:

„A plant protection fine shall be imposed on persons who do not have marketing authorisation (type rating), in addition did not participate in a periodic inspection, or marketed, operated or used non-compliant plant protection machinery;"

5. The section entitled "Plant Protection Fine" and Annex I. of the Government Decree of 194/2008. (31.VII.) concerning the method of calculation and the scale of penalties in relation with food chain control set out the rules under which the authority determines the amount of the fine to be imposed.

Materials and methods

After reviewing the existing legislation, the procedural acts that the authority has taken to clarify the facts will be described as well as what facts had to be assessed.

On 31 of August 2020 a notification has been submitted to the plant protection authority. According to the notifier, the iceberg lettuce grown by the notifier was damaged due to the dessication of the neighbouring sunflowers by drone. It needs to be clarified that the authority's notification procedure was a broader one that investigated the illegal drift during pesticide application, and this included the legal assessment of the plant protection treatment with the drone.

The authority examined the notification with regard to the provisions of the Complaint Act. In the course of the investigation, it carried out an official inspection according to the Code of General Administrative Procedure., as a part of which an on-the-spot check was carried out on the 2nd of September 2020. During the visit the user of the sunflower area presented and verified with an invoice that the dessication of the sunflowers was carried out in the evening of 26 August 2020 using the product Reglone Air in the dosage of 2,0 l/ha with a total spray volume of 8 l/ha by drone application by a service provider. During its procedure the authority concluded that the operator did not have a pilot authorisation for plant protection treatment with the drone.

Although it is no longer necessary to prove unlawful use of drones, it is interesting to devote a few sentences to the experience of the field check that demonstrate the drift of the plant protection product. During the on-site visit it was found that the sunflower is dried due to desiccation, as was the weed it contained in it. Cultures on the East, South and West sides of the plate show no symptoms. However, beyond the 18 metres wide stubble field of oil radishes, on the iceberg and maize at the depth of 168 metres and some of the weeds contained therein had necrosis spots in the leaves, and in more severe cases, leaching of the leaves. The effects of the spray reaching into the cornfield were also observed in lower weeds inside the stock. A significant part of the declared iceberg lettuce culture has been damaged to such an extent that it has become unmarketable. Phytotoxic symptoms on vegetation indicate scorching herbicide, which includes diquat-dibromide, the active substance of Reglone Air. So there is a causal link between the desiccation of the sunflower and the damage to adjacent cultures.

The authority found an infringement on the basis of the experience of the site visit, customer statements, documentary evidence and laboratory examination records, and, of its own motion, initiated an official procedure against a customer carrying out plant protection treatment with a drone.

The authority has notified the client of the initiation of the procedure. The client did not make use of his right to make a statement within the deadline, so the authority issued a decision imposing a plant protection fine on the basis of the evidence at its disposal.

Results and conclusions

In this section, an overview is given of how the authority applied the legal provisions cited in relation to the use of pesticides by the drone. In other words, how the authority has established that the application of pesticides by a drone by the customer is illegal and, in view of this, what penalties were applied and to what extent.

Decree 43 of 2010 of the Ministry of Agriculture and Rural Development on the rules of plant protection Paragraph 5. Article (1), (2) provide that plant protection products may be used only in the authorised manner and in accordance with the specifications and instructions of the marketing and use authorisations and labels. The authority considers that the customer by the application of the product Reglone Air subject to licence with an agricultural drone, in the amount of 8 litres per hectare has performed a use and application different than set out in the licence, as the emergency licence of NÉBIH 6300/234-1/2020 states that *"Reglone Air may be used in autumn colza and sunflower crops for the production of good, furthermore in sunflower seed production for pre-harvest stock drying in the dosage of 1,5-2,0 l/ha by land-based machinery (hydra-tractor) spraying 300-400 l/ha… The preparation may be used by air applications in sunflower and autumn colza in at least 10 ha contiguous areas with an obligatory addition of a drop heavy additive in the amount of 50 to 60 litres/ha spray mixture."* Even the emergency licence does not approve the spraying in the volume of 8 l/ha by the use of agricultural drone.

The Act of 17/B. § (1) on the food chain and the official supervision thereof and 32. § (1), (2) and 34. § (1) state that plant protection machinery shall be subject to a type-approval procedure as a precondition for the granting of a marketing authorization. The authority concluded that the client had carried out plant protection services activities with drone equipment without Type Rating. The client attempted to interpret the activity as pilot application, however no experimental authorization has been granted by the competent authority for that area.

As a result of the official control carried out during the investigation of the complaint received on the 31st of August 2020 – on the basis of the on-site inspection, customer statements and documents obtained – the authority concluded that by using the plant protection product subject to authorisation in a different way, and using plant protection machinery without marketing authorisation (type rating) the client has committed an infringement.

In the light of the infringement established, the authority has decided to initiate proceedings on its own motion against the client for the imposition of a plant protection fine in accordance with point a) Paragraph (1) of 101 in the Code of General Administrative Procedure.

In the following, the basis and extent of the imposition of the fine will be examined. In case of infringement of the provisions laid down in the Act on the food chain and the official supervision thereof 56. Paragraph (1) or in the legislation issued for its implementation, the authority may impose a fine. In the present case, the grounds for imposing a fine are laid down in Article 60 of the Act on the food chain and the official supervision thereof Paragraph 1, points d) and i), according to which a plant protection fine shall be imposed on a person using a product subject to authorisation in a manner other than set out in the authorisation; using plant protection machinery without marketing authorisation (type rating).

As the authority found, as above, the infringements committed by the customer, thus imposed the two fines.

The amount of the fine is primarily determined by the rules of the Government Decree. At this point, it must be borne in mind that the authority also assessed the fact of the drift in the original proceedings when imposing the fines. Thus, instead of describing the specific fine amount, only

the rules of the calculation are derived. In accordance with Point i) 2 of Annex No 1 of the Government Decree, the amount of the plant protection fine set out for the use of plant protection machinery without marketing authorisation (type rating) is HUF 50.000 per machinery. In accordance with Point 3., Paragraph d) in Table B) of Annex No1 of the Government Decree plant protection penalty rate for the use of a product subject to authorisation in a manner other than permitted is up to HUF 150 million, depending on the risk arising from use. Paragraph (1) of the Government Decree 5. provides that plant protection fines for infringements listed in Table B) of Annex No 1.shall not be less than the minimum specified in Table C) of Annex No1 for the given facts.

Basic fines to be applied in determining the amount of the plant protection penalty shown in table B) in thousand HUF:

Infringement of Table B)	Persons subject to proceedings that are not subject to the Accounting Act	Subject to the Accounting Act not exceeding HUF 500 million net annual turnover	Subject to the Accounting Act exceeding HUF 500 million net annual turnover
d) point 3.	100	300	500

In the procedure described, the client was a company with an annual net turnover not exceeding HUF 500 million.

In view of the above, the minimum amount of the fine to be imposed is HUF 350.000. In other words, no lower amount may be set by the authority. The upper limit is HUF 150 million. The amount of the fine to be imposed under the fines shall be determined by the authority, taking into account the circumstances of the case, in which it may not disregard the principle of graduality. Thus, in the case of a first infringement, the amount of the fine clearly tends towards the lower limit.

Summary

It can be said that it is no longer just a strong interest in using drones as plant protection machines, but the use of these machines in agriculture has actually begun. As though drone spraying has been granted social legitimacy. However, for the time being, the exercise of the activity constitutes an infringement that the authorities – following the existing legal requirements – may only consider as fine to be imposed on the person carrying out the activity.

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Act CLXV of 2013 on Complaint and Public Interest Disclosures;
Act CL of 2016 on the Code of General Administrative Procedure;
Act XLVI of 2008 on food chain and the official supervision thereof;

Government Decree No.194 of 2008 concerning the method of calculation and the scale of penalties in relation with food chain control;

Decree 43 of 2010 of the Ministry of Agriculture and Rural Development on the rules of plant protection;

EUROPE 2020 STRATEGY AT NATIONAL AND REGIONAL LEVEL – HUMAN CAPITAL AND EMPLOYMENT TARGETS

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Abstract

In the framework of the research, I mainly undertook to examine the change in the employment and qualification indicators defined in the Europe 2020 strategy between 2010 and 2019. In the study, I examined whether EU and national level targets were fulfilled by 2019. The employment and qualification objectives set out in the strategy are interlinked. Higher levels of education can provide better employment opportunities, and increasing employment can reduce poverty. The direction and strength of the correlations between the highlighted indicators were explored by correlation analysis and linear regression. The explanatory power of the relationships was interpreted using the determination coefficient.

Introduction

The economic crisis of 2008 highlighted Europe's structural weaknesses, which were already visible before the crisis. Figure 1 illustrates the growth rate of GDP and employment in the 20-64 age group in the EU. Growth rates are seasonally adjusted and calendar-adjusted figures compared to the previous quarter. The effect of the economic crisis of 2008 can be clearly seen in the examined interval, between 2008 and 2009 GDP and employment decreased drastically, after that there was some decline between 2012 and 2013.

Figure 1. GDP and Employment growth
Source: Own editing by Eurostat data

As a result of the recession, the EU's economic growth and employment rate have also lagged behind the rapid progress in the rest of the world. For a sustainable future, the European Commission has set out its Europe 2020 strategy for smart, sustainable and inclusive growth for 2010-2020. The main challenge for the Europe 2020 strategy is to prevent an instinctive return to the pre-crisis situation. The crisis has also highlighted the interdependence of our economies. Reforms implemented in one country also affect the performance of others. Our reflection on the crisis indicates that together we are much more effective. It follows from the above that social and territorial cohesion is the basis for achieving the set goals at both Member State and regional level (European Commission, 2010). The budget of the European Union for the period 2014-2020 has been determined in line with the objectives of the Europe 2020 strategy.

Among the theories dealing with the economic growth and development of regions, endogenous growth theories (e.g., Solow's growth model) emphasize the importance of local conditions. Models consider knowledge to be endogenous within a region (Lengyel 2010, Capello 2007; Romer 1994). According to Rechnitzer et al. (2003), the knowledge base of the workforce in successful regions is high. Numerous empirical studies demonstrate that human capital can explain a very large proportion of the variance of GDP per capita between countries (Mankiw et al., 1992). According to experts, the most important element of the long-term solution of economic problems is the drastic increase of the education and knowledge of the population (Jankó, 2010; Hajdú, 2020).

The objectives of the Europe 2020 strategy have been formulated taking into account the factors influencing economic growth. The objectives include raising the employment rate of the 20-64 age group to 75% and raising the share of tertiary graduates to 40% in the 30-34 age group. Furthermore, one of the EU's education priorities is to reduce the number of early school leavers across the EU to below 10% by 2020. The Commission is working with Member States to reduce early school leaving by implementing comprehensive strategies.

The above goals are related to each other. A higher level of education can provide better employment opportunities, and by increasing employment, poverty can decrease, prosperity and health situation will be better (Egri et al. 2009, Egri-Tánczos 2015, Egri 2017). Achieving these goals will make the EU a smart, sustainable and inclusive economy with high employment and productivity and strong social cohesion.

The scope for monitoring the development of employment targets is for the 20-64 age group, which is gaining ground in international comparisons as a large part of the EU population continues their studies in higher education.

The targets reflect the Commission's vision of the future of the European Union. The European Commission recommends that the guidelines be followed at regional, national and EU level. All EU Member States are committed to achieving the objectives of the Europe 2020 strategy. The strategy took into account the fact that each Member State is different from the other, and the differences are much greater in the EU than they were a decade ago. To implement the strategy, national targets have been set based on EU targets and growth-enhancing policies have been developed.

In the framework of the research, I examined at the national and NUTS2 (regional) level the changes in the employment and qualification indicators defined in the Europe 2020 strategy between 2010 and 2019, as well as the fulfillment of the set target values. The correlation between the indicators highlighted in the study and its strength was explored by correlation analysis and linear regression.

Material and methods

During the preparation of the study, the emphasis was basically on the analysis of statistical data collected from secondary sources. The study was based on the national level and the NUTS2 (regional) territorial levels determined according to the NUTS 2016 statistical division system. The territorial basis of the analysis was the regions of the 28 member states of the European Union and the pre-accession countries. With the 2016 revision of NUTS in the EU, a total of 281 statistical regions were created. The NUTS system also includes 1-1 extra-regions per member state, as the division only covers economic areas (European Commission, 2020). For efficient database management, it was also necessary to classify those parts of the economic life that cannot be classified into a particular region (e.g., airspace, land waters, enclaves, embassies, consulates, military areas, oil and gas deposits in international waters) this gap was closed by creating extra-regions (European Commission, 2011).
Data on employment and qualification at national and regional level were provided by the time series of the EUROSTAT database.

Pearson's correlation analysis and single and multivariate linear regression were performed to explore the relationships between employment and qualification indicators. Correlation calculation provides an answer to the question of how strong the relationship between variables is. Pearson's correlation is a linear statistic, so it gives a reliable value for data series where the relationship between the two variables can be described by a line (Wilcox, 1998). The result of the correlation test is strongly influenced by the outlier points (Vargha, 2000). The value of the coefficient varies between +1 and -1, the closer the relationship is, the closer the absolute value of the coefficient is to 1. The coefficient is strong in absolute terms in the range of 0.7-1; medium at 0.3-0.7 intervals; and indicates a weak correlation at 0-0.3 intervals (Nemes Nagy, 2005). If the sign of the correlation coefficient is positive, then there is a straight, otherwise inverse proportionality between the two variables. However, the coefficient is not suitable for exploring causal relationships, so we can only say whether the two variables examined are related, but we do not get an answer as to what caused this.

I also examined the correlation results to support whether they were significant. Significance (p) is the probability of committing the first type of error. In statistics, a result is significant if the probability that it was obtained as a coincidence of chance remains below a predetermined value (Vita, 2011). Depending on the results obtained in the study, the chosen values are 1% and 5% ($p = 0.01$ and $p = 0.05$).

In the framework of the research, I examined with the help of a determination coefficient what percentage of one criterion explains the variance of the other criterion (the mean of the square of the deviation from the mean). Assuming a linear relationship between the variables, the determination coefficient is equal to the square of the Pearson coefficient (Zhang, 2017). The value of the indicator is between 0 and 100%, so it determines the strength of the relationship

in%. According to Hunyadi (2000), the very small coefficient of determination (R^2 <10%) means that the fit is weak and the reality content of the model is low. On the other hand, it also means that the explanatory power of the model is small; it is hardly possible to draw a conclusion about the relationship between the variables, so it does not mean significant additional information for the examined variable.

Results

In the framework of the study, I examined the development of employment and qualification indicators at the national and regional levels in 2010 and 2019. As part of the research, the key qualification variables (the proportion of early school leavers and the proportion of those with a tertiary degree in the 30-34 age group) were plotted at NUTS2 level as a function of the employment rate in Figures 2 and 3.

Figure 2 shows the situation in 2010, it can be stated that the employment rate in most of the studied regions ranged between 60-80%, while the proportion of people with higher education ranged between 20-40% and the proportion of early school leavers typically remained below 20%.

Figure 3 illustrates the situation of the regions in 2019. Employment shows a strikingly positive change; by 2019 it has typically shifted to 70-85%. Overall, the rate of early school leavers also improved compared to 2010. There is a smaller dispersion of the variables, which indicates a decrease in the differences between the regions. The proportion of people with tertiary education has shifted upwards; typically it was between 30-50%.

The figures also include data for the regions of pre-accession Turkey, Serbia, northern Macedonia and Montenegro. Typically, negative outliers belong to regions of pre-accession countries.

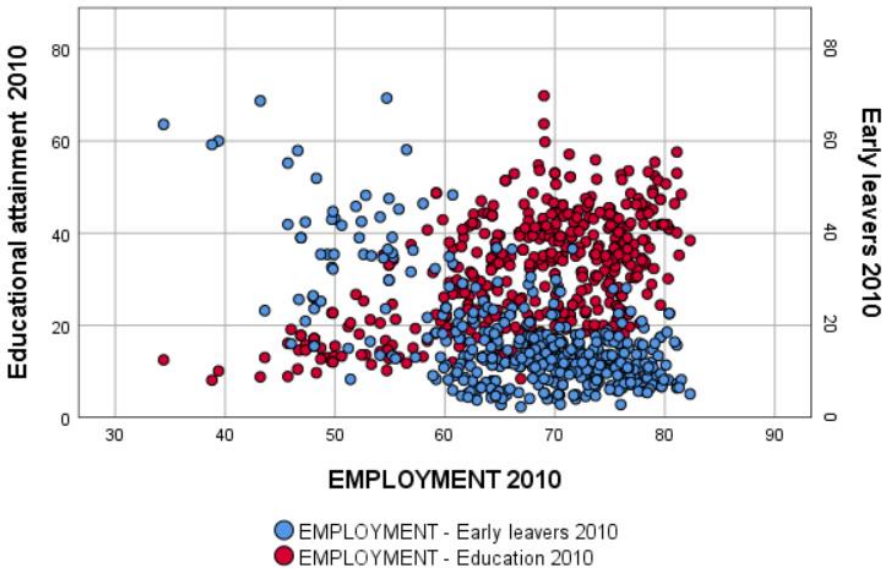

Figure 2. Employment and qualification indicators in 2010
Source: Own editing by Eurostat data

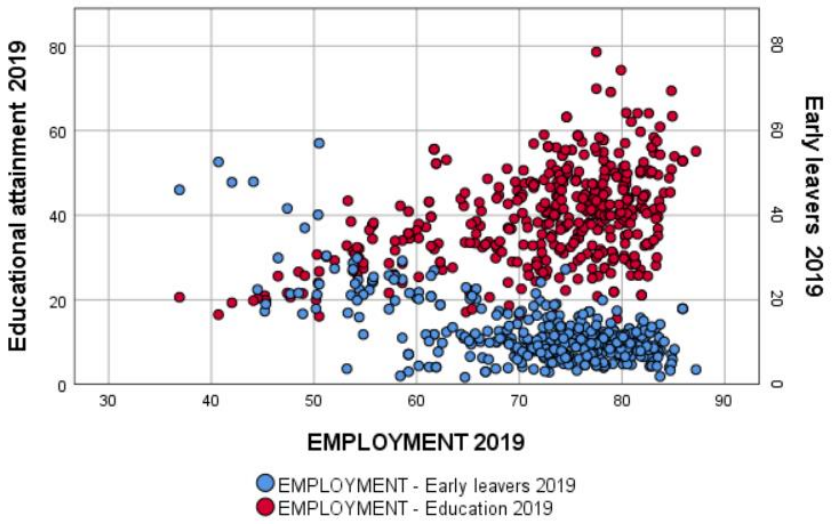

Figure 3. Employment and qualification indicators in 2019
Source: Own editing by Eurostat data

Figure 4 illustrates the national employment targets for the 20-64 age group and the 2019 actual data. On average in the Union, the target of 75% has not yet been met; in 2019 73.9% of the 20-64 age group were employed in relation to the total population.
Based on the 2019 data, the achievement of the target has not been achieved in even more member states. Significant deviations from the individual targets are observed in Greece (8.8% points), Spain (6% points), Italy (3.5% points), France (3.4% points) and Belgium (2.7% points). Contrary to forecasts, Malta (6.8% points), Lithuania (5.4% points) and the Czech Republic (5.3% points) achieved employment rates more than 5 %points higher. All countries that joined in 2004 exceeded their national employment target in 2019. Hungary reached a rate 0.3%points higher than the 75% target.

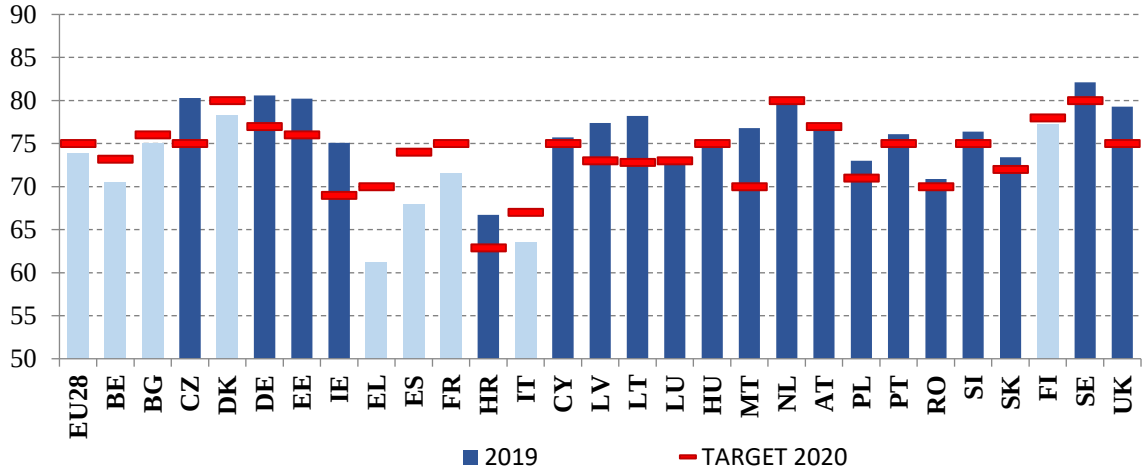

Figure 4. Employment rates and targets by Member States
Source: Own editing by Eurostat data

Figure 5 shows the development of employment rates in 2019 at the NUTS2 regional level. Regions in Sweden, the United Kingdom, Germany, the Czech Republic and the Baltic States have employment rates close to or above the EU target. Employment was well below the EU average in the pre-accession countries (Turkey, Serbia, northern Macedonia, and Montenegro) and in Romania, Greece, southern Italy and southern Spain.
In Hungary, the national average employment rate for the 20-64 age group was 75.3%. Western Transdanubia (78.9%), Budapest (78.3%) and Pest County (77.9%) and Central Transdanubia (77.1%) had the highest employment rates.

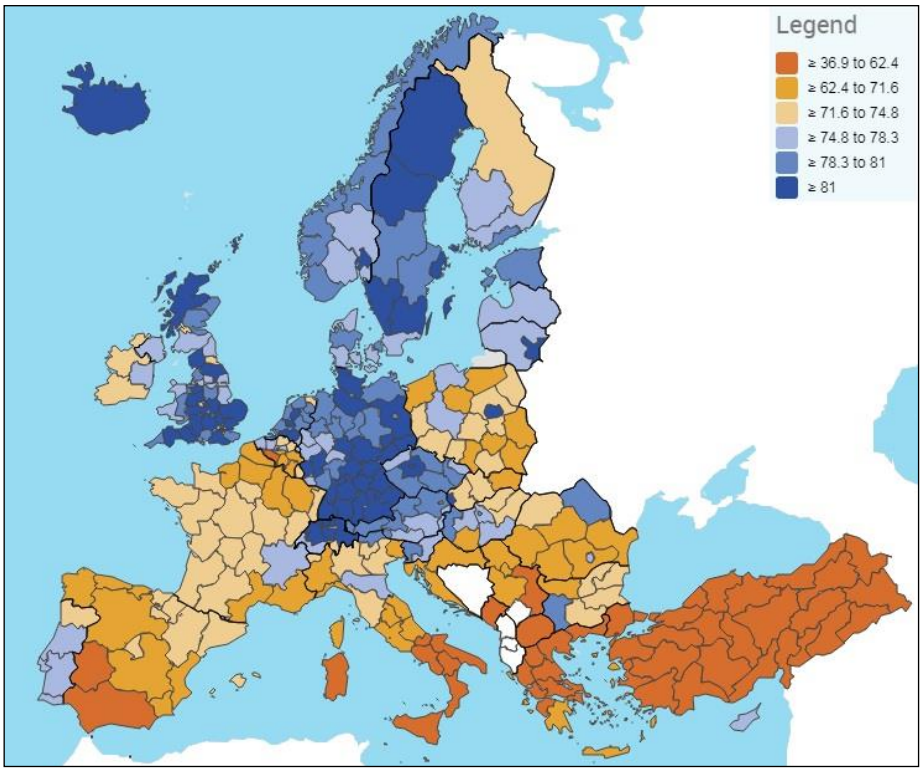

Figure 5. Employment rates by NUTS 2 regions
Source: Eurostat

Figure 6 provides information on the proportion of early school leavers at the national level. As in the case of employment, national targets have been set for education and training. The highest target was set for Italy (15%) and the lowest for Croatia (4%).
Overall, the EU28 exceeded the 10% target by only 0.3 %points in 2019. Thirteen countries exceeded the individual national target, with school dropout rates being remarkably high at over 15% in Spain (17.3%), Malta (17.2%) and Romania (15.3%). The headline target of less than 10% was met in 19 countries; it was below 5% in Croatia (3%), Lithuania (4%), Greece (4.1%) and Slovenia (4.6%).

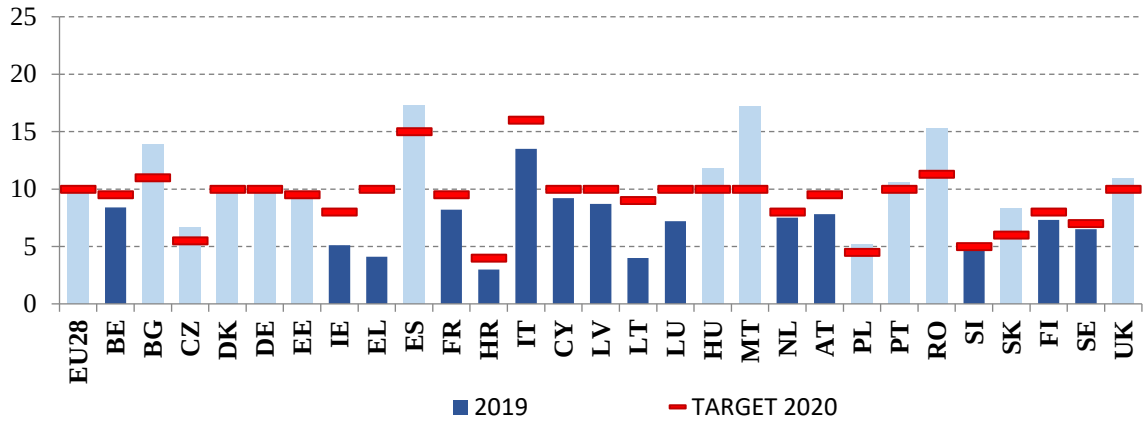

Figure 6. Rates of early leavers from education and training by Member States
Source: Own editing by Eurostat data

However, there are significant differences in the distribution of the sexes, with an average of 20-30% higher proportion of boys. Early school leaving rates show large differences also depending on whether those affected were of foreign birth; among the Union's foreign-born population is almost twice as high as among the domestic-born population.
Figure 7 illustrates the proportion of early school leavers between the ages of 18-24 at the regional level. It is striking that the rates of early school leavers are very high in the regions of pre-accession Turkey, as well as in Romania, Spain and southern Italy.

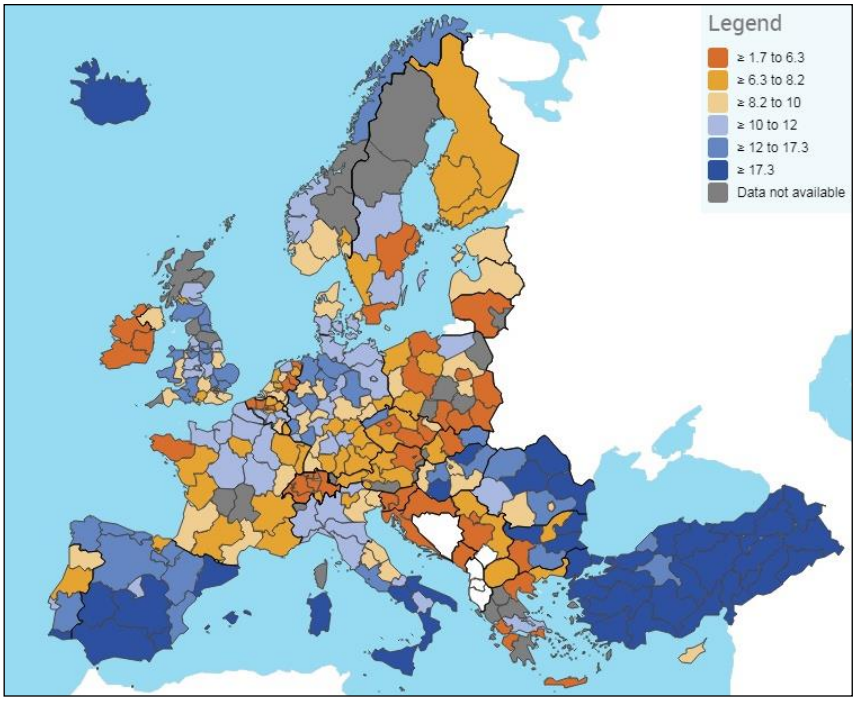

Figure 7. Early leavers from education and training by NUTS 2 regions
Source: Eurostat

In Hungary, the proportion of early school leavers was 11.8% on a national average, so the EU target of 10% has not yet been met. The worst-off regions are Northern Hungary (21.5%), the Northern Great Plain (16.3%) and Southern Transdanubia (17.3%).
Within the 30-34 age group, the national target for the share of tertiary graduates was met in 19 countries by 2019 (Fig. 8). The EU target is 40%, which has been met by all but 9 countries. The proportion of people with tertiary education below 30% is in Romania (25.8%) and Italy (27.6%). The proportion of the highly qualified population in the 30-34 age group is over 55% in Cyprus (58.8%), Lithuania (57.8%), Luxembourg (56.2%) and Ireland (55.4%).

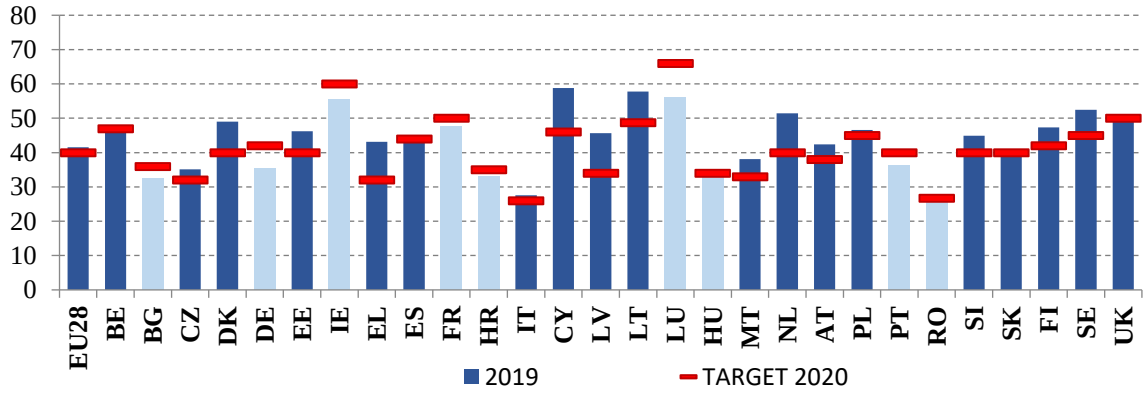

Figure 8. Rates of tertiary educational attainment in age group 30-34 by Member States
Source: Own editing by Eurostat data

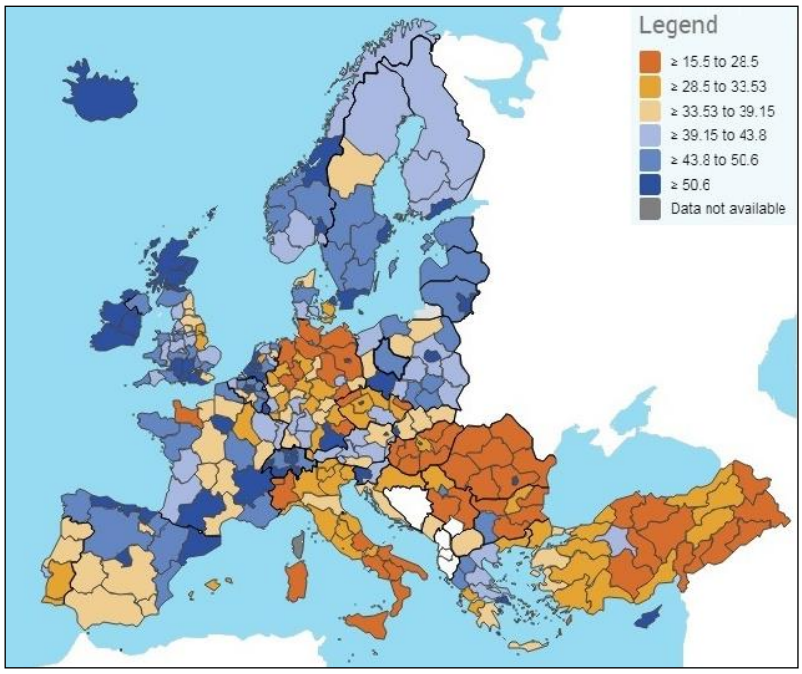

Figure 9. Rates of tertiary educational attainment in age group 30-34 by NUTS 2 regions
Source: Eurostat

If we examine the proportion of people with tertiary education at the regional level (Fig. 9), it can be stated that, similarly to the previous indicators, it is also low in the regions of pre-accession Turkey and Romania, Bulgaria, Poland, Italy.
In terms of this indicator, Hungary ranks among the last. The proportion of people with tertiary education is low in almost all regions, below 30%. An exception is Budapest, where the proportion of people with higher education in the 30-34 age group is 57.7%.

In the framework of the research, I used Pearson's correlation to explore the relationship between the 2019 key variables at the regional level (Table 1). The territorial basis of the calculations was given jointly by the regions of the 28 member states of the European Union and the regions of the pre-accession countries. The coefficient between the employment rate and the ratio of tertiary graduates indicates a medium (r = 0.453), directly proportionality. There is a moderate (r = - 0.620) inversely relationship between the employment rate and the rate of early school leavers. The relationship between the indexes indicating educational priorities is also of medium strength (r = - 0.499), which is characterized by inversely proportionality.
Examining the significance of the correlation coefficients, I obtained the result that in all three cases we can state at the 100% confidence level that the null hypothesis is true. That is, the mentioned groups have a minimal chance (0%) of getting a random value.
For Pearson's correlation coefficients, determination coefficients were also calculated. The indicator gives the percentage by which one variable (e.g., the proportion of people with tertiary education) explains the variance of the other variable (e.g., employment rate). I obtained a low value (around 20%) for the proportion of people with tertiary education and the employment rate (R^2 = 20.52%) and the proportion of early school leavers (R^2 = 24.90%). The highest determination coefficient R^2 = 38.44% exists between employment and the rate of early school leavers. The coefficient expresses the explained variance, so in our case, the rate of early school leavers at 38.44% explains the variance in the employment rate.

Table 1. Examining the relationship between employment and qualification indicators (regions of EU and pre-accession countries)

Indicators (2019)	Pearson's coefficient (r)	Significance (p)	Determination coefficient % (R^2)
Employment – education	,453**	,000	20,52
Employment – early leavers	-,620**	,000	38,44
Education – early leavers	-,499**	,000	24,90
Model_1	**,0647****	**,000**	**41,86**

** Correlation is significant at the 0.01 level.

Source: Own construction and calculation based on Eurostat data

The explanatory power of Model_1 (dependent variable: employment rate, independent variable: education and early leavers) estimated by linear regression is R^2 = 41.86%. The adjusted determination coefficient is 41.7%, so the independent variables explain the variance

in the employment rate by 41.7%. The result is significant at the p = 0.01 level. The standard error of the estimate is 7.48, while the relative error is 10.33%. The expected value of the error member is 0, while the standard deviation is Std.Dev = 0.998.

The relationship between the employment and qualification key variables of 2019 was also explored by narrowing the territorial base to the EU28 regions. Table 2 shows the regression results calculated by filtering out the regions of pre-accession countries. With the narrowed of the territorial unit, the explanatory power of Model_2 has significantly deteriorated. This is also supported by the low determination values (<10%), which indicate that the fit is weak; on the other hand, they also mean that the explanatory power of the model is small.
After narrowed the territorial, in the new model estimated by linear regression, R^2 = 18.32% and the adjusted R^2 = 17.7%, so the independent variables explain the employment rate in only 17.7%. The results in this model are also significant at the p = 0.01 level. The expected value of the error member is 0, the standard deviation is Std.Dev = 0.996. The standard error of the estimate is SE = 7.0717, the relative error is RSE = 9.54%.

Table 2. Examining the relationship between employment and qualification indicators (regions of EU)

Indicators (2019)	Pearson's coefficient (r)	Significance (p)	Determination coefficient % (R^2)
Employment – education	,304**	,000	9,24
Employment – early leavers	-,399**	,000	15,92
Education – early leavers	-,433**	,000	18,75
Model_2	**,428****	**,000**	**18,32**

** Correlation is significant at the 0.01 level.

Source: Own construction and calculation based on Eurostat data

To filter for heterogeneity between regions, dummy variables were placed in the model. Dummy variables can have a value of 1 or 0. In our case, regions that belong to the same country with a value of 1 that do not have that feature, that is, which belong to another country were given a value of 0. In the following 2 models, employment was given as a dependent variable, as well as 1 key variable and the dummy variables were given as independent variables.
First, I examined the extent to which the level of employment can be determined by the proportion of people with tertiary education (Tab. 3). The explanatory power of Model_3 was significantly improved (R^2 = 66.75%) by filtering for heterogeneity. The adjusted determination coefficient is 63.1%. The proportion of people with higher education determines the change in the level of employment at 63.1%. The standard error of the estimate is SE = 4.7225, while the relative error of the fit is RSE = 6.37%, which is below the upper limit of 15%. Cook's D does not exceed 1 for any of the regions (there is no explicitly distorting element), the expected value of the error member is 0 (Mean = 0), and its standard deviation is around 1 (Std.Dev = 0.948).

Table 3. Examining the relationship between employment and proportion of people with tertiary education (regions of EU)

Indicators (2019) + Dummy	Pearson's coefficient (r)	Significance (p)	Determination coefficient % (R^2)
Employment – education	,304**	,000	9,24
Model_3	**,817****	**,000**	**66,75**

** Correlation is significant at the 0.01 level.

Source: Own construction and calculation based on Eurostat data

In Model_4, I examined the impact of early school leavers on employment levels, and dummy variables were added to the key variable of the model in this case as well (Tab. 4). The results obtained are significant. The explanatory power of the model is 73.62%, and the adjusted determination coefficient is 70.3%. In the model, the rate of early school leavers determines the variance in employment levels by 70.3%. The standard error of the estimate is SE = 4.2417, while the relative error of the fit is RSE = 5.73%.

Table 4. Examining the relationship between employment and early leavers of education (regions of EU)

Indicators (2019) + Dummy	Pearson's coefficient (r)	Significance (p)	Determination coefficient % (R^2)
Employment – early leavers	-,3,99**	,000	15,92
Model_4	**,858****	**,000**	**73,62**

** Correlation is significant at the 0.01 level.

Source: Own construction and calculation based on Eurostat data

The results of the regression calculated using all three key indicators are shown in Table 5. The results show that with the addition of dummy variables, the values of the correlation coefficients between the highlighted variables are unchanged, while the explanatory power of our model is significantly improved compared to Model_2. By filtering the heterogeneity, the independent variables already explain the dependent variable, in our case employment, in 74.30% (adjusted R^2 = 70.8%). The results obtained in this case are also significant at the p = 0.01 level. The standard error of the estimate is SE = 4.2093, while the relative error of the fit is RSE = 5.68%. Similar to the previous two models the expected value of the error members is 0 (Mean = 0), the standard deviation is around 1 (Std.Dev = 0.940).

Table 5. Examining the relationship between employment and qualification indicators (regions of EU)

Indicators (2019) + Dummy	Pearson's coefficient (r)	Significance (p)	Determination coefficient % (R^2)
Employment – education	,304**	,000	9,24
Employment – early leavers	-,399**	,000	15,92
Education – early leavers	-,433**	,000	18,75
Model_5	**,862****	**,000**	**74,30**

** Correlation is significant at the 0.01 level.

Source: Own construction and calculation based on Eurostat data

In the case of models created by filtering heterogeneity in the framework of the research, the error members were plotted in the context of the independent variables (Fig. 10). It can be stated that we get a more favorable picture in the model in which all 3 key variables were included.

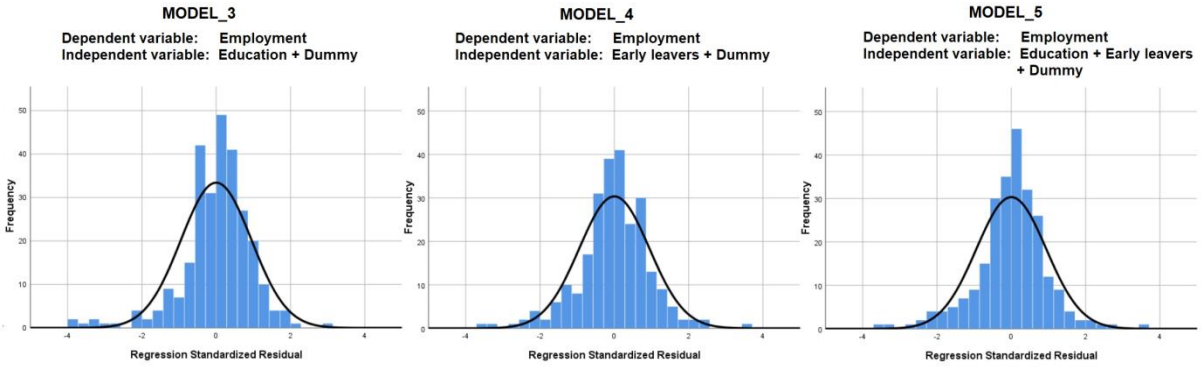

Figure 10. Histograms of filtered models
Source: Own editing and calculation based on Eurostat data

For multivariate regressions, it is important to examine the existence of multicollinearity. The study showed that in the case of Model_5, in 3 of the 29 independent variables used, the variance inflation factor (VIF) is between 2-3 suggesting caution.

Conclusions

The achievement of the Europe 2020 targets shows a very varied picture. The key indicators improved significantly between 2010 and 2019. A striking positive change can be observed in the field of employment, the employment rate for the 20-64 age group shifted predominantly to 65-85% by 2019. The proportion of people with tertiary education has also risen and is concentrated at around 30-50%, creating a more coherent picture. Overall, the rate of early school leavers also improved compared to 2010 and fell below 20% in most regions.
Strengthening territorial cohesion can be seen as an important element of the Europe 2020 strategy, which seeks to extend the benefits of economic growth to peripheral regions.
In the period under review, there was a small leveling off between regional indicators, which reduced territorial disparities and thus strengthens cohesion.

The outlier points of the scatter diagram prepared in the framework of the research are typically given by the regions of the pre-accession Turkey, Serbia, Northern Macedonia and Montenegro. The three indicators identified at national level highlighted in the study were met by the majority of Member States. The employment targets were most effectively met in 2019, with 20 Member States meeting the national target, while 18 Member States met the 75% EU threshold. In the pre-accession countries (Turkey, Serbia, northern Macedonia, and Montenegro) and in Romania, Greece, southern Italy and southern Spain, employment was well below the EU average. Although the 75% target was reached in Hungary at the national level, the ratio of several regions (Southern Transdanubia, Northern Hungary, and Northern Great Plain) remained below 75% at the NUTS2 level, despite the fact that regional differences have been decreasing since 2010.

The target for tertiary graduates in the 30-34 age group was met in 19 Member States, while 20 Member States reached the EU target of 40%. The indicator is below 30% in Romania (25.8%) and Italy (27.6%), thus, lag significantly behind. The worst values were in the pre-accession countries, as well as in Bulgaria, Poland and Hungary. In Hungary, the proportion of people with tertiary education is below 30% in almost all regions, with the exception of Budapest, where it was 57.7%.

The biggest concern is meeting the national education targets, which have been met by 15 Member States, while the EU 10% target has been met in 22 Member States. The rate of early school leavers was above 15% in Spain (17.3%), Malta (17.2%) and Romania (15.3%), as well as in the pre-accession countries and regions of southern Italy. In Hungary, their national average was 11.8%, so the EU target of 10% has not yet been met. The worst situations were in the regions of Northern Hungary (21.5%), the Northern Great Plain (16.3%) and Southern Transdanubia (17.3%).

Examining the correlation between employment and qualification variables, it was found that after filtering the heterogeneity of the regions, the variance of the employment level is significantly explained by the qualification indicators. The results obtained support that the human capital variable has a very large impact on the growth and development of the economy. Overall, the EU has the capacity to act in times of crisis and to adapt its economies and societies to change. Europeans nowadays must once again prepare for transformation in order to cope with the effects of the crisis and overcome the EU's structural weaknesses and growing global challenges.

It is indisputable that the coronavirus epidemic that will appear in 2019 will affect the economy of the European Union. As a result of the economic recession caused by the epidemic, meeting the Europe 2020 targets has been a greater challenge for member states than ever before.

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CHANGES IN THE TERRITORIAL DISTRIBUTION OF THE UNEMPLOYED IN THE KUNSÁG WINELAND BETWEEN 2009–2019

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Abstract

In Hungary, viticulture and winemaking are also organized on a territorial basis. The Kunság wineland is the largest of the 22 winelands of the 6 winelands of Hungary. The performance of this wineland has a decisive influence on the profitability of the entire Hungarian wine sector. During the complex spatial structure analysis of the Kunság wineland, it is important to cover the peculiarities and spatial distribution of the available labor reserve. The supply of human resources can fundamentally determine the grape and wine production performance of a wineland.

Introduction

Unemployment is present in some form in every society, but it causes problems to very different degrees in different territorial units (Siposné Nándori, 2016) and at different levels of the settlement hierarchy (Alpek–Tésits, 2014). Unemployed people as a potential labor reserve can also be interpreted as an endogenous resource of a given region (Győri–Egri, 2020).

Among the social and economic factors determining economic competitiveness, the qualification of the workforce is of paramount importance (Káposzta-Tóth, 2014).

In his study, Hajdú (2020) draws attention to the fact that the composition of jobseekers by qualification at the territorial level also depends to a large extent on the economic development of the affected territorial unit.

According to statistical data, the Hungarian viticulture and the closely related wine sector, as well as the economic activities based on or serving them in whole or in part, have long been the dominant employers in the Hungarian rural economy. The untapped potentials of local and regional economic development in the grape and wine sector and the surrounding systems can be decisive in the economic restructuring processes and strategy of the spatial units affected by these activities. (Járdány-Duray, 2020). However, these processes may be significantly affected in the long run by the development of available human resources. Thus, the labor market situation is also an important component of harmonious territorial development (Egri-Tánczos 2016, Egri-Kőszegi 2018).

According to the definition of the Central Statistics Office (CSO), the potential labor reserve consists of the unemployed, the underemployed and the inactives. The quantity and quality of the potential labor reserve can be considered as an endogenous factor, therefore it is justified to analyze its composition when examining competitiveness (Győri-Egri, 2020).

In the course of the research, we undertook to map the spatial concentration of registered jobseekers in the Kunság wineland, categorized according to age and education, and its change between 2009 and 2019.

Material and method

The examined territorial unit is the Kunság wineland in the Great Plain, 2/3 of its territory is in the Southern Great Plain region, 1/3 is in the Central Hungary region. The area of he wineland is mainly located within the administrative boundaries of Bács-Kiskun county and Pest county; however, its outcrops also affect Jász-Nagykun-Szolnok county (Figure 1). The wineland includes the wine-growing areas of 111 settlements. The settlements according to their legal status: 1 city with county status, 32 cities, 11 large villages and 67 villages. The total area of the affected settlements was 8246 km^2, and in 2019 the permanent resident population living here was 688,139 according to the data of the CSO. In 2019, the vineyard area of the Kunság wineland was 20,983 hectares, which is 32.1% of the total Hungarian wine-growing area.

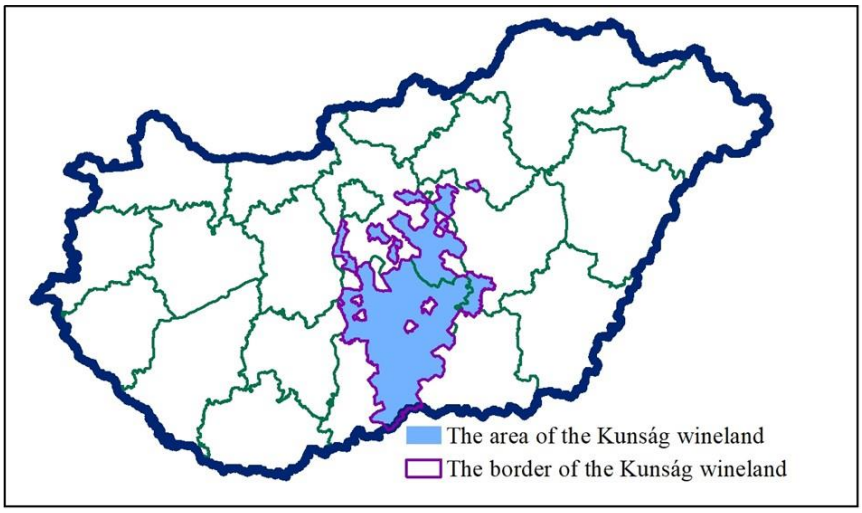

Figure 1. Kunság wineland
Source: Own editing based on data of National Council of the Wine Communities, 2020

After learning about the relevant literature, the emphasis in the preparation of the study was mainly on the analysis of statistical data collected from secondary sources. In the analysis of labor market databases, we used data from the National Employment Service (NES). In the course of the research, the basis of the spatial concentration study was the LAU2 (municipal) territorial level determined according to the NUTS-LAU statistical zone system.

In the research, we mapped the groups with a decisive weight within the registered jobseekers with the help of the location quotient (LQ), which can be well applied to the examination of the Hungarian regions. (Vas – Lengyel – Szakálné Kanó, 2015). The indicators were calculated on the basis of the number of registered unemployed in the categories by education and age group. The registered jobseekers were divided into three age groups, so we formed groups under 24, 25-54 and over 55. According to education, we also distinguished three groups: those with

primary, secondary and tertiary education. The selected statistical indicator expresses whether the proportion of the unemployed belonging to a given group in a given settlement is under-represented or over-represented compared to the county average of the given group. The indicator expresses the regional distribution of the selected criterion with the following formula:

$$LQ = \frac{\frac{UNE\ i,j}{UNE\ j}}{\frac{UNE\ i}{\sum UNE}}$$

UNE i, j = number of unemployed in group i in settlement j
UNE j = number of unemployed in j settlements
UNE i = number of unemployed in group i
UNE = number of unemployed

If LQ = 1, it can be interpreted as the same percentage distribution of the unemployed in a given group in the examined settlement as in the proportion of the given group in the population of the unemployed within the county. The index was interpreted according to the following scale: below 1 there is no concentration, between 1.00-1.25 it is low concentrated, between 1.25-1.50 it is moderately concentrated and above 1.50 it is highly concentrated.
In addition to the local quotient, the Hoover index (h) and the weighted Gini coefficient (G_S) were selected. These methods are well suited for spatial structure studies.
The Hoover index measures the difference in the spatial distribution of two quantitative criteria. In the study, the indicator was used to measure the territorial distribution of unemployment in the study area.
The inequality of the statistical distributions was measured using the weighted Gini coefficient for the variables examined. The index took into account the extent of the overall distribution. The calculated Gini indexes were expressed as a percentage, so its value set is the interval [0, 100]. The value 0 is taken if the distribution of the specific variable in the studied population is the equation, while in the case of total inequality its value is 100%.
We processed and evaluated the collected data and databases with the help of Microsoft Office software package. To create cartograms, we used ArcGIS 10.6.1. software.

Results

In the Kunság wineland, the number of registered unemployed decreased by 58.47% during the ten years examined. At the same time, the population in the settlements of the Kunság wineland decreased by 1.59%. It can be stated that the decrease in unemployment is not due to the decrease in the population. However, in addition to the change in the number of unemployed, it is just as important to examine the composition of unemployment (eg gender, age, education). The composition of the unemployed by age group in 2009 was as follows: the share of the unemployed under the age of 24 was 16.15%, the share of the unemployed aged 25-55 was 75.34%, and the share of those at risk over the age of 55 was 8.50%. By 2019, the distribution of the unemployed in this respect has changed significantly. The proportion of the 0-24 age group decreased by 3.78% and the 25-55 age group decreased by 14.45%, while the proportion of those over 55 increased by 18.24% compared to 2009.
In 2009, 39.54% of the unemployed had a primary education, 56.59% had a secondary education and 3.87% had a tertiary education. The share of those with a primary education increased by 4.30% points and those with a tertiary education by 0.86% points, while the share of those with a secondary education decreased by 5.16% points by 2019.

In the framework of the research, we also examined the territorial inequalities in the distribution of the unemployed. We have shown that in the examined term, the inequality of the territorial distribution of the unemployed decreased compared to the distribution of the total population. Based on the values of the Hoover index, we found that 10.95% of the unemployed in 2009 and 10.64% in 2019 would have to be reallocated to have the same territorial distribution as the population. The leveling of the spatial distribution is also confirmed by the values of the weighted Gini index (G_{S_2009} = 16.4%, G_{S_2019} = 15.47%). According to this, the territorial distribution of the unemployed is approximately 1% more balanced compared to the territorial distribution of the population than a decade earlier.

The territorial concentration of the unemployed under the age of 25 in the Kunság wineland is illustrated in Figure 2 for 2009 and 2019. Comparing the maps, it can be seen that in 2019, compared to 2009, we showed the concentration of the examined age group in several settlements. Compared to the two settlements in 2009, in 2019 the LQ index reached a value higher than 1.5 in 10 settlements, which means a very strong concentration. The concentration of the unemployed under the age of 25 has shifted from the center of the wineland to the periphery of the area.
Indicators measuring territorial inequalities (h, G_S) were also calculated for each age group (Tab. 1). The Hoover indexes for the young age group were h_{2009} = 5.32% and h_{2019} = 12.09%, while the weighted Gini coefficient was G_{S_2009} = 8.01%, G_{S_2019} = 15.75%. The obtained values confirm the finding related to the age group that the inequality of the spatial distribution increased and spatial concentration took place.

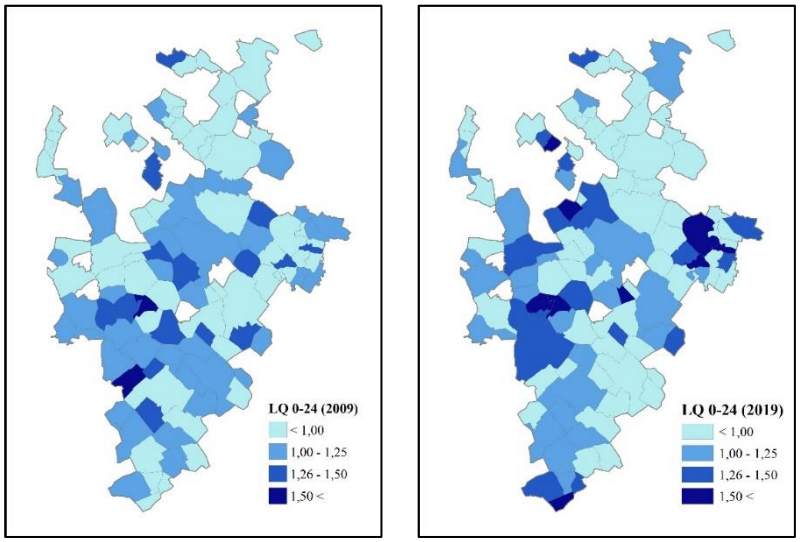

Figure 2. Territorial concentration of the unemployed under the age of 24 (LQ $_{2009,2019}$)
Source: Own editing based on own calculation
In the case of the unemployed aged 25-55, we found that in the close agglomeration of Kecskemét there was a milder degree of territorial concentration compared to 2009. At the same time, deconcentration took place in several settlements in the western and southern parts of the wineland. Overall, it was found that in the case of the 25-55 age group no strong concentration

can be measured anywhere in the examined territorial unit in 2019, medium concentration was identified in three settlements (Fülöpháza, Jakabszállás, Lakitelek) (Fig. 3).
The values of the indexes calculated for the examination of the territorial distribution of the 25-55 age group (Tab. 1) increased in the examined term, on the basis of which we established that the territorial distribution became more unequal in this age group as well. The indicators support the formation of concentrated contiguous spatial units that can be clearly seen on the map compared to the previous more scattered arrangement.

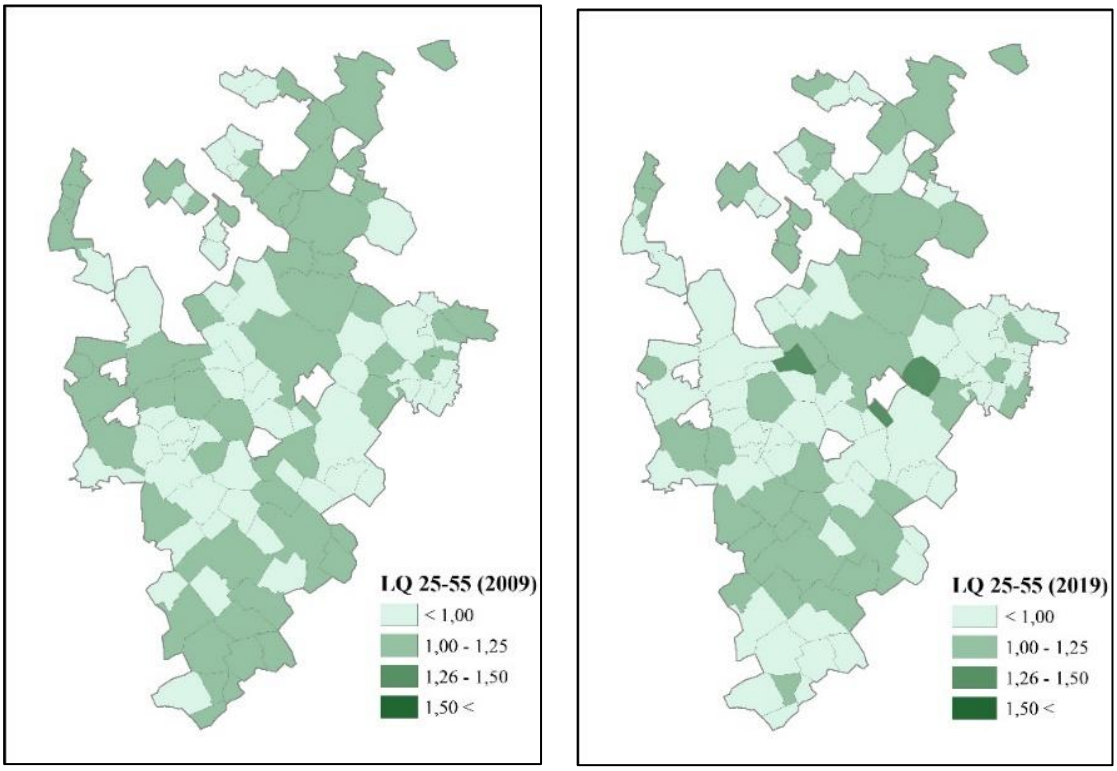

Figure 3. Territorial concentration of the unemployed age 25-55 (LQ $_{2009,2019}$)
Source: Own editing based on own calculation

The concentration of the unemployed over the age of 55 has shifted from the peripheral areas of the wineland to the central area. Overall, deconcentration processes took place, by 2019 the proportion of settlements with high concentration decreased. Deconcentration can also be seen in the agglomeration of Kecskemét, except in the large village of Lakitelek, where concentration density could be measured in a unique way in the area. The concentration of the age group endangered from the point of view of the labor market decreased in the settlements of the wineland closer to the capital (Tököl, Szigetcsép, Ócsa, Gomba, Monor, Bénye, Pilis, Kóka) (Fig. 4).

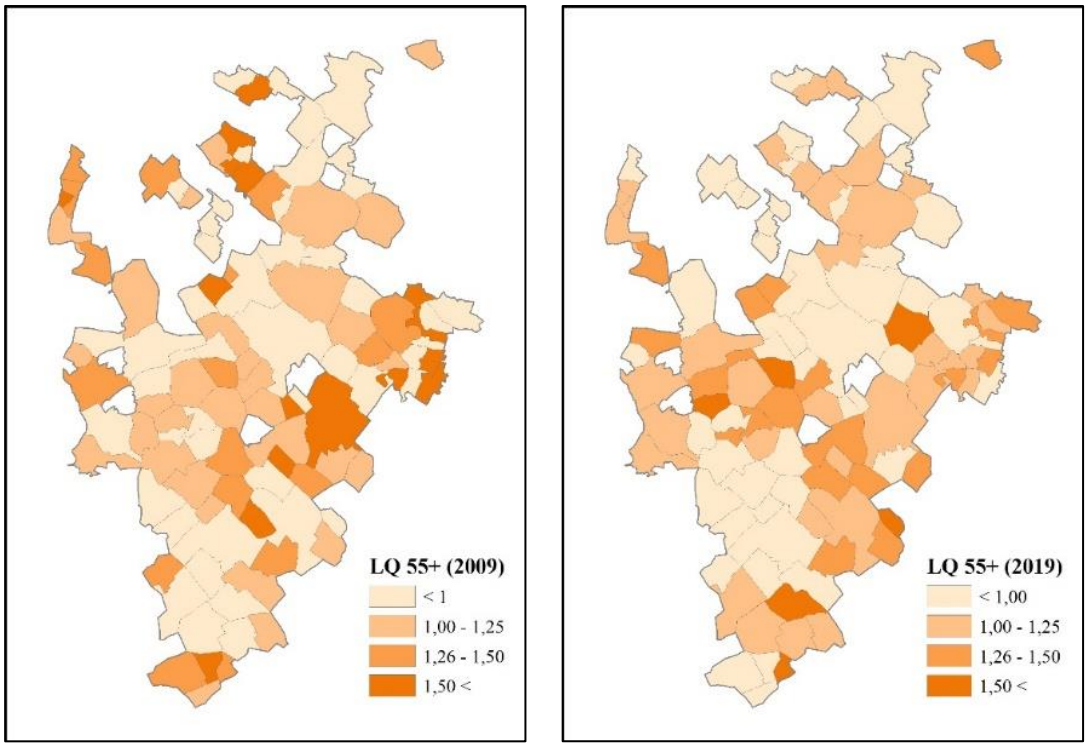

Figure 4. Territorial concentration of the unemployed over the age of 55 (LQ $_{2009,2019}$)
Source: Own editing based on own calculation

Indicators of the territorial distribution of the age group over 55 indicate an improvement in the distribution. The Hoover index decreased from h_{2009} = 11.04% to h_{2019} = 7.50%, showing a similar trend, the weighted Gini index also decreased from G_{S_2009} = 16.70% to G_{S_2019} = 9.62%. The change in the values of the calculated indicators supports the finding that deconcentration processes took place in the case of the age group.

Table 1. summarizes the results of the territorial inequality indicators calculated by age group, which were analyzed in the presentation of the spatial structure of the given age group.

Table 1. Results of Hoover-index and Weighted Gini-index by age group

Categories	Hoover-index (%)		Weighted Gini-index (%)	
	2009	2019	2009	2019
0-24 age group	5,32	12,09	8,01	15,75
25-55 age group	1,46	6,17	2,16	4,34
55+ age group	11,04	7,50	16,70	9,62

Source: Own calculation based on NES data

When examining the concentration of the unemployed with a primary education, it is striking that in 10 years the value of the LQ index remained above 1.5 in only one settlement, in Dány

(Fig. 5). In addition, the overall concentration of this group decreased slightly, by 1.8 percentage points over 10 years. In the southern areas of the wineland, concentration shifted from west to east. A larger increase in concentration was observed in the wineland areas close to Csongrád and Szentes, while in the agglomeration of Baja and in the Serbian border areas we measured significant deconcentration.

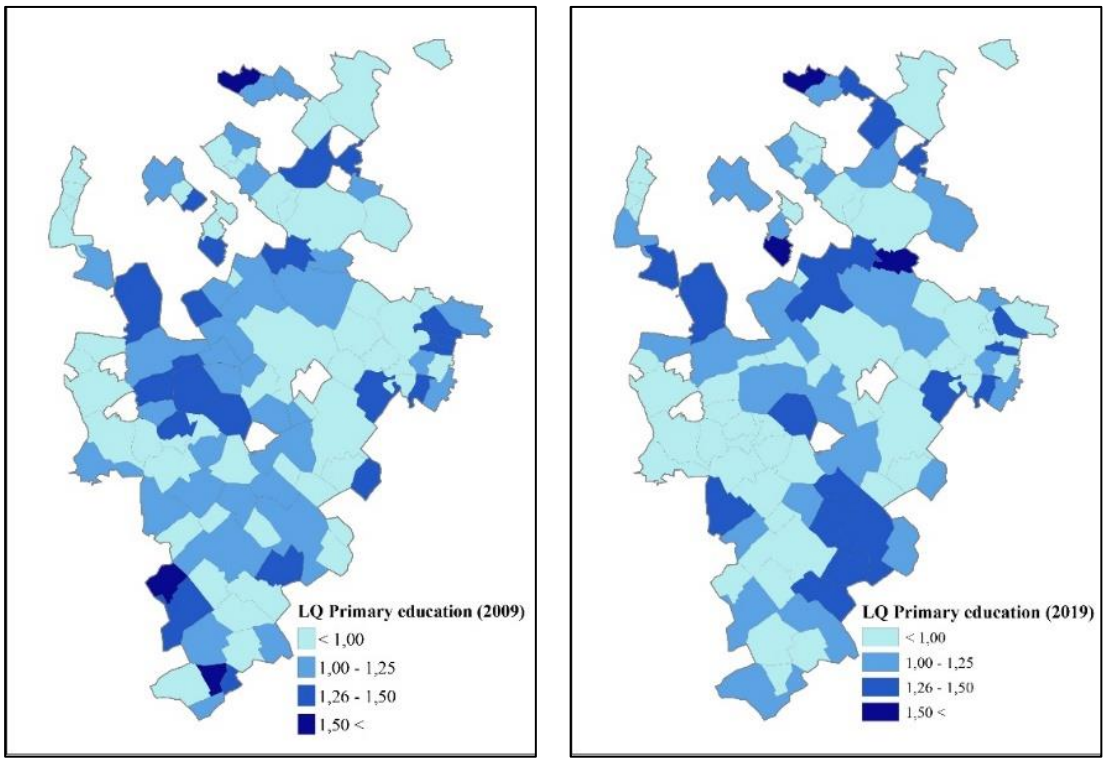

Figure 5. Territorial concentration of the unemployed with primary education (LQ $_{2009,2019}$)
Source: Own editing based on own calculation

The indicators of territorial inequalities in the case of those with primary education increased in the period under review (Table 2). The Hoover index rose 2.28 percentage points, while the weighted Gini index rose 2.71 percentage points by 2019. Thus, the territorial distribution of the unemployed belonging to the group deteriorated. 10.7% of the unemployed with a basic education should be redeployed so that their territorial distribution is the same as the territorial distribution of the unemployed in 2019.
Within the wineland, the concentration of the unemployed with a medium-term education has clearly increased. While in 2009 no strong concentration was detected in any settlement, in 2019 we calculated LQ index values higher than 1.5 in 4 settlements (Jászszentandrás, Bénye, Harta, Páhi) (Fig. 6). A continuous increase in concentration can be observed in the settlements east of Kecskemét and on the Apostag-Kiskunhalas axis in the western part of the wineland. Compared to the situation in 2009, by 2019 we can see a high degree of deconcentration in the Serbian border settlements.

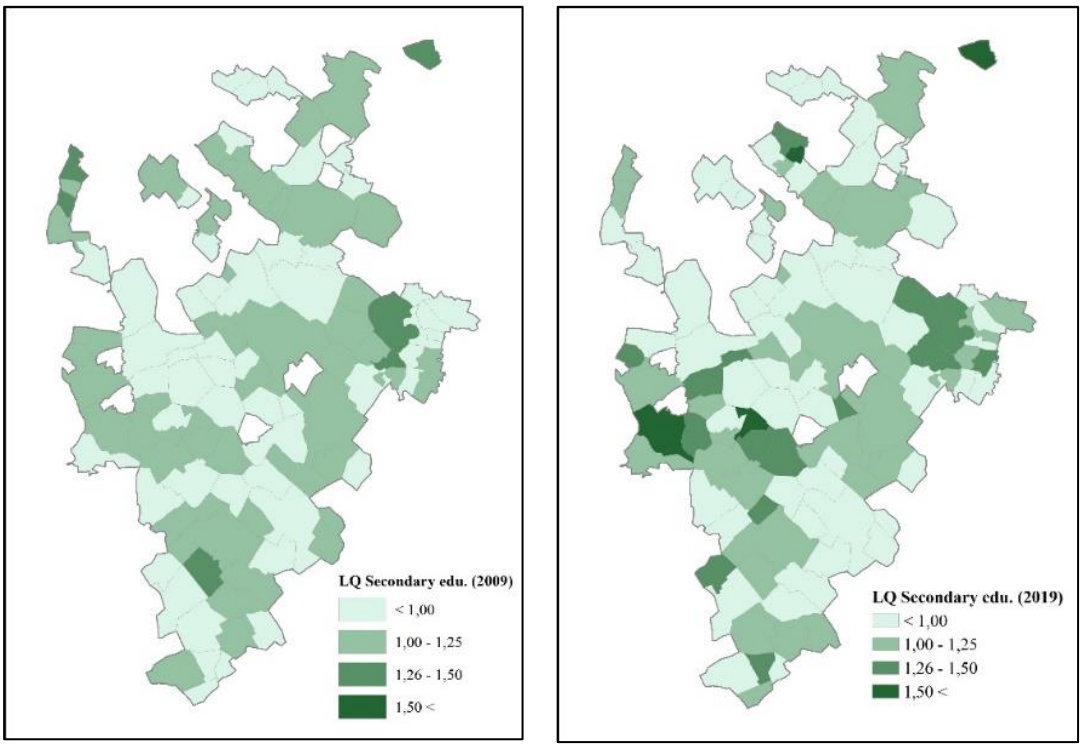

Figure 6. Territorial concentration of the unemployed with secondary education (LQ 2009,2019)
Source: Own editing based on own calculation

In the case of those with secondary education, the indicators of territorial inequality also proved that the distribution became more unequal. The Hoover index increased by 2.57 percentage points, while the weighted Gini indexes were G_{S_2009} = 6.70%, G_{S_2019} = 9.93%. The obtained results confirmed the conspicuous changes on the map, ie that the territorial concentration of the unemployed increased.

A high concentration of the unemployed with higher education can be observed in the cities of Kecskemét and Jászberény (Fig. 7). However, the changes measured in the agglomeration of the two cities are in different directions. In the case of Kecskemét, it can be stated that while in 2009 only the city was affected by the high level of concentration, by 2019 it had already extended to the surrounding settlements. In Jászberény, the opposite process took place, the high concentration of the surrounding settlements disappeared. Of the categories examined on the basis of educational attainment, the presence of territorial concentration is best observed in this group.
The change in the calculated indexes is the most significant in this group (Tab. 2). The Hoover index rose 6.41 percentage points and the weighted Gini index rose 7.71 percentage points. The increase in the inequality of the distribution supports the phenomenon of concentration described.

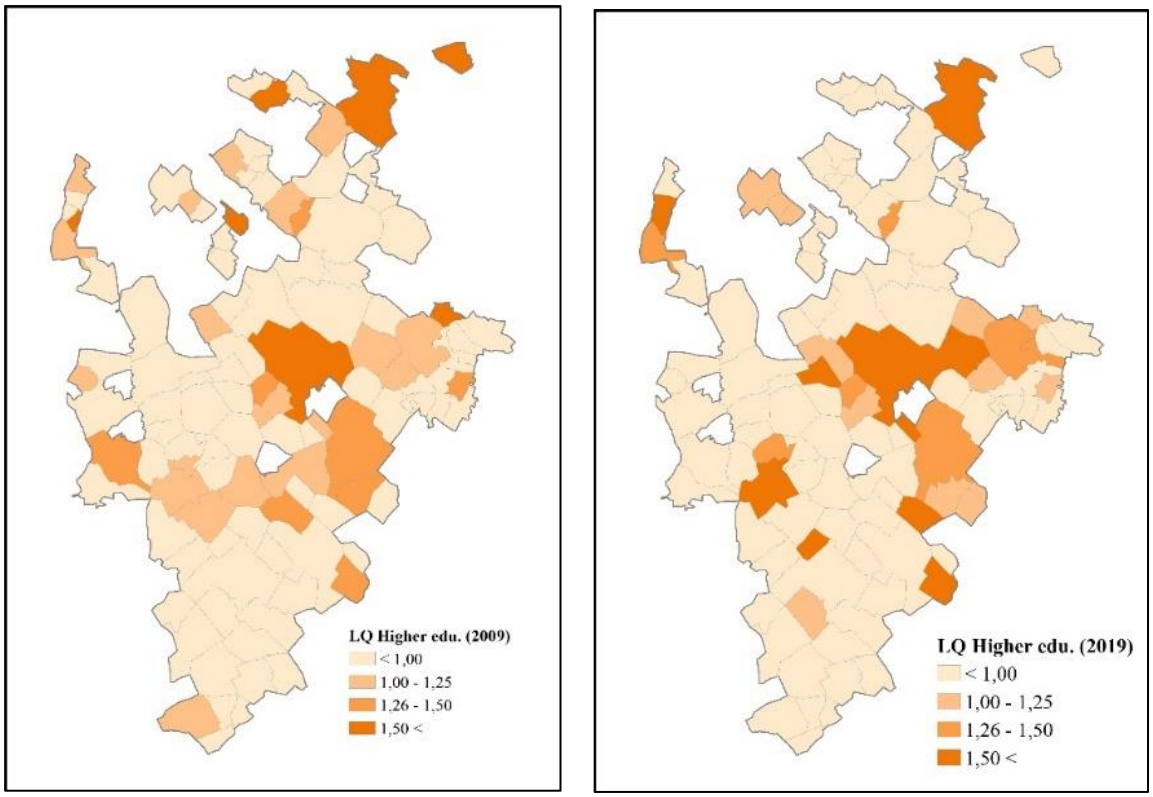

Figure 7. Territorial concentration of the unemployed with higher education (LQ $_{2009,2019}$)
Source: Own editing based on own calculation

Table 2 summarizes the results of the territorial inequality indicators calculated according to the categories of education, which were analyzed in the presentation of the spatial structure of the given group.

Table 2. Results of Hoover-index and Weighted Gini-index by educational attainment

Categories	Hoover-index (%)		Weighted Gini-index (%)	
	2009	2019	2009	2019
Primary edu	8,42	10,7	11,56	14,27
Secondary edu	4,82	7,39	6,70	9,93
Higher edu	21,18	27,59	29,38	37,09

Source: Own calculation based on NES data

Conclusion

Changes in the values of the calculated inequality indexes supported the phenomenon of spatial concentration verified and represented by location quotients. Overall, it can be stated that the extent of the change in the unemployed is not related to the change in the population of the studied area.

The distribution of the unemployed has changed so that territorial inequality relative to the distribution of the population has decreased. In contrast, the territorial inequality indicators calculated for all unemployed in the categories of the unemployed increased.
Unemployed people with a primary education and higher territorial inequality in the under-55 age group and their declining numbers could have long-term adverse effects on the area's viticulture and wine sector. In areas where their optimal distribution differs from entrepreneurial needs, labor demand may develop. This may be a significant competitive disadvantage compared to other actors in the wineland, especially in the case of unskilled, manual and / or seasonal manual labor. Due to the agricultural nature of the viticulture and wine sector, it is essential for businesses that the workforce is available in space and time then and there, as required by viticulture agro-technology.
In our study, we showed which areas in the Kunság wineland are most affected by the concentration and deconcentration of certain categories of unemployment.

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THE EFFECT OF THE CORONAVIRUS ON UNEMPLOYMENT IN BORSOD-ABAÚJ-ZEMPLÉN COUNTY

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Abstract

In March 2020, the COVID-19 coronavirus epidemic causing mass diseases appeared in Hungary. The virus has had a negative impact not only on people's health but also on the country's economy. Several people lost their jobs due to a loss of revenue caused by the virus or government decisions. There were sectors such as tourism and hospitality that completely disappeared in the first wave of the coronavirus. The aim of the study is to get a realistic picture of the impact of the epidemic on unemployment in Borsod-Abaúj-Zemplén County.

Introduction

In March 2020, the Government of Hungary introduced strict measures to curb the coronavirus epidemic, as a result of which the production of many industries decreased or worse, stopped. Business companies in Hungary, especially commercial enterprises, can find a solution in the changes in the supply chains in order to recover the economy (Koppány, 2020).

We use health as our most important resource in our daily lives. It is in the social and individual interest to maintain our state of health, as the worker is an indispensable member of the transformation process. During the coronavirus epidemic, we found that there is a close relationship between health and the economy. As a result of the epidemic, many jobs have been lost, and government measures have had a negative impact on the work of other sectors. As a result of the effects mentioned above, unemployment increased, resulting in negative economic effects (Huszka et al, 2020).

The COVID-19 epidemic not only tests the suitability of healthcare systems worldwide, but also has unprecedented economic consequences and even disrupts seemingly stable integrated systems. The main method of controlling the virus is to radically reduce human contact, so that the human factor has withdrawn at a very high rate from the two main branches of the economy at the same time, production and consumption (Balázs, 2020).

The economic downturn, which is accompanied by the coronavirus epidemic, is expected to hit the country's disadvantaged regions the hardest, as those living here have the least financial savings, lower-than-average education and less favourable employment opportunities in the regions. It can also result in the repatriation of workers who have emigrated abroad, as the economy and jobs are similarly affected by the epidemic (Koós, 2020).

After the first wave of the pandemic, the restart of our economy began. The strategic importance of the food industry and the agricultural economy came to the fore when the epidemic occurred, as food security must be maintained. In the case of agriculture, there can be no cessation of production and supply processes, as a result of which, in the industry, restarting has a different significance in the agricultural sector than in the case of those sectors where they have actually ceased. Based on experience, it is also necessary to redesign the sector in agriculture, which has again brought to the fore the need for generational change in the sector, which may also result in the improvement of the competitiveness of the sector (Szinay and Zöldréti, 2020).

Material and methods

The study examines the effects of the coronavirus on the changes in unemployment in Borsod-Abaúj-Zemplén County. Before conducting the research based on the secondary data of the National Employment Service and Public Employment Portal, I reviewed the available domestic and international textbooks and journal articles on the topic. The database was compiled and analysed using Microsoft Office 2013 program.

Results

41/2020 created in March 2020. (III. 11.) on the basis of another economic crisis in the country however, this crisis was not caused by the economy but by the coronavirus epidemic.

Borsod-Abaúj-Zemplén County was also negatively affected by both the economic downturn caused by the epidemic and the restrictions caused by government decisions. Unemployment in the county shows an increasing trend compared to the same period last year. Figure 1 also shows well that each month of the period from January to October 2020 exceeded the statistical data measured in the same period of the previous year. In the first quarter of the year, the absolute number of unemployed was slightly higher than last year. From April to October, greater growth can already be seen. According to the government's decisions, from the summer period, in June, the enterprises dealing with tourism and hospitality, which employ a significant number of workers in the tourist areas during this period, could reopen.

In Borsod-Abaúj-Zemplén County, tourism is not very significant, so this government decision was not able to compensate for the situation of workers excluded from the labour market. Of course, summer seasonal work in agriculture could also have reduced the number of jobseekers, but this did not result in a significant decrease in the number of jobseekers either.

The number of first-time registrants shows that workers who have never been unemployed in their lifetime have left the labour market. During the virus, up to and including September, the number of employees in 2020 exceeded the data of 2019 in each month examined. This means that many people who had had a stable, reliable job for many years lost their jobs due to the coronavirus pandemic in Borsod-Abaúj-Zemplén County. It also shows that the negative economic impact of the coronavirus has also hit companies that have previously created secure, reliable jobs. In September and October, their headcount showed a declining trend compared to the previous year (Chart 2).

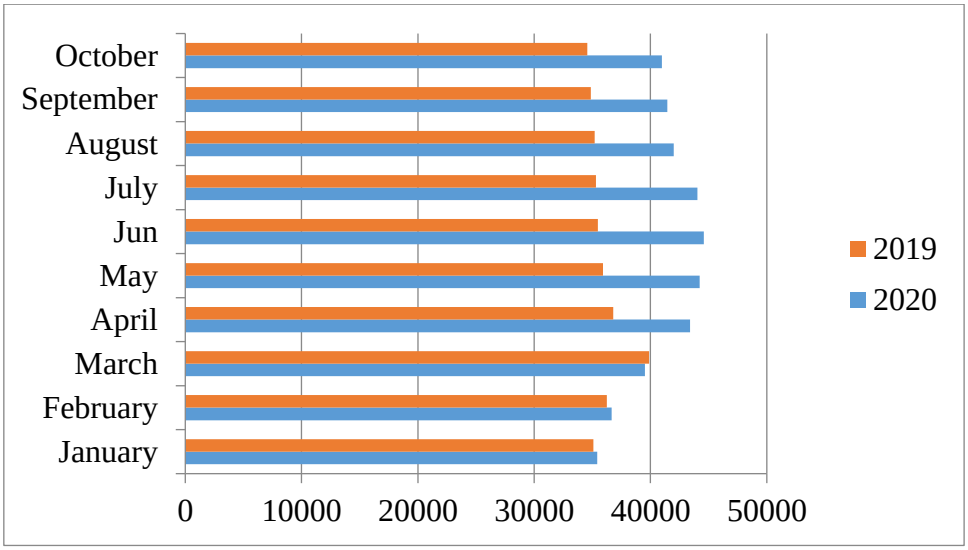

Figure 1. Changes in the number of unemployed in Borsod-Abaúj-Zemplén County during the coronavirus and a year earlier
Source: Based on own creation (www.nfsz.munka.hu)

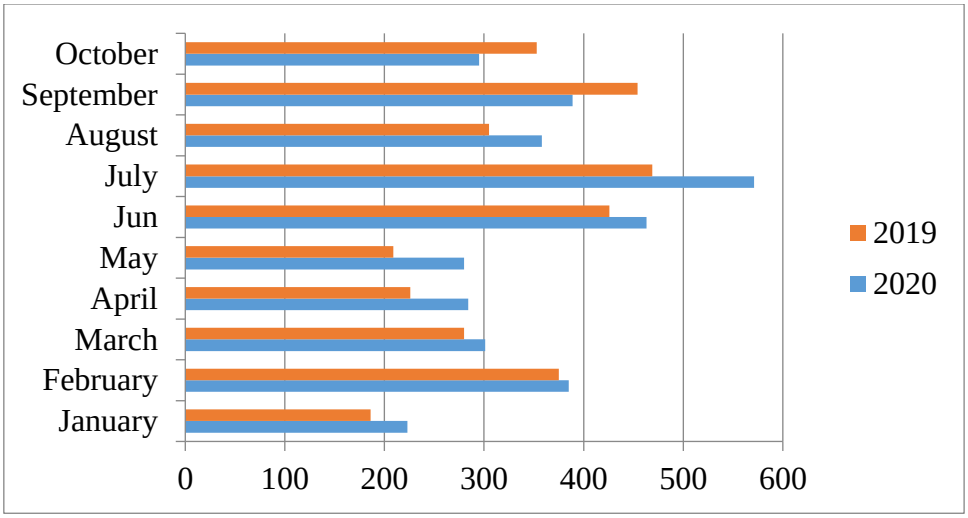

Figure 2. Number of first entry registers during the coronavirus and one year earlier in Borsod-Abaúj-Zemplén conuty
Source: Based on own creation (www.nfsz.munka.hu)

The changes in the unemployment of the districts of Borsod-Abaúj-Zemplén County during the period of the coronavirus and in the same period of one year show an increasing trend in each district. The 6 districts of the county were able to keep the increase in the number of unemployed below 10%. There are no large companies in these counties that employ hundreds of people. The other 10 districts showed a 10% increase in headcount in 2020 compared to

January-October 2019. In terms of proportions, the largest increase in unemployment was in the Sátoraljaújhely district, although many residents of this district work abroad due to the proximity of Slovakia. This increase may also have been caused by the workplace closure effect of the coronavirus in Slovakia. The actual increase in the number of employees was due to the district of Miskolc, which is basically not surprising, as most of the county and most employers live in this district. Overall, the districts most negatively affected by the economic impact of the coronavirus were those in which large corporations are located (Figure 3).

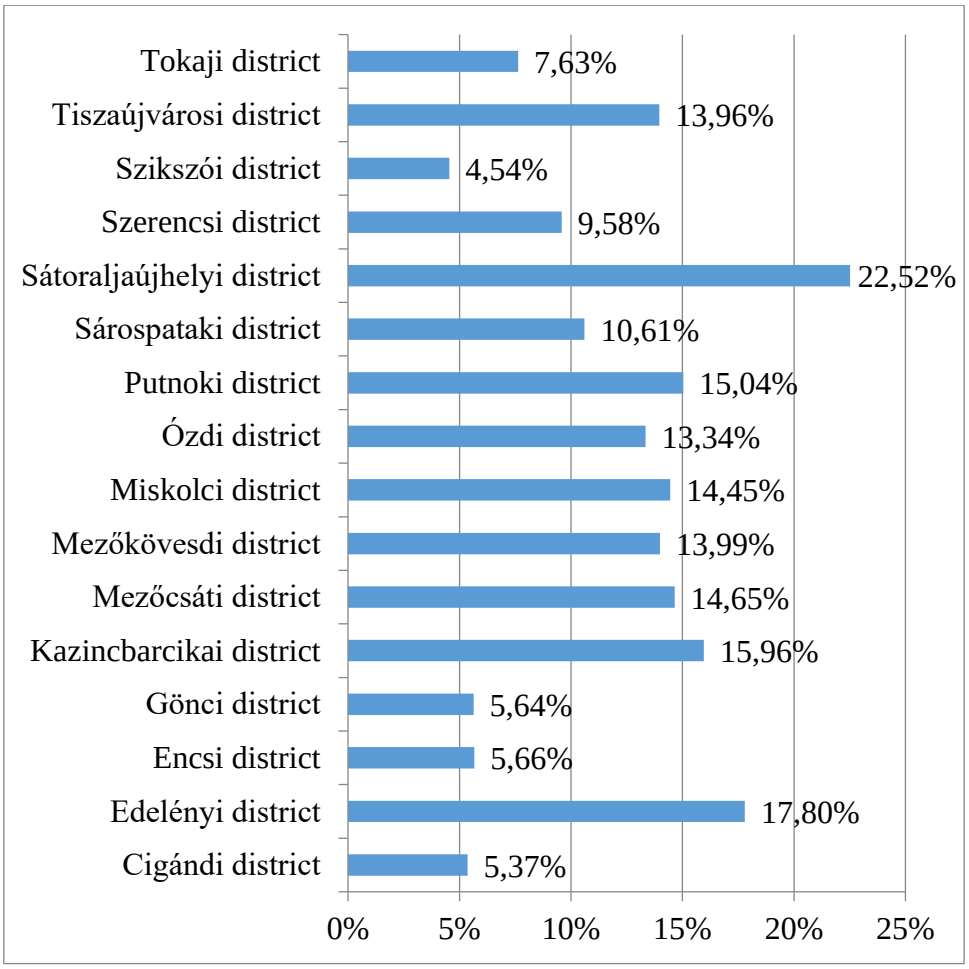

Figure 3. Increase in coronavirus unemployment from 2019 to the same period in 2020 in Borsod-Abaúj-Zemplén County
Source: Based on own creation (www.nfsz.munka.hu)

The development of the number of people employed in public employment shows a different picture in the two years examined. As a result of government decisions, it had a higher headcount in 2019 than during the economic crisis caused by the coronavirus. The Government did not see the key to combating high unemployment in public employment. The first government decision caused by the coronavirus came into force in March 2020. In the months

following the entry into force, the gap in the number of public employees decreased compared to the previous year. Most of the increase in the number of employees can be seen in the summer period, as during this period those working in this form of employment are employed for seasonally employed agricultural work owned by the municipality. That is, in the summer months, public employment is more necessary for rural municipalities, however, winter jobs are not negligible from an employment point of view either.

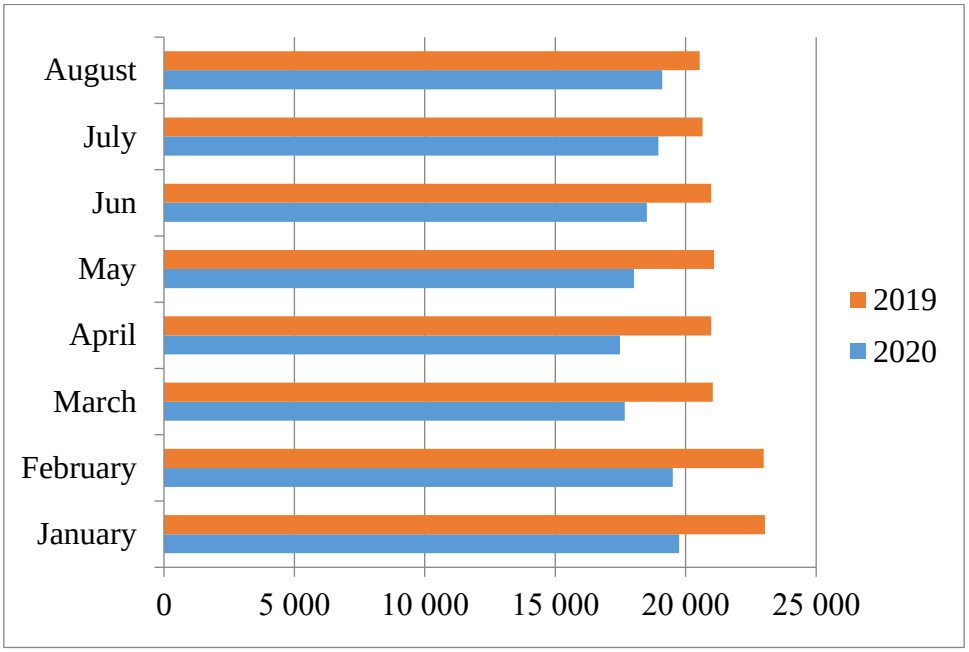

Figure 4. Changes in the number of people employed in public employment at the time of the coronavirus a year earlier in Borsod-Abaúj-Zemplén County
Source: Based on own creation (www.kozfoglalkoztatas.kormany.hu)

We can see a similar picture in the development of the number of vacancies as in all the statistical data examined so far. Everywhere in the months under review, the number of vacancies in 2019 exceeded the data measured in the same period in 2020. The biggest discrepancy is found at the time of the first government decisions on the coronavirus, in March and April. As summer seasonal work approached, the differences between the two-year data for the same months began to narrow greatly (Figure 5).

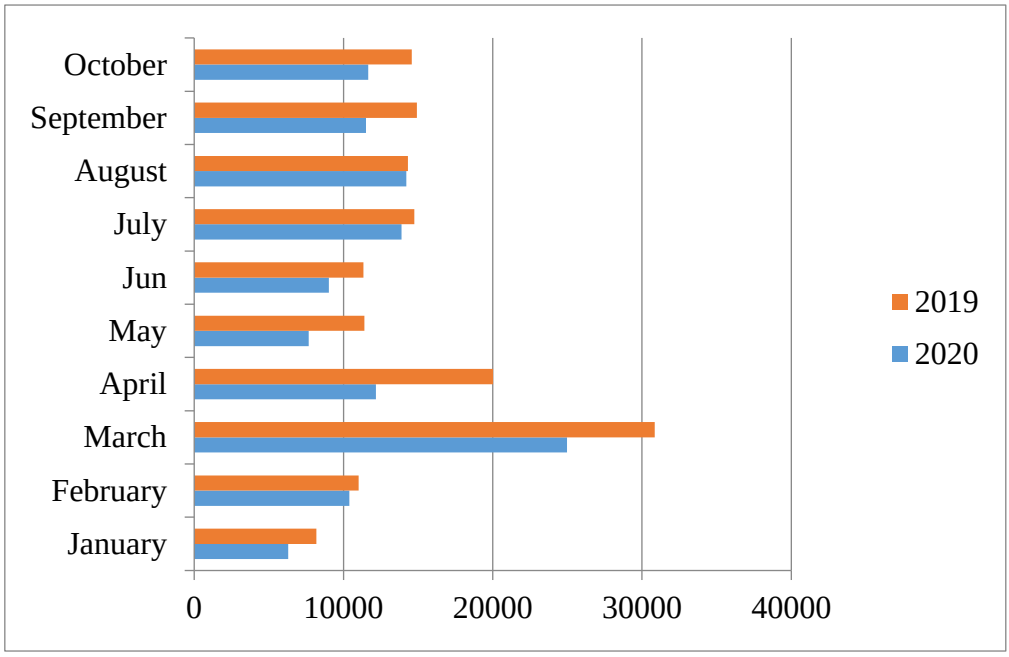

Figure 5. Changes in the number of vacancies during the coronavirus and a year earlier in Borsod-Abaúj-Zemplén County
Source: Based on own creation (www.nfsz.munka.hu)

Conclusions

The negative effect of the coronavirus has reached the economy of Borsod-Abaúj-Zemplén County in Hungary. Many have lost their jobs as a result of labour market anomalies caused by the epidemic and government decisions.
In its rural districts, the county was least affected by the summer months, as the number of unemployed became somewhat moderate due to summer seasonal work. The districts most affected by the coronavirus are those with large corporations employing hundreds of people.
As a result of government decisions, most tourism and hospitality workers have lost their jobs. The state did not see a reduction in unemployment in public employment.

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TERRITORIAL DISTRIBUTION OF ADULT EDUCATION IN HUNGARY

Dávid HAJDÚ – Krisztián JÁRDÁNY

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Abstract

The study examines the territorial distribution of adult education in Hungary. In all respects, Budapest has the highest indicators in Hungary in terms of territorial distribution. Regarding rural counties, Borsod-Abaúj-Zemplén County and Szabolcs-Szatmár-Bereg County have the most training and education. In terms of participation, OKJ trainings have a high volume. With regard to the trainings supported by the European Union, the level of support for the professions included in the National Training Register is insignificant; the general adult training is preferred by the sponsoring decision-makers.

Introduction

The democratization of the Hungarian social policy system in recent decades has forced sweeping changes in the labour market, as well as the transformation of the economic structure, to engage communities and individuals in learning and education. As a result, the role of learning has become the most important driver of the economy and the role of learning has increased (Rakaczkiné, 2010). It is a common phenomenon today that a person is forced to make career adjustments several times in his or her life, and as a result, in order to remain in the labour market, he or she must acquire a myriad of new skills. We can distinguish two types of adult education, adult learning. Adult education tends to focus on the acquisition of special professional and language skills, while adult education usually focuses on the acquisition of a degree or vocational qualification within the framework of school-based training (Csoma, 2005).

Adult education includes activities aimed at the planned, purposeful development of adults, in which the emphasis is on competencies. In adult education, the vocational training, retraining and further training of adults leading to an officially recognized qualification is referred to (Zrinszky, 2010). Adult education is aimed at acquiring potential professional qualifications for the needs of the market, which helps the educated to earn income legally, thus realizing their social integration. As a result, a number of Community policy directives have been formulated, such as the Europe 2020 strategy for smart, inclusive and sustainable growth. One of the main pillars of the priorities set in Europe 2020 is the creation and development of an economy based on knowledge and innovation, as well as the creation of an economy that provides high employment and is characterized by territorial, economic and social cohesion (Farkas-Henczi, 2013).

We distinguish three types of incentives for adult learning, which are motives of interest, existential, and prestige. Interest-based motives usually occur when an adult expects help from learning or teaching to solve a problem, or may start learning because he or she is interested in a profession or field of science. Existential motives encourage an individual to learn if they want to move forward in their workplace or want to maintain their position. We also talk about existential motives in the case when entering the labour market, getting a job is the reason for joining training. Prestige motives are shaped by our environment, family, friends, and the workplace. Motivation of this kind is considered an authoritative activity of learning. The most ideal case is when all motives play a role in adult learning (Koncz, 2017).

According to the Adult Education Act, the concept of adult education is complex, and adult education includes both professional and general language training (Zachár, 2010). The legislation today distinguishes four training circles in Hungary, which are the following:

• Training circle "A": professional trainings according to the OKJ.

• Training circle "B": other professional trainings not included in the National Training List are allowed.

• Training circle "C": language courses allowed

• Training circle "D": other trainings are allowed.

Material and method

As a basis for the research, after learning about the domestic and international textbooks and journal articles available on the topic, I processed the secondary data found on the OSAP 1165 Statistical Interface in a national context. The distribution of adult education in Hungary shows a diverse picture. At first glance, I illustrate the various statistical indicators at the NUTS 2 level, and then I turn to the county-level distributions, criteria and the specifics of the counties. Of course, from all statistical points of view, Budapest shows an outstanding performance, therefore, in order not to distort the picture, it is excluded from some analyses. The processing and evaluation of the collected database was performed with the help of Microsoft Office 2013 and IBM SPSS Statistics 20 programs.

Results

Adult education is becoming more and more widespread in Hungary. All adult education statistical indicators show development and growth. In the period under review (2015-2019), the number of educational institutions with an adult education license increased in the regions of the country. Over the years, many businesses have recognized this market space that existing public education institutions could no longer fill. In terms of the number of training institutions, the Central Hungary region stands out from the country, which is mainly due to Budapest and its agglomeration. This was followed by the Northern Great Plain region, which became one of the main centres of training supported by the European Union together with Borsod-Abaúj-

Zemplén County, which is located in the Northern Hungary region, due to the economic backwardness of Szabolcs-Szatmár-Bereg county and high unemployment. It can also be clearly seen from Table 1 that in the regions where they do not fight unemployment, there are far fewer institutions and enterprises engaged in adult education.

Table 1. Number of training institutions by region (2015-2019)

Region	2015	2016	2017	2018	2019
Dél-Alföld	114	128	141	143	153
Dél-Dunántúl	89	90	102	103	99
Közép-Dunántúl	98	96	107	109	108
Közép-Magyarország	643	623	651	673	738
Nyugat-Dunántúl	110	112	109	116	134
Észak-Alföld	167	156	190	191	204
Észak-Magyarország	88	92	107	112	121
Altogether	**1309**	**1297**	**1407**	**1447**	**1557**

Source: Based on own creation (www.osap.mer.gov.hu)

In terms of the number of trainings, each county shows an increasing trend. With the exception of Győr-Moson-Sopron County, every county in Western Hungary is dwarfed by the counties in Eastern Hungary. The figure does not include Budapest because it showed a much distorted picture. In the capital, 107,959 trainings have been completed in the last 5 years, which is 48.9 % of all trainings under the Adult Education Act in the country.

In the last 5 years, there have been almost 330 thousand trainings in Hungary, almost 72 % of which were based on 8 grades or less. The proportion of graduate-based trainings was 11.5 per cent, which suggests that the proportion of participant's in general adult education is much higher than in vocational training in the intermediate National Training Register, as all trainings, language and IT trainings are required to complete a grade. The proportion of the college as an input condition for joining the training (3%) is mainly due to professional and teacher training.

The number of students shows an increasing trend in the studied years. There were fewer less than 8th primary school graduates and completed 8th grade-based training. The number of participants in courses based on a college degree shows a decrease, while the number of courses that can be completed with a university degree has stagnated, with a slight increase.

In total, most participants in the study period (949863 people) were in the VET group, due to the fact that in many workplaces (such as teachers) they have to complete compulsory training on a grading basis and can only continue their activities if they obtain the compulsory training, required training scores. The second most participants (844045 people) are in the general adult education group; this group includes the trainings that have been a huge success in Hungary in the last 10 years. The third group with the largest number of participants (755,120 people) is

the state-recognized OKJ vocational qualification group. From the point of view of the labour market, this group is the most significant, because the student can find a new profession, education and a better chance than a student. The group according to the nature of the 3 trainings listed makes up 64.1% of all trainings in the country in the last 5 years, these groups are the most significant in terms of adult education in Hungary today.

In each county, the number of graduates increased year by year. From the figure, Budapest, as the capital with the largest population (1,519,793 people), has been omitted because it distorts the picture very much. In terms of the number of graduates, Budapest covers 61.9 % of the country. In Hungary, a total of 2,453,884 people have completed adult education in the last 5 years. In the distribution by county, it can be clearly seen that the most participants were in the two counties with the highest unemployment potential in the country, although in Borsod-Abaúj-Zemplén County the number of graduates decreased in the last year examined.

Nógrád County is one of the counties with the highest unemployment in Hungary, which is surprising that it has the least number of training groups. It can be clearly seen in the figure that only Győr-Moson-Sopron county stands out from the developed counties of Western and Central Hungary. The largest increase was seen in Hajdú-Bihar county and Pest county. In the examined years, a decline for 2016 was observed in all counties, which was due to the structural changes that came into force on 1 February 2016.

The distribution of trainings by number of hours is shown in Table 2. Most courses and training were less than 200 hours in the country, which was more than 90 percent of the training in the country. Trainings lasting less than 200 hours are usually trainings, sub-vocational qualifications, language trainings and IT trainings. As the trainings have been a great success in adult education for the last 5 years, their number dominates in each indicator. In the case of trainings over 201 hours, we can generally talk about OKJ trainings. The strangest of the trainings was more than 2001 hours, and then 80 percent were in Borsod-Abaúj-Zemplén County.

Table 2: Distribution of the number of trainings (courses) by number of hours

Period	2015	2016	2017	2018	2019	Altogether
Between 1001 and 2000 hours	406	423	540	697	643	2709
200 hours or less	52312	47229	54793	64059	78961	297354
More than 2001 hours	33	23	3	2	16	77
Between 201 and 400 hours	3702	2638	3260	3804	3341	16745
Between 401 and 600 hours	1690	1219	950	878	872	5609
Between 601 and 800 hours	207	247	490	664	628	2236
Between 801 and 1000 hours	367	610	916	977	819	3689
Altogether	**58717**	**52389**	**60952**	**71081**	**85280**	**328419**

Source: Based on own creation (www.osap.mer.gov.hu)

Regarding the trainings in the National Training Register, the group had the most training of 200 hours or less. Most of the trainings in the National Training List of less than 200 hours are

part-time qualifications. There are currently 44 vocational qualifications and part-vocational qualifications in the 2019 National Training Register.

In terms of the trainings included in the National Training Register, Budapest had the most participants, but in terms of support, it was one of the least supported in the capital. At the county level, most participants were in Borsod-Abaúj-Zemplén county and Szabolcs-Szatmár-Bereg county, and these counties also had the highest share of beneficiaries.

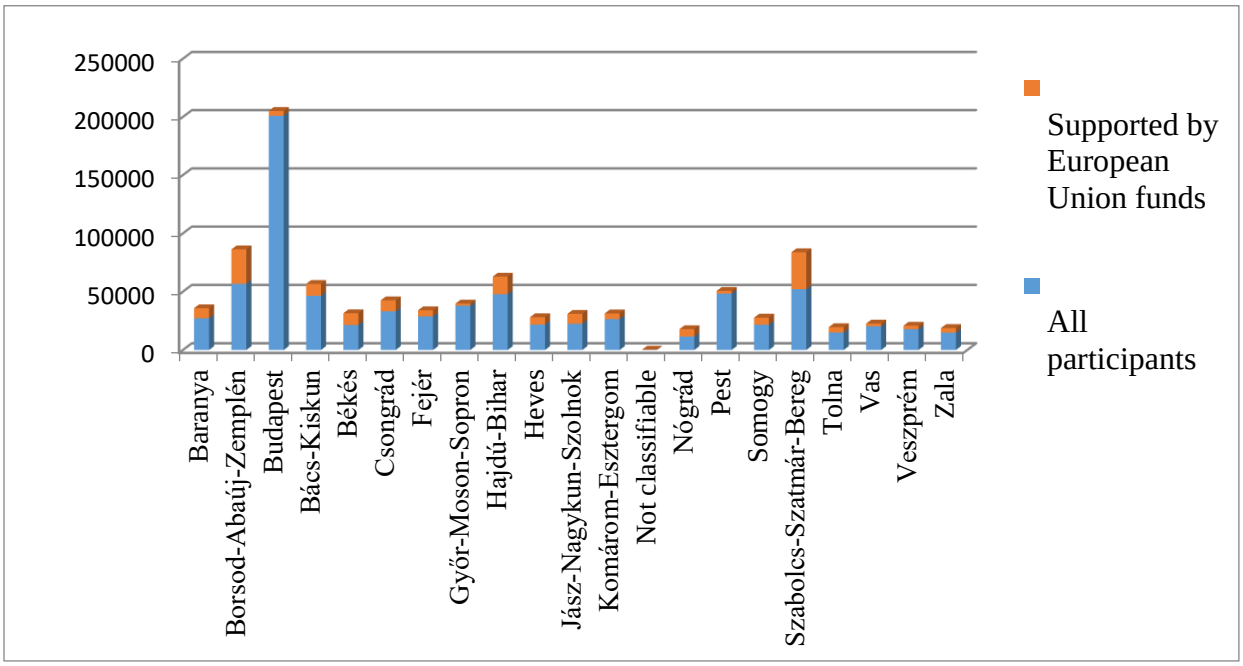

Figure 1. Number of participants in OKJ-supported and non-subsidized OKJ training
Source: Based on own creation (www.osap.mer.gov.hu)

In Hungary, a total of 773,554 people have participated in adult training in the professions listed in the National Training Register in the last 5 years, which is unfortunate that only 22.5 percent of this number was supported by the European Union.

Conclusions, suggestions

In Hungary, the number of institutions and enterprises with an adult education license is constantly growing, this is important because adult education can only respond to the changes of the labour market the fastest, using a solution. The number of trainings in the country is constantly growing, especially in Eastern Hungary. Budapest distorts all adult education indicators due to the high participation rate, of course most adult education institutions are also located here.

According to the entry condition for joining the training, the majority of trainings with 8 general qualifications or less was in the majority, which are due to the trainings, catch-up trainings and the level 3 OKJ trainings. From 2015 to 2019, the number of trainings increased by 45 percent.

The group with the type of in-service training had the largest number of employees in the grouping according to the nature of the trainings. The professions on the National Training Register were only in third place in the ranking. In my opinion, from the point of view of the labour market, the acquisition of a new profession has a much greater workforce potential than general adult education training, so the distribution of European Union subsidies should be directed to vocational training.

In the distribution of training hours, both participants and grants prefer short-term training (less than 200 hours). Which is completely understandable during a training or language training, but it is frustrating for OKJ trainings, because 200 hours is not enough to learn a new profession, especially not to be able to complete the fresh, safe and appropriate quality with a new vocational qualification person performed his work.

There is a high level of participation in vocational training at OKJ, but the level of support is negligible. In my opinion, the preference for vocational training should be increased, both from an employee and economic point of view.

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DEVELOPMENT OF SINGLE AREA PAYMENT FOR VINEYARDS IN THE DANUBE WINE REGION BETWEEN 2014–2020

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Abstract

Changes in area-based payments are expected in the European Union budget period 2021-2027. According to the draft, larger farms will be entitled to proportionately smaller payments. This change may also affect Hungarian vineyards.The time series analysis of the SAPS data showed that in the 2014-2020 European Union budget period, the concentration of vineyards in the Danube wine region has taken place both in Hungary and in its largest wine region. However, the extent of the change varies from area to area.

Introduction

Nearly a third of the European Union's budget is spent on the common agricultural policy (CAP). The CAP has been in operation since 1962. During its operation, the CAP has undergone a number of reforms (Veysset et al., 2005). The main aim of the reforms that have taken place in the CAP since the late 1980s has been market liberalization (Viaggi et al., 2013).

By the 1990s, the role of price subsidies had diminished. Instead of this form of support, the CAP favored farmers who sold their crops directly to the market (Kilian et al. 2012). As a result of the process, coupled subsidies are mostly converted to area-based support (Viaggi et al., 2013). As a result of the reforms, subsidies from the European Union depend on the size of the land cultivated, not on the amount of crop sold to purchasers (Keszthelyi, 2020).

The vast majority of agricultural subsidies come from the Common Agricultural Policy European Agricultural Guarantee Fund (EAGF). Most farmers receive normative subsidies and most of them come from area payments, so the most significant of the subsidies are the range of area-based subsidies. Area-based subsidies are paid in Hungary according to the SAPS (Single Area Payment Scheme) system (Rákóczi, 2019).

In recent years, the amount of ever increasing area payments has become an outstanding source of income for farmers and investors for (Lipcsei, 2020).

Over the years, support amounts have been closely integrated into farmers' financial plans. Nowadays, SAPS has become an essential part of success and effective management. Today, the amount of subsidy per territorial unit has tripled compared to the beginning. In Hungary, almost 180,000 farmers need area-based support every year, to an area of approximately 5 million ha, amounting to approximately HUF 350 billion (Rákóczi, 2018).

Popp (2018) draws attention to the fact that in the budget period of the European Union 2021-2027, SAPS will decrease above a certain size range.

Of course, the change in SAPS also affects the Hungarian vineyards, and thus indirectly the Hungarian grape wine sector. In Hungary, viticulture and the wine sector are one of the distinguished branches of the rural economy. Hungarian grape growing and closely related viticulture, and the tourism sector based on them, are one of the most important engines of the rural economy (Járdány and Duray, 2020). In the long run, therefore, a change in SAPS linked to changes in vineyard sizes will have a repercussion on the profitability of the sector.

Material and metods

In the course of my work, I examine the development of the SAPS affecting vineyards in the Danube wine region in the 2014-2020 budget period of the European Union.
At present, viticulture and winemaking take place in 22 winelands in Hungary. The winelands are located in 6 wine regions of Hungary. In Hungary, the total area planted with vines is 65,397 hectares, of which 90.79% is productive.

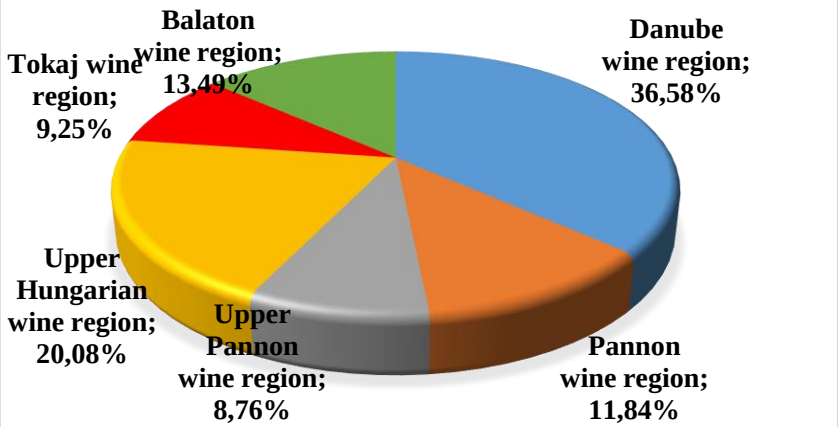

Figure 1. Distribution of Hungarian vineyards by wine regions, 2019
Source: Own editing based on data of National Council of the Wine Communities, 2020

The examined territorial unit is the biggest wine region in Hungary. The Danube wine region is located in the Great Plain. The vast majority of its territory is located in the Southern Great Plain region, and a smaller part in the Central Hungary region. According to the 127/2009. (IX. 29.) decree of the Minister of Agriculture and Rural Development the Danube wine 67region consists of three winelands:

1. Csongrád wineland: the totality of the settlements listed in the delimited production area chapter in the Csongrád OEM product description.
2. Hajós-Baja wineland: the totality of the settlements listed in the Hajós-Baja OEM product description in the demarcated production area chapter.
3. Kunság wineland: all settlements listed in the Kunság OEM product description in the demarcated production area chapter.

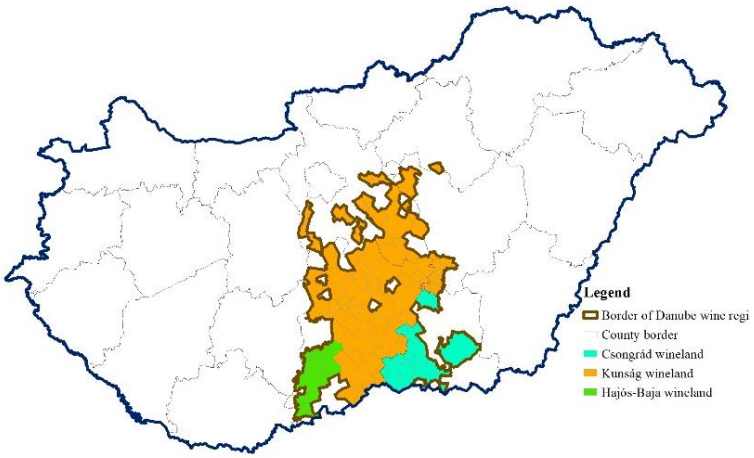

Figure 2. Location of the Danube wine region
Source:Own editing based on data of www.teir.hu, 2020

As a basis for the secondary research, I reviewed the domestic and international textbooks and journals closely related to the topic. I requested a secondary database from the Hungarian State Treasury related to the area-based support of vineyards. The Hungarian State Treasury provided the data at the national level, broken down by settlement, for the period 2014-2020. The data obtained include the number of SAPS applications and the size of the vineyards concerned, broken down by municipality at annual level. In addition, I analyzed the data of the National Council of the Wine Communities Hungary and the National Spatial Development and Spatial Planning Information System in connection with the topic.
I processed and evaluated the collected data and databases with the help of Microsoft Office software package. To create cartograms, I used ArcGIS 10.6.1. software.

Results

In the 2014-2020 budget cycle of the European Union, more than 50,000 hectares of vineyards, and more than 32,000 applications were applied for SAPS in Hungary every year. It can be clearly seen from Table 1 that the number of applications has fallen sharply in 7 years. Comparing 2014 with 2020, we can see that 3904 applicants have disappeared from the scheme, corresponding to a 10.8% decline. The pace of the decline has intensified in the last two years of the budget cycle. At the same time, a slight upward trend can be observed in the case of changes in the areas covered for support.The rate of growth is very low, with only 627 hectares increasing by 2020 compared to 2014, corresponding to an increase of only 1.17%.
Given that the number of applicants for area-based subsidy has fallen sharply, while the area under grapes has received a small increase, the average size of an area per applicant has increased. The rate of growth is significant. While in 2014 there were an average of 1.48 hectares per applicant, in 2020 there were already 1.68 hectares per applicant, which corresponds to an increase of 13.5%.

Table 1. Development of the application for vineyard SAPS in Hungary

Year	Number of applications	Area (hectares)	Avarage area (hectares)
2014	36180	53529,35	1,48
2015	33198	53099,20	1,60
2016	33805	53654,65	1,59
2017	33720	54082,03	1,60
2018	35221	56484,90	1,60
2019	32436	53800,19	1,66
2020	32276	54156,39	1,68

Source: Own calculation based on the data of the Hungarian State Treasury, 2020

In Hungary, the areas planted with wine grapes have been growing in a trend since 2013. The rate of increase for 2019 was 5.6% from 61930 hectares in 2013. During this period, the areas planted with grapes also increased in the Danube wine region, but the growth rate here was only 4.6%, which was lower than the national value. Due to the different growth rates, while in 2013 the Danube wine region accounted for 36.9% of the country's grape-growing area, by 2019 it changed to 36.5%. During the examined period, the winelands of the Danube wine region behaved differently in terms of grape area change. The grape-growing areas of the Kunság wineland increased by 6%, exceeding the national average. There was also an increase in the Hajós-Baja wineland, but its rate of 0.9% is much lower than the national average. Within the wine region, the big loser in the area change was the Csongrád wineland. The grape growing area of this wineland decreased by 13.1% by 2019 compared to 2013.

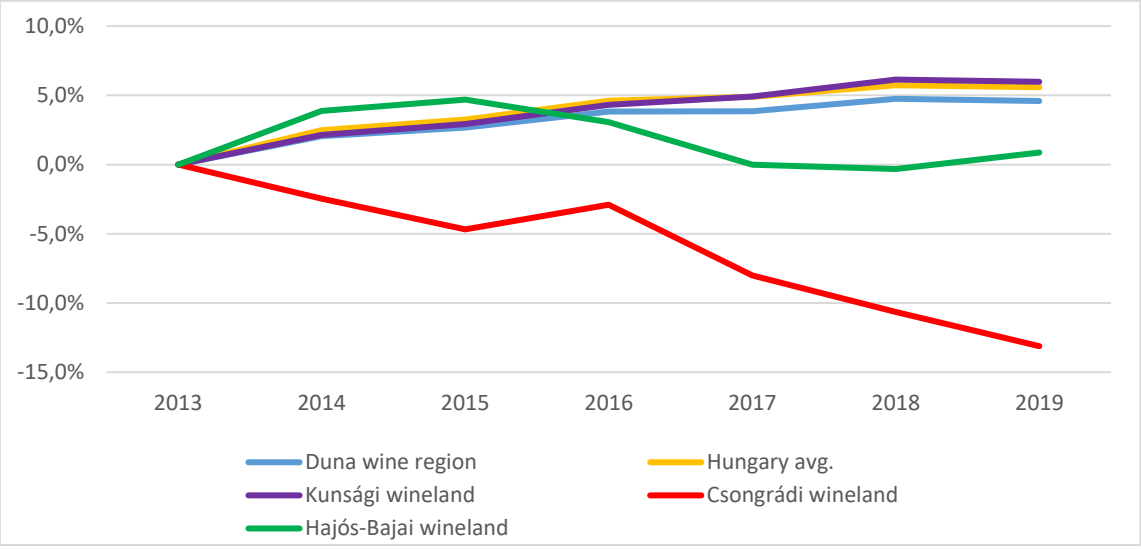

Figure 3. Changes in wine-growing areas in the Danube wine region between 2013-2019
Source: own editing based on data of www.hnt.hu, 2020

In the light of the area change dynamics outlined above, I examined the development of area-based subsidies in the Danube wine region.

Table 2. Change in wine-growing areas affected by SAPS, 2014-2020

	2014	2015	2016	2017	2018	2019	2020
Danube wine region (ha)	21278	21342	21499	21452	21256	21276	21252
Change compared to 2014	0%	0,3%	1,0%	0,8%	-0,1%	0,0%	-0,1%
Kunsági wineland (ha)	18656	18767	18885	18895	18722	18761	18755
Change compared to 2014	0%	0,6%	1,2%	1,3%	0,4%	0,6%	0,5%
Hajós-Bajai wineland (ha)	1713	1672	1659	1642	1648	1653	1640
Change compared to 2014	0%	-2,4%	-3,1%	-4,1%	-3,8%	-3,5%	-4,2%
Csongrádi wineland (ha)	910	902	955	915	885	862	857
Change compared to 2014	0%	-0,8%	5,0%	0,6%	-2,7%	-5,3%	-5,8%

Source: Own calculation based on the data of the Hungarian State Treasury, 2020

As it can be clearly seen from Table 2, in the period between 2014 and 2020, the dynamics of SAPS applications did not follow the trend of changes in wine-growing areas in any of the winelands of the Danube wine region. The area increase in the Kunság wineland significantly exceeded the area increase related to the need for SAPS.

In the Hajós-Baja wineland, although the area under grapes has decreased slightly in trend, at the same time the decrease in the areas related to the applications for SAPS shows a higher decrease according to the datas. In contrast, in the Csongrád wineland, the areas covered by the SAPS applications shrank to a significantly lesser extent than the production areas of the wineland. The area changes affected by SAPS are shown in Figure 4.

Examining the number of applications for SAPS in grape-growing areas in the Danube wine region, we can state that the change in the number of applicants followed the national trend during the period under review (Table 3.).

Although the trend is clear, it can also be seen that the decrease in the number of applicants for SAPS in the Danube wine region remained below the national average. Compared to 2014, by 2020 the rate of decline in the examined wine region was 3.5 percentage points lower than at the national level. In addition, the pace of change can be said to be significantly more balanced. The number of applicants for SAPS decreased the most in the Csongrád wineland, where the rate of decline from 2014 to 2020 was 9.2 percentage points. The rate of decrease in applicants was significantly higher than the decrease in vineyards supported by SAPS.

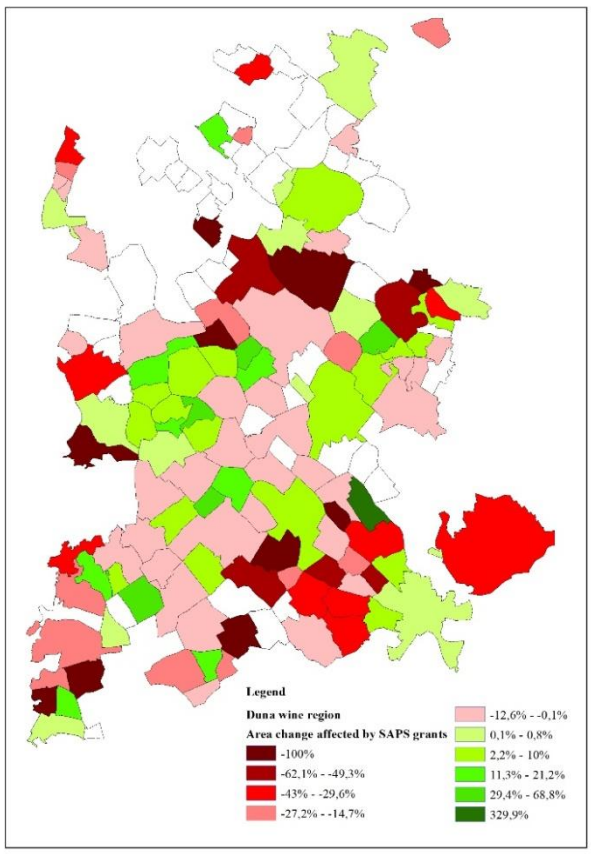

Figure 4. Changes in the areas affected by SAPS in the settlements of the Danube wine region between 2014-2020
Source: own editing, 2020

Table 3. Change in wine-growing areas affected by SAPS, 2014-2020

	2014	2015	2016	2017	2018	2019	2020
Danube wine region	12668	12282	12332	12167	11986	11883	11749
Change compared to 2014		-3,0%	-2,7%	-4,0%	-5,4%	-6,2%	-7,3%
Kunsági wineland	11598	11234	11264	11130	10985	10899	10785
Change compared to 2014		-3,1%	-2,9%	-4,0%	-5,3%	-6,0%	-7,0%
Hajós-Bajai wineland	551	519	530	512	494	503	493
Change compared to 2014		-5,8%	2,1%	-3,4%	-3,5%	1,8%	-2,0%
Csongrádi wineland	519	529	538	525	507	481	471
Change compared to 2014		1,9%	3,7%	1,2%	-2,3%	-7,3%	-9,2%

Source: Own calculation based on the data of the Hungarian State Treasury, 2020

In the Hajós-Baja wineland, the number of SAPS applicants decreased by only 2 percentage points from 2014 to 2020. The rate of decline remained 8.8 percentage points below the national average during the period under review. In proportion, the reduction in the area under grapes covered by the SAPS was higher (4,2 percentage points) in this wine region than the reduction in the number of applicants for the SAPS.
Within the Danube wine region, we can observe only in the Kunság wineland that while the number of applicants for SAPS is decreasing, the wine-growing areas affected by SAPS have increased.
As can be seen, in the case of vineyards, the number of applicants for SAPS and the size of vineyards affected by SAPS were different in the winelands of the Danube wine region. Due to this, the change in the average vineyard area per applicant in the winelands of the Danube wine region also shows a different picture (Table 4).

Table 4. Changes in the area under grapes affected by SAPS per applicant in the Danube wine region, 2014-2020

	2014	2015	2016	2017	2018	2019	2020
Danube wine region (ha/app.)	1,68	1,74	1,74	1,76	1,77	1,79	1,81
Change compared to 2014		3,5%	3,8%	5,0%	5,6%	6,6%	7,7%
Kunsági wineland (ha/app.)	1,61	1,67	1,68	1,70	1,70	1,72	1,74
Change compared to 2014		3,9%	4,2%	5,5%	6,0%	7,0%	8,1%
Hajós-Bajai wineland (ha/app.)	3,11	3,22	3,13	3,21	3,34	3,29	3,33
Change compared to 2014		3,7%	0,7%	3,2%	7,3%	5,7%	7,0%
Csongrádi wineland (ha/app.)	1,75	1,71	1,78	1,74	1,75	1,79	1,82
Change compared to 2014		-2,7%	1,3%	-0,6%	-0,4%	2,2%	3,8%

Source: Own calculation based on the data of the Hungarian State Treasury, 2020

It can be seen from the table above that both in the Danube wine region and in the winelands within it, a concentration of wine-growing areas can be observed. The degree of concentration of grape-growing areas in all observed territorial units lags behind the national average of 13.5% between 2014-2020.
In terms of the proportions of the concentration of vineyards, the Csongrád wineland was the least affected. According to the calculated data, compared to 2014, by 2020, the average grape-growing areas affected by SAPS increased by only 3.8 percentage points. This is 9.7 percentage points lower than the national average and less than half the data for the wine region.
In the Hajós-Baja wineland, the average size of vineyards affected by SAPS increased by 7% by 2020 compared to 2014. The magnitude of the change is nearly half the national value. The development of the concentration of the wine-growing area between 2014 and 2020 in this wineland is clearly explained by the fact that in its proportions the wine-growing areas affected by the SAPS have decreased by twice as much as the number of those applying for the SAPS.

Within the Danube wine region, the highest concentration of wine-growing areas in proportion was observed in the Kunság wineland. This is due to the fact that only in this wineland has the proportion of vineyards affected by SAPS increased, while the proportion of those applying for it has decreased.
Within the Danube wine region, the development of the ratios of the average grape-growing area change affected by the SAPS at the settlement level is illustrated in Figure 5.

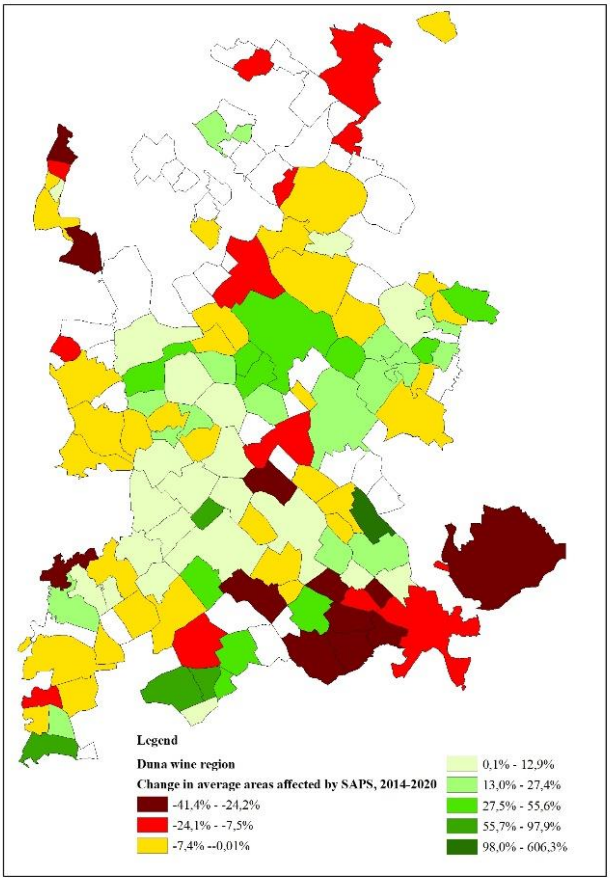

Figure 5. Change in average grape-growing areas affected by SAPS in Danube wine region, 2014-2020
Source: own editing, 2020

Conclusions

In Hungary, in the period between 2014 and 2020, according to the information obtained from the SAPS support data, an area concentration can be observed in the wine-growing areas. From this we can conclude that the size of vineyards is constantly moving towards larger farm sizes. Based on the processed data, it can be stated that between 2014 and 2020, SAPS subsidies related to vineyards follow the national trend in the Danube wine region. However, the process of shifting the concentration of vineyards is slower compared to the national average. Within the Danube wine region, the highest concentration of vineyards can be observed in the Kunság

wineland. In contrast, the vast majority of the settlements of the Csongrád wineland were hit by a large-scale decrease in the area under vines and the fragmentation of vineyards. In the Csongrád wineland as a whole, a very small proportion of vineyard concentration processes could be detected. Based on the obtained data, a concentration of holdings can also be observed in the Hajós-Baja wineland, but its extent and intensity suggest a slow pace. Between 2021 and 2027, the changes affecting the SAPS will mostly affect the viticulture of the Kunság wineland, and thus its wine prices within the Danube wine region.

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WHAT DOES THE VOJVODINA ECONOMIC DEVELOPMENT PROGRAM MEAN FOR THE HUNGARIAN COMMUNITY OF VOJVODINA?

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Abstract

Subsidies play a significant role for both the community and the individual, and this is especially true for a native national community and its members. Prosperity in the homeland as a national political goal is the same age as the greatest tragedy in the history of the Hungarian nation. It is difficult to imagine prospering in one's homeland without economic success. At the request of the Alliance of Vojvodina Hungarians, the Regional and Economic Development Strategy and Action Plan of the Hungarian Communities of Vojvodina was prepared between 2012-2015. In 2016, the Hungarian government launched an economic development program for the survival of foreign parts of the nation in the Carpathian Basin. The Vojvodina Economic Development Program is currently Hungary's largest cross-border economic development program, which is a pioneer in the implementation of foreign economic development programs and serves as a model for the implementation of similar foreign programs. The aid has been used in recent years with an investment of around € 300 million in Vojvodina. The program has determined the fate of tens of thousands, which is now a determining factor in the Serbian economy.

Introduction

Subsidies play a significant role for both the community and the individual, and this is especially true for a native national community and its members. It was also very soon, in my early high school years, that I personally experienced what support means to a student. That's when I became a scholarship holder of the Kosztolányi Dezső Student Aid Association (KODDE). We walked towards the end of the nineties, and the economic situation, which was burdened by the consequences of restrictions and hyperinflation, determined the daily lives of our families. Support often meant not having to ask a question at home to which the answer was no, it meant that I could buy books, school supplies, clothes, train tickets without parental help, it meant it was a little easier for the family. During the university years, we were constantly looking for and researching opportunities , with more or less success. It was then that I began to become an active part of our community, through youth and student organizations work. In the meantime, I learned a lot and as it turned out it had a decisive impact on my later career. Fortunately, today's Hungarian students in Vojvodina do not have to do research, the opportunity is given: the scholarship program of the Hungarian National Council

offers an excellent opportunity for all students, and the College of Europe (Európa Kollégium) provides high-quality service for students in Novi Sad. What does this mean for the individual? Perhaps I would put it this way: Regardless of family background, anyone who wants to learn today has every opportunity to do so, and has to deal with only one thing: learning.

Later, during my work, I was in constant contact with support systems. In the course of my municipal work, I sought to associate support with community ideas so that they could come to fruition, such as embracing youth issues, founding a Youth Office and developing an action plan, later taking part in infrastructure projects. At the same time, I had the opportunity to work on embracing the plans of local entrepreneurs by developing a local employment action plan. In addition to mainland and domestic sources, I also learned about European support systems, which helped me a lot in my work in the provincial government. The Ministry of Economy managed a wide portfolio, of which I was Deputy Secretary and among other things, I worked to ensure that the Hungarian community in Vojvodina received the largest possible, but at least a significant share of employment, tourism, telecommunications, transport development, home purchase and SME supporting subsidies.

Undoubtedly, the biggest challenge I found myself was when I was honored to start working on the implementation of the Vojvodina Economic Development Program.

Material and method

Prosperity in the homeland as a national political goal is the same age as the greatest tragedy in the history of the Hungarian nation, the rupture of the country caused by the peace dictation that ended the Great War, as a result of which Hungary lost two-thirds of its territory and one-third of its population. Overnight (beyond their own fault) Hungarian communities awakened outside the redrawn borders of the mutilated Motherland have been looking for answers to the question of how to thrive in the changed circumstances in their homeland since the Trianon-trauma. Pillars of preserving the national identity and prospering as a Hungarian in the homeland is, by default, the church, education, language use, information, culture (nurturing traditions). However, the changed circumstances posed challenges not only in the areas listed above, but also in terms of livelihood, ie in economic terms, to Hungarians living across the border. To substantiate this claim, it is adequate to examine the map of the historical railway network of Hungary, which can be clearly seen as centered, ie Budapest-centric, so the trade routes of the whole country gravitated to one center, creating a strong economic dependence over the centuries, leaving agriculture and the economy of the set-aside in a vacuum. The lesson of the last hundred years, which the Hungarian people of Vojvodina have increasingly emphasized in the last decade to the representatives of the largest association representing the Hungarian community in Vojvodina, the Alliance of Vojvodina Hungarians (VMSZ), is that in addition to symbolic elements (education, language, information, culture) pragmatic, more prominent issues also significantly influence their decision about going or staying in the country. At the same time, it is difficult to imagine prospering in one's homeland without economic success.

The new president of the VMSZ, elected in 2007, first formulated project-based politicization as the basis for achieving community goals. The conscious use of local resources available in Serbia and Vojvodina was one of the cornerstones of the approach (Hungarians in Vojvodina are Serbian taxpayers, so Serbian and Vojvodina resources must also be used for community development), while the other is the continuous and accurate exploration of problems, solutions and methods. The next important step in remedying the economic and livelihood difficulties, which decisively affected the lives of the members of the community, was when the Alliance of Vojvodina Hungarians and its president István Pásztor, in 2012 asked professors Sándor Somogyi and Imre Nagy to develop a strategy that sought answers to the issue. Under their leadership, and with the participation of nearly 30 professionals, the Regional and Economic Development Strategy and Action Plan of the Hungarian Communities of Vojvodina was completed between 2012 and 2015. The strategy is based on the guidelines of the Serbian, Vojvodina and local development plans, taking into account the relevant territorial and sectoral strategies of the European Union, the Carpathian Basin and South-Eastern Europe. The target area of the Hungarian communities in Vojvodina is, on one hand, Northern Bačka and the area along the river Tisza, which form a block of Hungarian communities within Vojvodina, several parts of Northern and Central Banat, and on the other hand the large cities (Novi Sad, Sombor, Versec) and smaller Hungarian-inhabited settlements (Doroszló, Maradék, Székelykeve, Ürményháza, etc.) (Nagy I., 2015).

On 18 November 2015, the Government of Hungary adopted Decree 1830/2015. (XI. 21.) on the regional and economic development strategy of the Hungarian communities in Vojvodina, in which it agrees with the support of the measures included in the documents and provides resources for its implementation. He entrusted the Prosperitati Foundation (Prosperitati Alapítvány) with the implementation of the Vojvodina Economic Development Program. The Prosperitati Foundation operates a network of 9 regional offices: in Subotica, Topolya, Zenta, Magyarkanizsa, Óbecsé, Temerin, Nagybecskerek, Sombor and Pancsova. The four eyes principle was practiced in the formal and professional evaluation of the applications. The staff of the regional offices carry out the formal inspection, the independent professional evaluators carry out the content evaluation. The decision-making related to the evaluation of applications is carried out in two stages. The opinion of the experts, based on the scores given by them, the decision list based on the scoring system is prepared by the Foundation's specialist service, the Board of Directors takes a stand on the proposal, forwards its decision proposal to the Governing Board for final decision. In the event of a tie, the vote of the representative of the Sponsor shall be decisive in the decision-making of the Board of Directors. The Vojvodina Party is represented in the work of the Governing Board by the current Chairman of the Foundation's Board of Directors, the Hungarian side is chaired by a representative of the Supporting Ministry of Foreign Affairs, and the representatives of the most important sectoral and professional ministries participate in its work: Ministry of Finance, Ministry of Agriculture, Prime Ministry. In 2016, the Hungarian government launched an economic development program for the survival of foreign parts of the nation in the Carpathian Basin. The Vojvodina Economic Development Program is currently Hungary's largest cross-border economic development program, which is a pioneer in the implementation of foreign economic development programs and serves as a model for the implementation of similar foreign programs. The on-site implementation of the program is coordinated and supervised by the

Prosperitati Foundation established for this purpose. The program aims to support developments that will enable as many people as possible to find their life path in their homeland and plan for their future in Vojvodina.

Results

To date, the Prosperitati Foundation has published a total of 52 tenders in 9 rounds of applications in the categories of agriculture, tourism, house purchase and business development. In the first and second development cycles, a total of 15248 applications have been received so far, of which 13026 have been supported. The total value of these projects is more than 93.3 billion forints, which is more than 34.8 billion dinars (295 million euros). The value of the awarded non-refundable support was nearly HUF 47.5 billion, ie approximately 17.9 billion dinars (EUR 150 million).

Table 1. Summary of the results of the Vojvodina Economic Development Program

#	Type of application	Number of projects supported	Grant awarded (RSD million)	Total value of projects (RSD million)
1	**Large-scale developments**	23	4.109	10.317
2	**Medium-scale developments**	166	1.579	4.533
3	**Buying a village house**	848	998	1.248
4	**Procurement and standardization of companies**	1.947	1.803	2.758
5	**Start - up support**	399	312.6	349.7
6	**Tourism projects**	72	94.8	128
7	**Low value agricultural developments:**			
7.1	*Field and closed system (foil tent) crop production*	385	447.9	663.5
7.2	*Purchase of breeding animals and bees*	1.021	1.228	1.741,9
7.3	*Ice nets*	6	3,4	4,4
7.4	*Purchase of agricultural machinery*	6.896	5.789,6	9.008,5
7.5	*Irrigation*	114	64,8	94,8
7.6	*Perennial plantations (orchards)*	392	382,7	531,4
7.7	*Higher value-added products (production of local products)*	157	134,3	186,9
8	Land purchase	600	759,2	3.199,5
	Altogether:	**13.026**	**17. 879**	**34 .765**

Source: Prosperitati Foundation, 2020 (own editing)

So far, the program has received support from 180 settlements, which covers 39 out of 45 local governments in Vojvodina, so it can be said that development has taken place in all Hungarian-populated parts of Vojvodina. The experience of recent years is that the winning tenders help to strengthen the regional role of Vojvodina and the development of the country. Most of the winning applications came from Subotica (846), Zenta (731) and Bečej (693) and their areas.

The main goal of the economic development program was to reach as many Hungarian families in Vojvodina as possible in the shortest possible time, this was achieved with small grants. As a result of the tenders, nearly 850 family houses have been purchased so far, as well as more than 2582 ha of arable land. Approximately 1,900 companies in Vojvodina purchased machinery and equipment, and the Foundation supported the purchase of stocks more than 1,000 times. The Foundation supported 114 irrigation projects, closed system and field crop production which was developed in connection with nearly 400 supported projects, nearly 400 new enterprises were started, more than 390 orchards were developed, 21 standards were introduced and 72 tourism projects were implemented. In connection with the projects, supporting more than 6,800 agricultural developments (purchase of machinery), nearly 10,000 agricultural machinery and switchgear has been obtained.

Comprehensive development of the economic environment is inconceivable without the involvement of medium and large firms. Their market position and opportunities, employment capacity and opportunities, economic performance and impact on small businesses are of high importance. Therefore, the next logical step was the extension of the economic development program, with the support of medium and large-scale developments. These developments have achieved significant results. The implementation of medium-scale developments has resulted in the creation of more than 550 new jobs. At the time of application, the applicant companies employed a total of 1581 people for an indefinite period, which increased to 1653 at the time of the contract. A total of 2,059 people are currently employed on an indefinite basis. Average salaries also increased for these companies, as the average salary at the time of application was RSD 38,612.00, which has now increased by RSD 8,583.00 that is RSD 47,195.00. In connection with theese large-scale investments, the 23 successful applicants agreed to open a total of 720 new jobs by the end of 2019, and they agreed to purchase the crops from nearly 4,500 farmers, in the framework of integrated cooperation. The 23 applicants had a total of 2,071 employees in open-ended employment at the time of the application, 2,153 at the time of concluding the contract, and by the end of 2019, this number had increased to 2,791 with the opening of new jobs under the contract. At present, the applicant companies have a total of 2,858 employees, which means that they have employed an average of 3 more people than they have contracted. Thanks to large-scale developments, the average salary in the given companies has increased by 11,560.00 dinars, which currently means an average salary of 50,285.00 dinars instead of the previous 38,725.00.

The survey, conducted at the end of the first development cycle, examined the work and results of the first three years. Based on the results of the questionnaire survey conducted with the help of the Prosperitati Foundation, the Szekeres László Foundation asked the Hungarian Economic Association (MKT) to participate in the evaluation of the survey. The aim of the research is to assess the results of the economic development program and the impact of its measures on the survival, development and increase of the competitiveness of Hungarian farmers and enterprises

in Vojvodina. It also examines the impact of the development of farms and businesses on the people, families and workers associated with them, and analyzes the well-being of these people in their homeland. It also aims to find out about the opportunities and prospects of farmers and entrepreneurs in Vojvodina for themselves, their family members and employees. The questionnaire survey reached more than 5,000 winning applicants, which was also returned by 4,338 applicants. (Pleschinger Gy., 2018)

Based on the review of the results of the questionnaire survey, we can conclude that the Vojvodina Economic Development Program has achieved its basic goals, provided significant additional resources, improved the competitiveness and profitability of winning businesses, stimulated job creation and is a real alternative for those who want to prosper in their homeland.

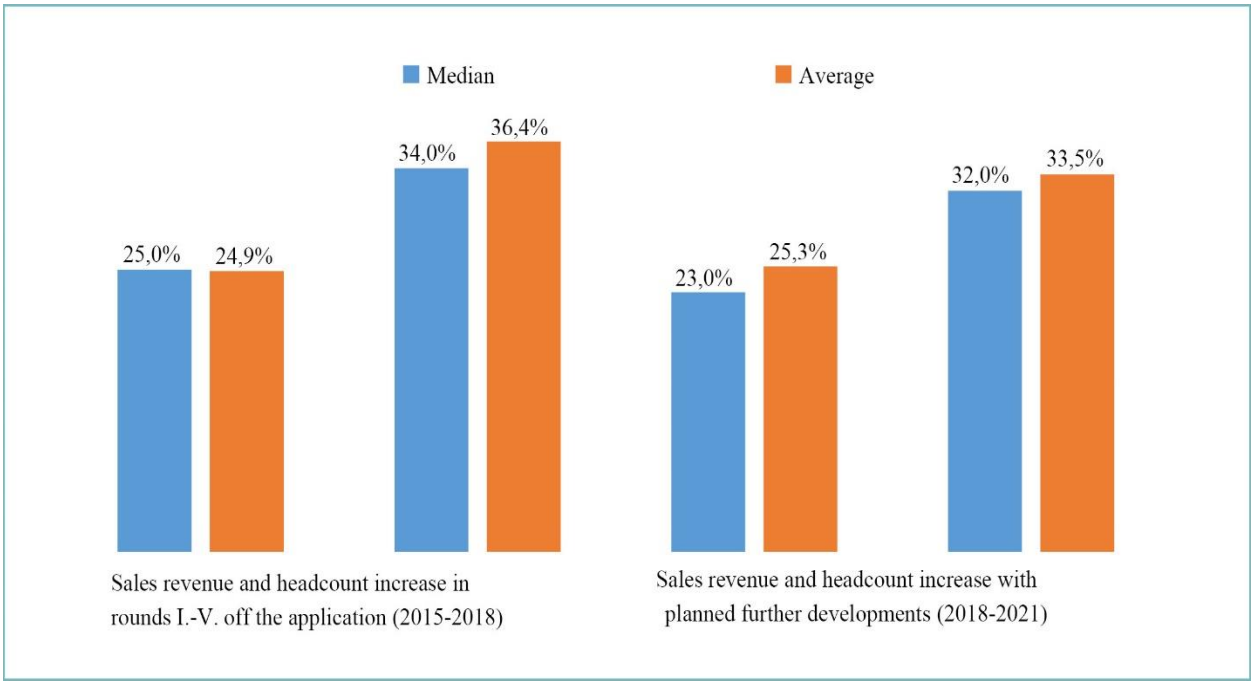

Figure 1. Impact of VGP support on the economic life of Vojvodina (Blue-median, Orange-avrage)
Source: Pleschinger (2018), VM4K

Thanks to the grants of the first development cycle, the average of the successful applicants was able to increase their sales revenue by about 25%, and this trend can also be forecast for the second development cycle. The same companies have been able to increase the number of their employees by more than a third in the recent period, a trend that can also be predicted for the second development cycle.

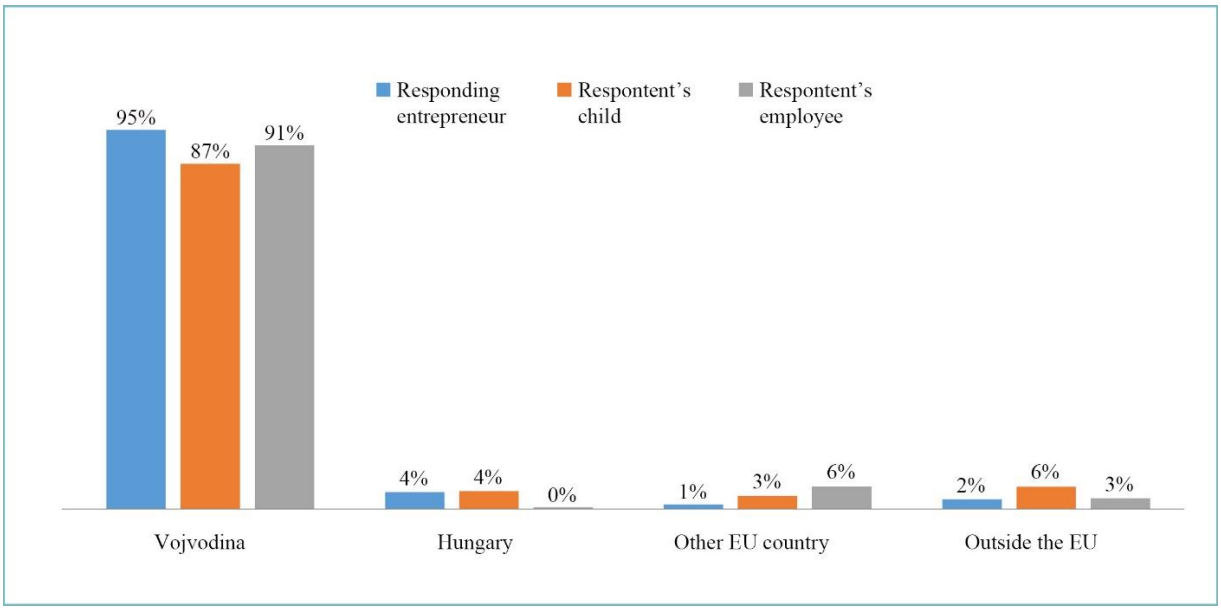

Figure 2.: Behavior of respondents in relation to their future residence
Source: Pleschinger (2018), VM4K

The second figure clearly shows the retaining power of the Vojvodina Economic Development Program from the diagram: not only are the beneficiary entrepreneurs clearly visible, but more than 90% of their employees envision their future in their home country, Vojvodina, which shows a similar rate among the respondents children, since almost 90% think similarly.

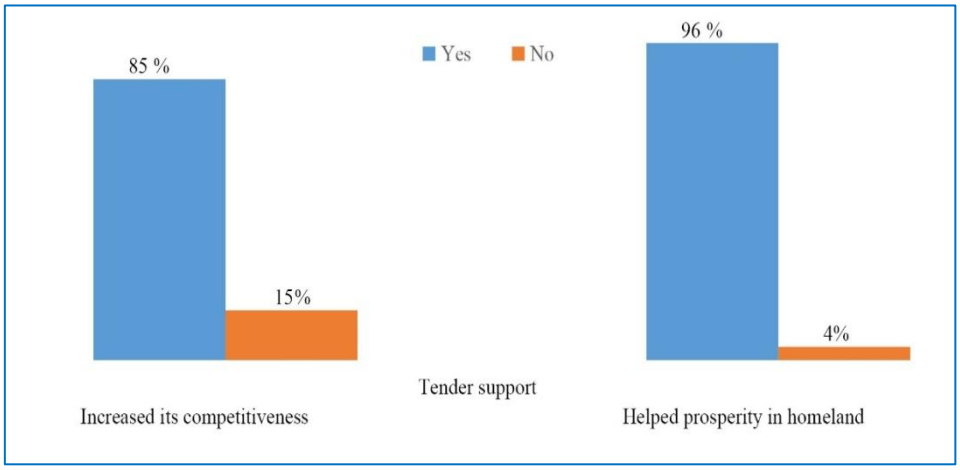

Figure 3.: Impact of subsidies on the competitiveness of enterprises in Vojvodina
Source: Pleschinger (2018), VM4K

Finally, I would like to show through some examples what **the economic development program means to me in the life of the Hungarian community in Vojvodina**.

First and foremost hope. As a single father with two kids, self-employed, who was almost left without a home and a job. In total despair, the Foundation's tender was the only way out. The opportunity to buy a village house in which he set up a workshop in accordance with the rules, and today he can provide a warm home and a secure livelihood for his family. Security has also laid the groundwork for creativity and further success: you can now hand out multi-award winning jobs,

Secondly, an unparalleled **development opportunity**. As a start-up entrepreneur who asked for and received support to start his own business at the start, and is now working on large-scale development. It has found a secure market and is on an unparalleled path of development. "Small" became "big".

Third, **innovation**. The IT center implemented in our program has now produced a real start-up project in the strictest meaning. It offers a novel solution to a current problem. Based on knowledge and creativity, our "home" smart house concept was born.

Fourthly, proving that our Hungarians in Vojvodina, regardless of what they think of us or what we want to make us and others believe, despite the fact that we are fewer in numbers, are indeed capable of outstanding performance. Whether it is chocolate or cheese, or the production of bicycles, furniture or building materials, **we are also able to reach the forefront of Europe and the world**. Tackling ourselves, domestic and foreign competition, and all challenges.

Conclusions

With the support of the Hungarian government, about 300 million euros have been invested in Vojvodina in recent years. Most of these were small grants, but several large and medium value developments have taken place over the years. Where large investments have been made, living standards have shifted markedly, and where we have supported families and small businesses, a real alternative has emerged with regard to the issue of living at home or moving abroad. The program determined the fate of tens of thousands: five thousand farmers and two thousand entrepreneurs received support, more than 850 were able to create a home for themselves, and hundreds of start-ups started their journey. Agricultural, industrial, processing and manufacturing plants were built and new technologies were applied. The joint projects of the Government of Hungary and the VMSZ are targeted, yet wide-ranging investments that are now a determining factor of the Serbian economy.

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KNOWLEDGE TRANSFER FOR ECONOMIC DEVELOPMENT: ONLINE FARMER TRAINING IN VOJVODINA

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Abstract

In the last decade, the agricultural sector has been fully networked with digital technologies, which also play a role in renewing and maintaining their level of knowledge. Improving the knowledge of farmers through training is a key issue in the operation of successful integration systems, in the production of crops of the right quality and quantity. In addition to supporting investments and developments, to the Vojvodina Economic Development Program also strengthens the Hungarian community in Vojvodina by transferring knowledge. The Prosperitati Foundation offers a unique opportunity for the agrarian society in matter of trainings as well, which is unique in the Carpathian Basin. The program therefore simultaneously develops the level of knowledge, digital competence, useful services and further development steps of farmers.

Introduction

Today, more and more measurement data and information are available in agriculture that can help you make better decisions, manage more effectively, and create sustainability. In the last decade, the agricultural sector has been completely networked with digital technologies, not only in mechanization, soil and crop composition determination, meteorological forecasting, decision support software, and so on, but also play a role in training farmers, renewing and maintaining their level of knowledge. Many steps in farm management have been digitized for years, such as the e-cadastre (e-kataszter), the digital cultivation plan, e-banking, the registration of seasonal workers, etc., so they are no strangers to the digital world and this type of communication.

The Vojvodina Economic Development Program has been successfully implemented in Vojvodina for five years now since the beginning of 2016. Based on the Regional and Economic Development Strategy of the Alliance of Vojvodina Hungarians, developed with the support of the Hungarian government, under the maintenance of the Prosperitati Foundation, an investment of around € 300 million was made in the target area, with more than 13,000 projects implemented. The program is the largest foreign economic development program in the Carpathian Basin, a pioneer among similar initiatives. In addition to supporting investments and developments, it also strengthens the Hungarian community in Vojvodina by transferring knowledge. The Prosperitati Foundation offers a new, unique opportunity in the field of training

for agricultural society in the Carpathian Basin. In order to support the integration processes, the Prosperitati Foundation provides an e-learning service with the involvement of integrators participating in the Vojvodina Economic Development Program, and operates an online farmer training course developed by the Pro Scientia Naturae Foundation in Zenta.

E-learning is a form of training available on a computer network, which organizes the teaching-learning process with efficient, optimal knowledge transfer and learning methods, organizing both the curriculum and student resources, as well as tutor-student communication and interactive computer training software into a unified framework which makes it accessible to the student (Forgó, 2005). It is also clear from this definition that e-learning is not just a tool but a complex form of training / education that is multidisciplinary and includes the technicalities of the platform and other complementary content (videos, online tests, forums, forms, etc.) preparation and customization, joint preparation with lecturers / professionals, recording and processing of content, announcement and administration of training (Námesztovszki, 2020).

There are different levels of e-learning.

- Spontaneous level: upload educational content / videos to a popular site / platform. This level provides an opportunity to contact the lecturers, however, the feedback from the students is very poor and practically exhausted in tracking the number of views / openings.
- Systematisation of content: uploading and systematization of educational content / videos, as well as supplementing them with various content (forums, tests, forms). Here you can observe more intensive monitoring of the students, depending on the completed tests and forms, as well as the forum activity.
- Planned activity: Practically the same as the second level, but students' activities are planned in advance and branching structures may appear, depending on the learner's answers / choices. Today, MOOC-type courses are the most popular for organizing educational content (Námesztovszki Zs, 2020).

Work and methodology

First, in 2017, the need arose for the development of a training program that promotes more efficient use of economic development support, and then more efficient management. In order to develop such an effective system, it is first necessary to measure the digital literacy of the business community, to precisely define the target group and its receptivity to the various methodological solutions. For this purpose, with the support of the Ministry of Foreign Affairs and Trade, the Digital Welfare Program and the Hungarian National Chamber of Commerce, the Discovery R&D Center prepared a study called Carpathian Agri (Kárpát Agri). The Department of Carpathian Basin Cooperation of the Ministry of Agriculture and the associations of agricultural organizations operating in each region provided significant assistance in carrying out the research.

From the completed questionnaires, the conditions necessary for the proper education of the exact target group were determined with the help of the Kárpát Agri project, as well as the methodology by which the knowledge material can be delivered to all relevant users in time

and in the same quality. Once the target group, and its preparedness and sensitivity became clear, an examination of the Prosperitati Foundation's integrator system began. Comprehensive development of the economic environment is inconceivable without medium and large economic entities. With regard to agricultural developments, these entities are, by definition, agricultural processors. Their access to the market creates a serious demand for raw materials (primary agricultural products, crop), which means significant purchase potential for small family farms.

Table 1. Integrators and their projects participating in the integration system

#	Applicant's name	Total cost of the project (RSD)	Awarded subsidies (RSD)	Awarded subsidies (HUF)	Subject of the tender
1	**Telek Paprika Kft.**	508,205,816.00	225,345,076.00	608,431,705.00	Expansion of the capacity of the plant for processing leafy herbs and paprika
2	**Gebi Kft.**	1,116,000,000.00	502,200,000.00	1,355,940,000.00	Construction of a sunflower processing capacity of 55,000 t / year and a storage capacity of 51,312 t + 840 t
3	**Geneza Kft.**	348,803,078.00	146,497,293.00	395,542,691.00	Construction of 2342 m2 of filtration and 19000 m2 of storage capacity for organic and spice processing
4	**Tisacoop Kft.**	348,720,415.90	156,924,187.00	423,695,305.00	Establishment and operation of honey integration in Vojvodina
5	**Kontakt Kft.**	242,874,513.00	109,293,531.00	295,092,534.00	Mill development: construction of 800t processing and storage capacity
6	**Andex Kft.**	1,116,000,000.00	502,200,000.00	1,355,940,000.00	Construction of fruit and vegetable processing, distillation capacity and 7150 t capacity cold store
7	**Aretol Ltd.**	983,246,169.70	442,460,776.37	1,194,644,096.00	Increasing vegetable processing and cold store capacity
8	**Császárkert kft.**	321,157,706.00	144,520,967.50	390,206,612.00	Establishment of a unified plant area for the production of vegetable seedlings, packaging, processing and storage of vegetables
9	**Seb-Agrar Kft.**	167,020,610.52	75,159,274.74	202,930,042.00	Development of storage and processing capacity for oilseed rape processing

10	**Hollo Company Kft.**	491,800,588.00	221,310,265.00	597,537,715.00	Pig integration and feed mixer construction

Source: Prosperitati Foundation (2019)

The supplier - and partner relationship is particularly important both for the producer and the processor. The economic development program therefore aimed to develop integration systems. In addition to providing a secure purchasing market for producers and providing the right quantity and quality of goods to the processor, the integration system includes other important elements:

- variety definition (in order to achieve the right quality of a crop, the integrator may prescribe which plant varieties are acceptable to him),
- providing production inputs (facilitates the start of the production year for the farmer and increases the security of processing),
- providing professional advice (increasing the level of knowledge of farmers contributes to the production of better quality crops),
- other services of mutual interest.

In building the integrator system, the next step in the program was to support small family farms, that is, to develop support that allows for the implementation of developments that prepare them for successful cooperation with the integrator. By grouping processing capacities, five different integrations were defined: grains, vegetables, fruits, honey, and pigs.

Table 2. Projects of farmers participating in the integration system

Type of integration	Approved project	Awarded subsidy (RSD)	Total cost of the project (RSD)
Grains	2708	3,354,766,099.02	5,230,010,336.83
Honey	124	101,337,464.61	135,892,995.94
Pigs	64	81,214,138.53	124,051,422.04
Fruits	84	103,380,053.90	149,986,847.40
Vegetables	241	327,326,687.50	500,121,987.54

Source: Prosperitati Foundation (2019)

One of the preconditions for real successful participation in the integration system is the availability of the appropriate agricultural machinery (this was helped by the calls for proposals), while the other precondition is the availability of the appropriate professional knowledge. In successful cooperation, it is essential to produce the right quantity and quality of crop. Improving the level of knowledge of farmers through training is a key issue in the operation of successful integration systems. As Table 2 shows, a very large number of more than 3,000 farmers (who also applied for development) participate in the integration system. Under such circumstances, the implementation of classroom education faces many difficulties. An obvious and effective alternative is to organize online training.

An important aspect in the examination of the integrator system was the economic positions of the integrators, their development opportunities and goals, as well as the obligations undertaken in the tender. In addition, an important aspect was the circle of suppliers (small family farms) general preparedness. During the preparation of the program, topics related to the activities of the integrator, which are very important to the program, were identified in a personal inquiry. After gathering the needs and experiences of the integrator, the obtained information was processed into a unified structure and the training theme consisting of 23 modules was created. This topic has been sent for processing by professionals who are familiar with the Vojvodina region and provide practice-oriented, useful and up-to-date information to those interested.

An online platform has been chosen as the training interface, which is also a frequently used and easily adaptable, easy-to-use system on international level aswell. After selecting and preparing the system and a short helping material, agricultural specialists were involved who developed the knowledge that constituted the main element of the online training system. This was followed by the application of their written and video material to the online interface. The finished material is thus available to users in the same quality, at any time, without being tied to space. It gives the editors a useful picture of the level of knowledge, interests and thinking of farmers, which can be a very important starting point for more efficient development of further support programs.

Results

Prior to the development of the training program, a digital study of the literacy of those working in agriculture was assessed in the framework of a Carpathian Basin-level research (Kárpát Agri) and how the agricultural society can be categorized in terms of the use of digital resources. The main target group of the research was the farmers living in the Carpathian Basin, as well as the entities who are related to agricultural production in some way. The survey focused on three groups of questions built on demographic issues, management issues, issues concerning digital maturity. Due to the modular design of the questionnaire , the questions, concerning management data were filled in only by agricultural producers and employees.

The territorial delimitation of the query is limited to seven neighboring countries of Hungary, especially to the regions inhabited by Hungarians: Austria, Croatia, Romania (Transylvania), Serbia (Vojvodina), Slovakia (Highlands), Slovenia and Ukraine (Transcarpathia). The number of raw database items in the research is 795, and the number of items in the cleaned database is 781 queries. With regard to agro-IT solutions, it should be emphasized that four distinct segments can be formed:

(a) *those who do not have the IT solution in question and do not wish to use it:* they cannot be considered as potential market users in the short and medium term;
b) *those who have the given IT tool but do not use it:* in-depth research is needed in this area as to what causes the equipment to be underused;
(c) *who aquired and use the specific agri-IT tool:* potential users, but in their case, they can enter the market as a competition or as a new product and service innovation;

d) *who do not have the specific agri-IT tool but would like to use it :* they are the most valuable market segment.

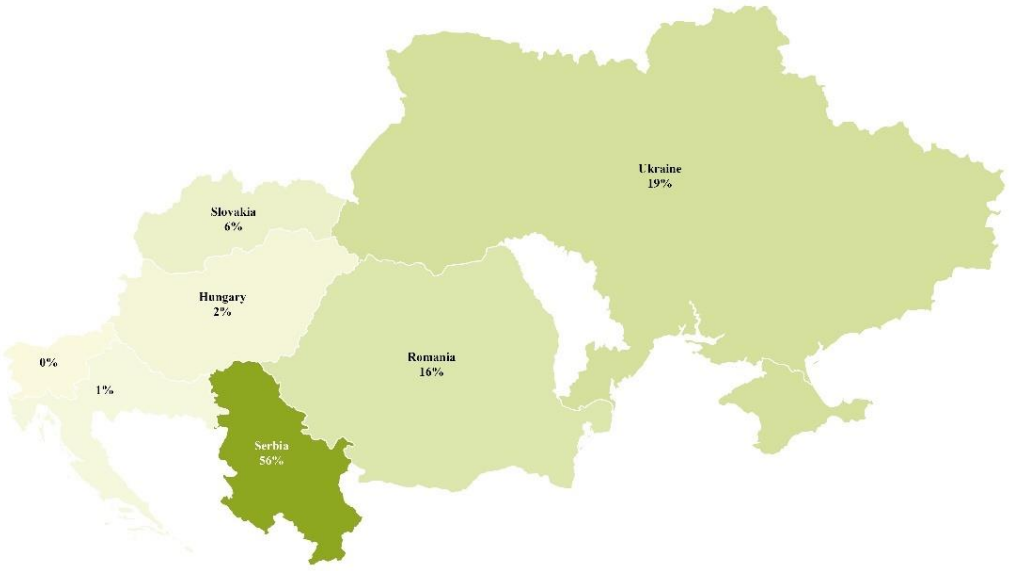


Figure 1. Proportion of respondents by country
Source: Kárpát Agri (2018)

When comparing the problem areas and digitalization as a solution, two main segments are worth mentioning:

1) who say that the topic is not a problem and that digitization would not help,
2) who say the topic is a problem and digitization would help in part or to a large extent.

Regarding the way of obtaining information, it can be stated that the use of the printed press and tablets does not show any outstanding value in any age group. Radio and television are still showing an extremely high level of acceptance, desktop computers and smartphones are also considered significant. 82% of those over 56 use radio and television daily to obtain information, while 59% of those aged 20-25 also use it. It can be considered an age-old trend that these information carriers show a decrease. The opposite trend can be observed for desktop computers and smartphones, where it can be clearly seen that younger age groups are increasingly prefering these two tools. Interestingly, personal professional contact, although not the most used source of information, shows the age trend, while among those over 56, only 10% are those who use this source of information on a daily basis, and 27% of those aged 20 to 25. A similar age trend can be observed for websites and online communities, and this is increasingly

seen as a primary source of information for younger people. Among those over the age of 56, the perception of online communities shows the largest variance (Kárpát Agri, 2018).

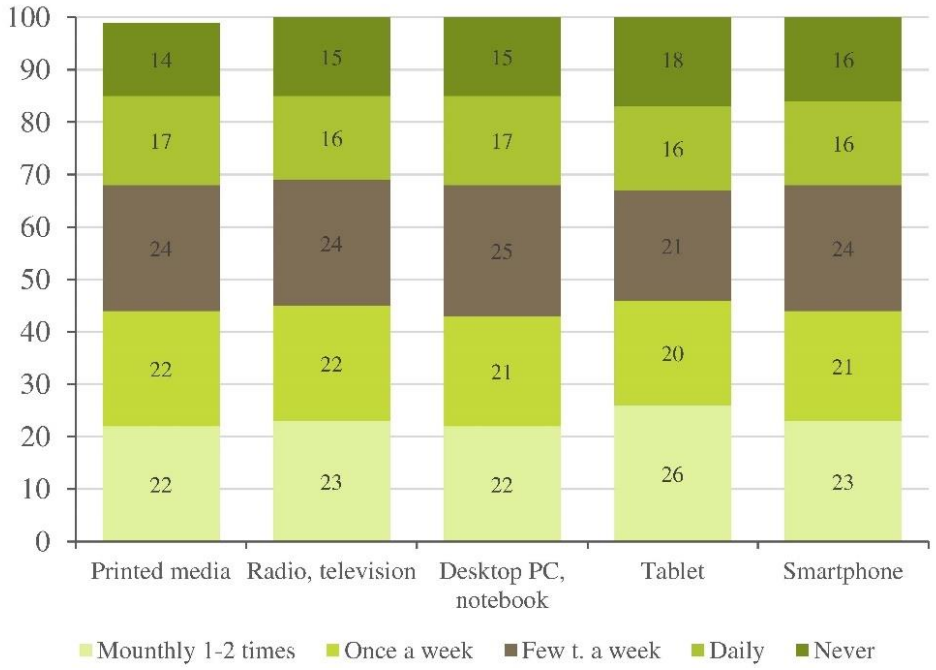


Figure 2. Frequency of use of IT tools among farmers
Source: Kárpát Agri (2018)

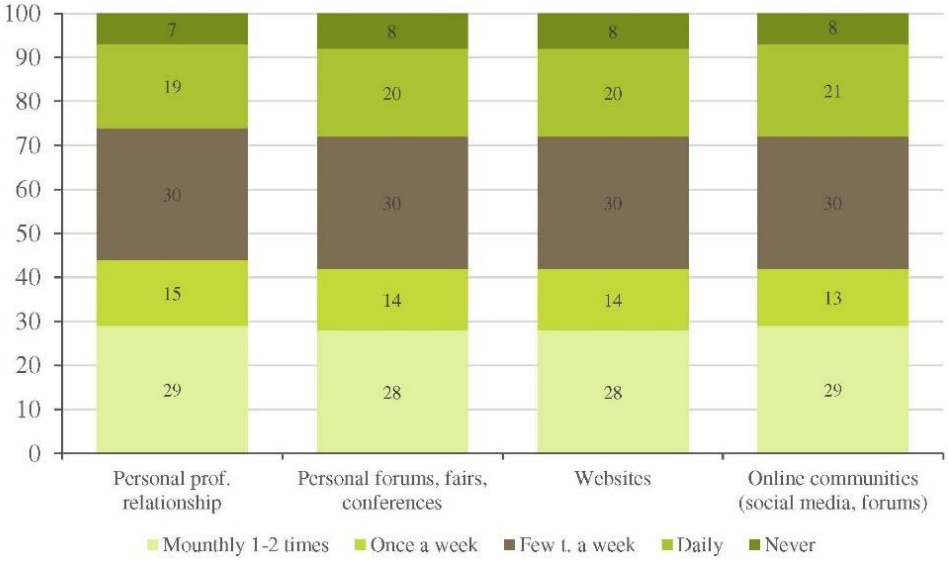


Figure 3. Frequency of use of tools to obtain information by farmers
Source: Kárpát Agri (2018)

The aim was to create a training interface and material that can be used by all beneficiaries without exception. The survey shows exactly to whom, in what way and by what means we can most effectively deliver knowledge and new information. A smartphone and average mobile internet access are enough to use the online training system. Research shows that farmers, regardless of age, education and place of residence, have the necessary minimum technical knowledge and equipment.

As a result of the examination of the integration system, and personal consultations, the necessary competencies have been identified, which are essential for the application of good production, practices and the implementation of agricultural production that adapts to higher quality requirements. Based on this, the topics of the professional modules were selected by experts in practical advice, based on the questions most often asked by producers, where most professional help should be provided, what are the current and expected problems and challenges in our area, and what was the expectation of the integrator company related to the topic and the training module. The modules that form the basis of online host training are:

1. Precision farming,
2. Food safety,
3. Theoretical knowledge of beekeeping,
4. Practical knowledge of beekeeping,
5. Follow-up in the food vertical,
6. Introduction to soil power management,
7. Soil power management in practice,
8. Irrigation,
9. Plant development and plant protection,
10. Plant protection in the field,
11. Horticultural plant protection,
12. Genetics of field crops,
13. Genetic background of vegetable production,
14. Vegetable growing in practice,
15. Growing sweet peppers for fresh use,
16. Growing sweet peppers (spice) for grounding,
17. Fruit growing,
18. Growing of medicinal plants,
19. The practice of agricultural mechanization I.,

20. The practice of agricultural mechanization II.,
21. Innovative technologies in agricultural sectors,
22. Management knowledge,
23. Marketing knowledge.

EasyGenerator was chosen as the platform for the online training, which is a simple, easy-to-use and cloud-based, and its a unique e-learning framework. It has an interactive test system that allows you to test new types of measurement and evaluation in addition to traditional testing methods. It is used by the world's leading large companies, such as Danone, Wallmart or Electrolux. In its reporting system, statements and reports can be made about the students' study results, their knowledge and its strengths. The software is also suitable for publishing the completed course on many devices (such as mobile devices) and systems. Users can access the content through the Prosperitati Foundation's PIT application system, which directs the user to a Moodle e-learning system that records the most important data of the entrants and guides them to the appropriate curriculum. This interface is designed to be as simple as possible so that novice users can easily access it from a mobile phone. By searching the Moodle interface, the system directs you to the Easy Generator interface, which manages posted videos, e-books, practice assignments and final exam questions. Navigating in EasyGenerator is made easy with guides and aids in Hungarian at every step.

The training material related to the modules was prepared by 13 Hungarian and 13 Vojvodina specialists, most of them from the Hungarian or Vojvodina institution of Szent István University, but some from the Hungarian Academy of Sciences, the University of Szeged, and some independent consulting companies. The lecturers first prepared the curriculum in writing, for which the editor wrote a short introductory thought of a few seconds. The short films were recorded in a classroom in front of a white wall, in such a way that the highlighted concepts, figures, pictures, etc. could be visualized later in addition to the performer. The lecture for one module is approx. 15 minutes long and a module has an average of four smaller logic units. The content of the lectures recorded on film was also published in the e-book, which is more detailed than the film instructional material. Following the recording, the film material underwent editing, professional and linguistic verification, and then the material that has been declared final by the editors was returned to the presenter for approval. The e-book is an edited, linguistically and professionally proofread, uniformly structured written material that carries the image elements of the program, it can be viewed from a mobile phone and a computer, and can also be downloaded and printed. The exercises that deepen the knowledge were given by the lecturers themselves, which was structured in accordance with the possibilities of EasyGenerator. After the preparation of the complete material, the final exam questions were defined, which were defined jointly by the lecturer and the editor, and which gave a comprehensive picture of the degree of knowledge acquired at the end of each module.

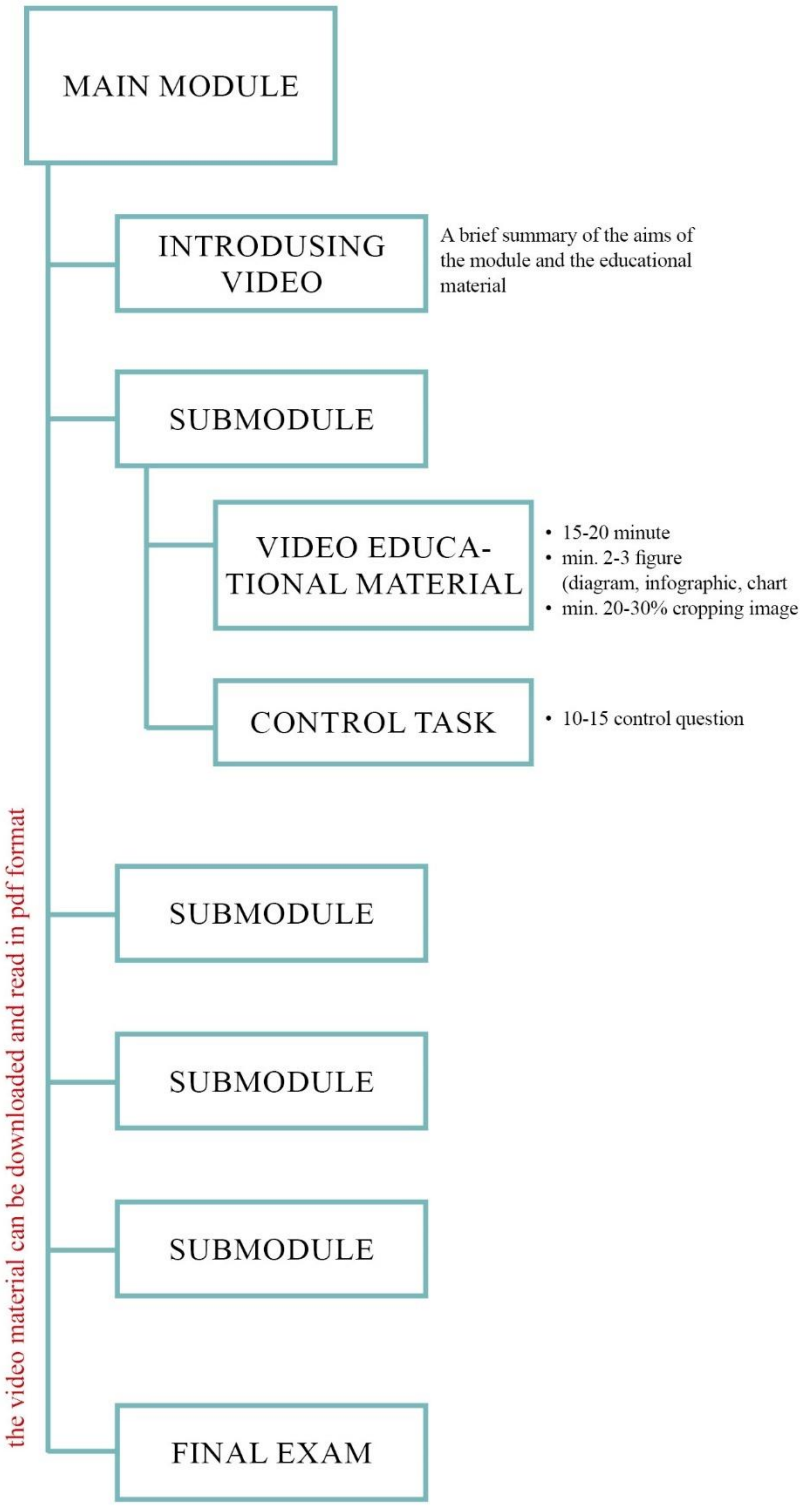


Figure 4. Structural mapping of the online modules
Source: own edition based on own research

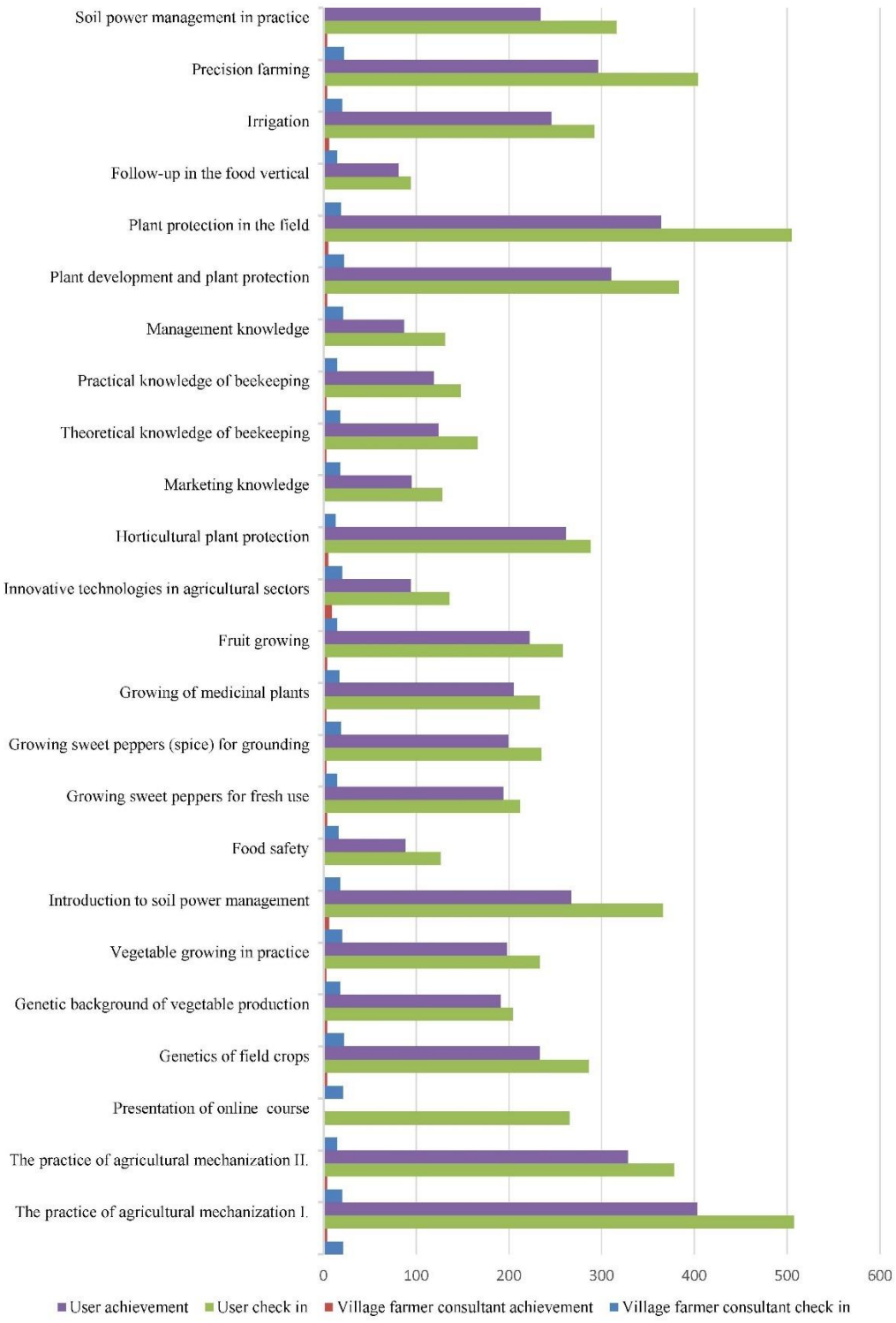
A 20-30 second video was recorded separately for each module, summarizing the topic, introducing the teacher, requirements, and so on. The video is similar to a visual table of contents, a summary. Due to system unification, all introductory videos were reported by the same person. Each module consists of four submodules based on 15-20 minute videos and a series of evaluation questions. The advantage of this is that you do not have to look through the 60-minute curriculum at once, but the student can move step by step through topics. At the end of the module, a series of final questions were placed. A submodule consists of 1 video of 15-20 minutes. Each video contains at least 20-30% of the crop or non-studio footage. In each video, 2-4 figures, graphs and illustrations were placed, which can later be used as an exam task. Each video (submodule) has a set of evaluation questions of about 10 questions. The submodule also includes a downloadable pdf in which the student can read what is heard in the video or revisit the figures.

The following types of questions are available during the exam:

- True / False: A statement must be made to be true or false.
- Multiple choice (answers a, b, c, d). A statement can be associated with four answers, from which it must be decided which is true.
- Image-specific response selection (You must tell which image is correct for an image or figure).
- Complete: Parts of a text are left blank and are filled in by the student.
- Add text based on answers provided: Certain items in a text that the student can select from a drop-down menu have been omitted.
- Collapse: Sentence parts can be connected to each other.
- Arrange: A text / sentence must be arranged in a logical order
- “Hot spots”: certain elements must be marked on an image or map.

Going through the program, the user can immediately see the success of the completion, in case of an unsuccessful attempt, he can resume the training, but he can also review the films or the written material several times as required. The completion of the course (module) is registered by EasyGenerator in such a way that we can track practically all attempts, clicks, mistakes and successes of the user, so we can get an idea of which are the most popular learning materials, where are the most common mistakes and where they may not understand the explanations.

A total of 3160 farmers were able to use the online farmer training program, of which 703 completed at least one module, and there are 53 farmers who successfully completed all courses.



5. Figure: Number of farmers who completed the training per module
Source: own edition based on own research

Based on the interest of the users, in order to make the acquired knowledge as widely applicable and usable as possible, the training has been accredited in accordance with Serbian legal requirements. The accredited courses cover several modules and are were accepted in the following structure:

1) State-recognized approved training - Field and horticultural plant protection (3 modules)
2) Approved trainings:
   a. Theory and practice of beekeeping (2 modules)
   b. Soil and water management (3 modules)
   c. Agricultural mechanization practice and precision agriculture (3 modules)
   d. Agricultural crop production (7 modules)

In the first cycle, 383 farmers from 23 villages of Vojvodina applied for the accredited training. The most massive applications were from the villages along Bácska and the Tisza, but the farmers of the settlements of Banat also joined the training in large numbers. Almost all ages were represented, with the youngest participant being 19 years old and the oldest being 83 years old.

Table 3. Participants in accredited training

Accredited training	**Number of applicants**	**Number of successful completion**
Field and horticultural plant protection	269	227
Agricultural mechanization practice and precision agriculture	205	152
Agricultural crop production	204	135
Theory and practice of beekeeping	49	37
Soil and water management	156	125

Source: ProScientia Naturae Foundation (2020)

A total of 383 farmers (students) took part in the training, who entered 883 trainings, while 299 students successfully entered and completed 676 trainings. Based on this, 227 participants obtained state-recognized official certificates and in addition, another 449 certificates will be awarded to the participants of the other four training programs. The efficiency recorded in the first training cycle is 76.55%.

Conclusions

The economic development program supervised and carried out by the Prosperitati Foundation contributes not only to the support of investments and developments, but also to the development and prosperity of the Hungarian community in Vojvodina by creating a knowledge base and exploring the potential of knowledge transfer.

The program offers a new opportunity for the local society in the field of trainings, and represents a unique opportunity in the Carpathian Basin.

Due to the fact that the design was made to be user-friendly, and requires a low-level technical equipment and IT skills, the knowledge base is equally accessible to farmers regardless of age, territorial distribution or education.

The program simultaneously expands the level of knowledge and digital competencies of the farmers, and provides useful information for further developments.

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MAPPING OF DEFICIENCIES OF PUBLIC SERVICES IN KUNHEGYESI DISTRICT

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Abstract

The aim of this study was to collect the deficiencies in public services in Kunhegyes District of Jász-Nagykun-Szolnok County, Hungary, based on the Local Equal Opportunities Programmes of the settlements of the District, as well as an online survey conducted with local mayors on the utilisation of EU development funds in the 2014-20 budgetary period. It is found that social and economic development of depressed regions is subject to a number of factors besides the amount of absorbed support funds.

Introduction

Kunhegyesi District, which consists of seven settlements, is the most disadvantaged district of Jász-Nagykun-Szolnok County, in the Northern Great Plain Region of Hungary.

Figure 1. Locating Kunhegyesi District
Source: Mikovari

Not only does it produce some of the poorest district-level aggregate data in the county, but two of its settlements, Tiszabő and Tiszabura, target settlements of a number of EU funded and domestic development programs, NGOs and religious charity organisations, produce some of the most extreme economic and social data in the whole county.

Despite the amount of development funds and hence some favourable tendencies, the region seems unable to leverage a meaningful and self-sustaining development. It is beyond the scope of this study to punctually monetise economic development per a unit of inflowing fund. For example, it is obvious that financial incentives pumped into social economy could generate a tangible increase in the standard of living and net income of local families, but it is difficult to monetise the effects of the renovation of a fountain in the centre of the settlement or constructions of a sports field or community centre. It is nevertheless critical to understand how the certain settlements have made use of the cohesion support from the different sources, what challenges the local decisionmakers had to face in the application process for funds and, finally, what substantial changes were felt at the level of the inhabitants and local entrepreneurships.

The Kunhegyesi District (hereinafter referred to as the District, unless otherwise indicated) is in need of development with complex programmes based on Government Decree No. 290/2014 (November 26) on the Classification of Beneficiary Districts. The majority of settlements, five out of seven, are entitled to be beneficiaries of economic, social and infrastructural developments, based on Government Decree No. 105/2015 (April 23) on the Classification of Beneficiary Settlements and the Conditionality of Benefits. Three out of seven settlements are affected by significant unemployment.

The District has a total population of 20,074 as of 2018. The largest settlement, the capital of the District, Kunhegyes has a population of 7,660, the smallest, Tomajmonostora has 746 (KSH). As indicated before, two settlements of the District, Tiszabő and Tiszabura are among the poorest settlements of Hungary according to statistical data. The annual average net per capita income in the Kunhegyesi District was 628,695 HUF (see table 1) which makes it the poorest district of the nine in Jász-Nagykun-Szolnok County:

Table 1. Annual Net Per Capita Income per district in Jász-Nagykun-Szolnok County, 2018 (HUF)

DISTRICT OF JÁSZ-NAGYKUN-SZOLNOK COUNTY	ANNUAL NET PER CAPITA INCOME (HUF)
Szolnoki District	1,109,526
Jászberényi District	1,062,913
Törökszentmiklósi District	873,218
Mezőtúri District	858,698
Karcagi District	823,765
Jászapáti District	811,034
Kunszentmártoni District	805,885
Tiszafüredi District	798,111
Kunhegyesi District	**628,695**

Source: Own edition based on TeIR data, 2020.

As a consequence, it is no wonder that a number of public social and infrastructural services are unavailable in the whole of the District. This study collects which public services are lacking or are inaccessible in the District, the probable causes behind, and attempts to investigate whether the inflow of domestic and EU funds, as well non-governmental development activities have been successful in slowing or overturn downward social and economic trends.

Literature review

Roma settlements and slums are never identical, each have their particular issues and resources, most stretch isolated at the village periphery, or in abandoned cooperatives, mines or factories. Today there are 1,633 segregated slums in or at the rim of 823 settlements (Domonkos, 2010), with an approximate population of 300,000, that is 3 per cent of the total population of Hungary.

Development policy tends to intervene in the special structure either on the level of Regional Operative Programs or at the micro-district level, by favouring the most disadvantaged micro-districts. The government launched its complex regional development programme based on its National Regional Development Strategy of 2011 elaborated within the framework of the Darányi Plan in seven districts. These programmes aimed at the integration of Roma living in segregated slums, e.g. in the Cserehát region of Northern Hungary (DGF Hungary, 2011). In practice, however, funds rarely leveraged locally and tended to be risk-averse with some surface-scratching. Other government development programmes focused on traditional Roma crafts, e.g. in the severely disadvantaged Southern Ormánság region (DDRF, 2010).

The 2014-20 budgetary period, Regional Operative Programmes gave way to planning and implementation at local level, however, expertise tends to be scarce or missing. In 2016 the Charity Service of the Order of Malta started its Presence Programme at the commission of the government (Kiss et, 2013). The programme aims at the integration of people living in slums and is based on the constant presence (hence the title) of social workers who live and work within the communities of the slums. They apply the so-called “diagnosis-based intervention method” intervention tools tailored to the local circumstances and resources. So far, overall results are promising. Still, there seems to be an urgent need to empower elected local decisionmakers and development officers in order to improve their skills and knowledge.

Material and methods

In order to collect all public services that are unavailable or inaccessible in the District, besides analysing secondary data of the Central Statistical Office and the thematic maps of the TeIR (the National Information System of Regional Development and Spatial Planning), the local issues identified in the so called Local Equal Opportunities Programmes were also compiled and analysed. Additionally, in order to obtain a closer picture, an online survey was conducted on how the development funds of the 2013-20 budgetary period have so far been leveraged by the municipalities in February 2020. The online questionnaire – multiple choice, short and long responses – was filled in by respondents from 66 out of 87 localities of the county, five out of

the seven in the District. Among the respondents were mayors, deputy mayors and municipality officials responsible for the Local Equal Opportunities Programmes.

Results

The population of Kunhegyesi District have been steadily decreasing since 2011 (see Figure 2). Migration balance, which shows the difference in the number new settlers versus the number of movers, is also a negative figure year after year.

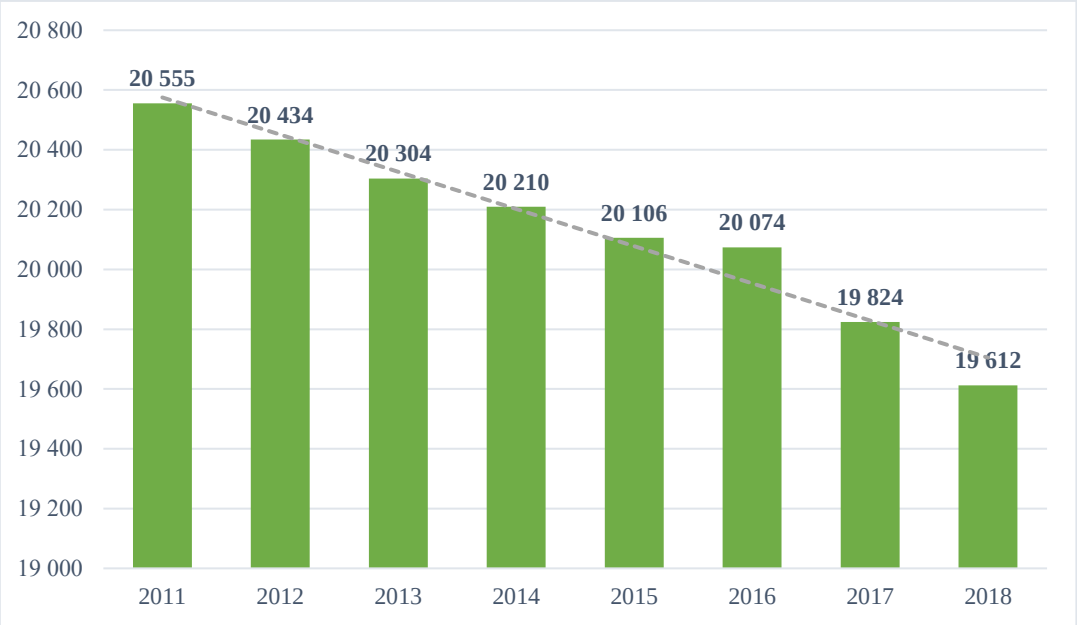

Figure 2. Population of Kunhegyesi District, 2011-2018
Source. Own edition based on TeIR data, 2020

Besides the decreasing population count and the negative migration balance it is important to examine and understand the age structure of the society of the District. The proportion of minors aged 0-2 years steadily grew between 2012 and 2017 and has somewhat decreased since, and showed a figure of 4.1% in 2018. The number of toddlers per accessible day care service is 15. However, only 52 toddlers were enrolled while day care capacity for available for 55 (TeIR), which means that capacities currently exceed the demand for day care. Should the demand significantly increase in the future, for example because more young mothers have access to employment and would wish to seek day care for their children, capacity will not be sufficient. Day care for children aged 0-2 years not only ensures regular nutritious alimentation but also encourages parents to seek training or employment during the day. The EU funded Territorial and Settlement Development Programme (TOP) maked possible the establishment or expansion of four day care centres in Kunhegyes, Tiszabő, Tiszabura and Tomajmonostora. The benefits

of the establishment of such educational institutions are obvious, however, its effectiveness, i.e. returns against cost, cannot be measured in Euro.

The number of children of kindergarten age, 3-5 years, was 829 in 2018. The lowest figure, 743, was in 2015, which follows the 2012 lowest of the toddlers. The kindergarten capacity somewhat exceeds the total number of children, so all children have access to the compulsory kindergarten service. The proportion of disadvantaged children is 67.65%, the highest in the Region.

There are 11 primary schools in the District. The number of children enrolled in primary schools was 2,025 in 2018. The proportion of disadvantaged children is 66.81%, an alarming five times the national average and more than twice the county and the regional average. The total proportion of children aged 0-14 compared to the whole population is significantly higher than that of the county, regional or national figures. Actually, this proportion is the highest in Jász-Nagykun-Szolnok County as well as the Northern Great Plain Region, while it is it is one of the highest countrywide, only exceeded by the three poorest districts of Northern Borsod-Abaúj-Zemplén County. The proportion of disadvantaged children of primary school age is close to 67%, which is significantly higher than the national average (see Figure 3).

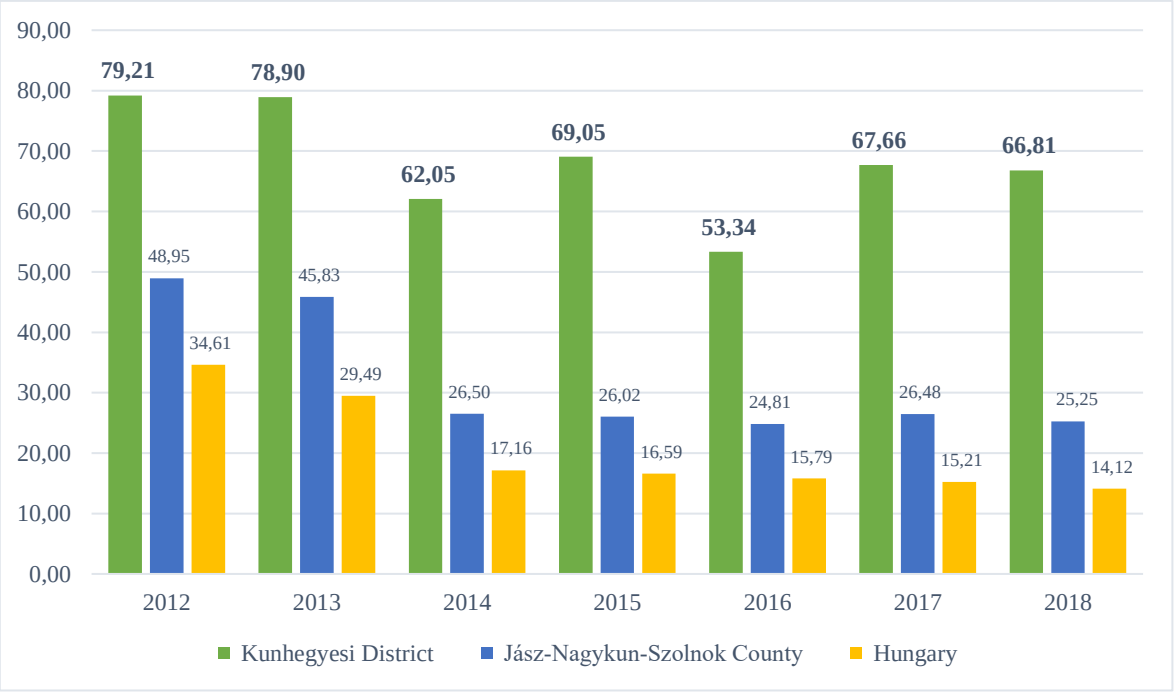

Figure 3. Proportion of disadvantaged children of Kunhegyesi District (compared to Jász-Nagykun-Szolnok County, Northern Great Plain Region and Hungary), 2012-2018 (%)
Source. Own edition based on TeIR data, 2020

Consequently, the proportion of the elderly is significantly lower than the national average and the lowest in the Northern Great Plain Region. This means that the District has a fairly young population, which could as well be good news and a reason for hopes if it weren't for one of the lowest life expectancy data countywide, the lowest number of taxpayers per active population, as well as one of the lowest net per capita income besides a steadily decreasing population count.

What are the possible reasons behind the declining social and economic tendencies of the District, which makes it the poorest performing district in many aspects in the County and the Region?

The proportion of self-identified Roma in the District is the highest data in the County. Roma communities do not in themselves reason for lower than average performance, however their historic although gradually decreasing social and economic exclusion lowers their chances for social mobility, along with the rather indifferent poverty policy of the current administration. It is important to mention that official data of minorities are based on the census organised once every decade. Unfortunately, the last official data, 17.93%, date back to the 2011 census, when propensity to identify as a member of the Roma minority was already much higher than during the preceding census, thanks to the *Ide tartozunk! (We belong here!) – Census 2011* civil campaign, still, rough estimates are well around at least the double of this figure (Malkovich, 2011). It is also worth to highlight that there are at least three settlements in the District with predominantly or purely Roma population. Also, the proportion of population with maximum 8 years of primary school education is the highest among the districts with its alarming 35% high, which is again a serious obstacle for social mobility, advisable to substantially decrease with the help of future development programs and campaigns. Of these, 25.43% do not dispose of a regular income. Furthermore, the more than half of households are without anyone employed (50.26%). This depressingly high figure reflects the low average qualification levels, which further decrease the chances of employment – a vicious circle.

Finally, the rate of young unemployed under the age of 25 is also a record high at 20.68%. The highest average proportion of ethnic Roma and people living in poverty in the District hence means that intersectionality is also predominant here, that is when race, class, gender, age, disability and/or other characteristics "intersect" with one another and overlap, thereby making the individual exposed to oppression on multiple bases.

Social issues are also a consequence of a lower than average qualification level (one of the lowest domestically), higher than average fertility rate, lower that average first childbearing age (one of the lowest domestically), which hinders the anyway sticky social mobility of women, primarily. Besides a deteriorating housing stock, a higher than average unemployment rate, lower than average employment-to-population ratio and the aforementioned very low income rates, we must not ignore the high rate of drug and alcohol abuse, and consequently lower than average life expectancy, health issues at an earlier phase in life, highest rate of preventable deaths and, supposedly alarmingly high cases of revealed and hidden domestic violence (NEKIR 2019).

Given the hard circumstances, the Kunhegyesi District administration, similarly to the municipalities therein, are facing difficulties in delivering even the basic public services. Based on Act No. 125 of 2003 on Equal Opportunities and the Promotion of Equal Treatment, all settlements are to dispose of a Local Equal Opportunities Programme, (hereinafter referred to as LEOP, after its Hungarian abbreviation). The LEOPs are prepared by the competent local officers and adopted by the local council, to be renewed every five years and revised biannually, in which all data regarding equal opportunities, vulnerable groups and local particularities are collected and analysed, social deficiencies and possible causes are identified and, based on them, an action plan is implemented. A quick answer to the question whether the alarming negative social and economic tendencies can be slowed or overturned would obviously be the lack money. At the same time, more than 8 Bn HUF worth of EU funds have successfully been absorbed by the seven municipalities of the District, while some municipalities have managed to draw impressive amounts per inhabitant, for example Tomajmonostora 686,965 HUF or Tiszabő 654,685 HUF (see Table 2).

Table 2. EU development funds (HUF) absorbed in Kunhegyesi District in the 2014-20 budgetary period

MUNICIPALITY	SZÉCHENYI 2020 FUNDS (HUF)	POPULATION	PER CAPITA DEVELOPMENT FUNDS (HUF)
Abádszalók	1,209,953,788	4,279	282,766
Kunhegyes	2,737,848,884	7,521	364,027
Tiszabő	1,370,909,580	2,094	654,685
Tiszabura	1,458,863,570	2,972	490,869
Tiszagyenda	734,779,550	1,077	682,247
Tiszaroff	172,996,579	1,624	106,525
Tomajmonostora	500,797,706	729	686,965
Total:	**8,186,149,657**	**20,296**	**3,268,084**

Source: Own calculation based on Approved Tender Search on PALYAZAT.gov.hu and ksh.hu

The following map (Figure 3.) is a graphic depiction of the deficiencies in public services identified in the local LEOPs for all settlements of Kunhegyesi District, in which the different colour codes represent different areas of public services explained in the legend in the top left corner.

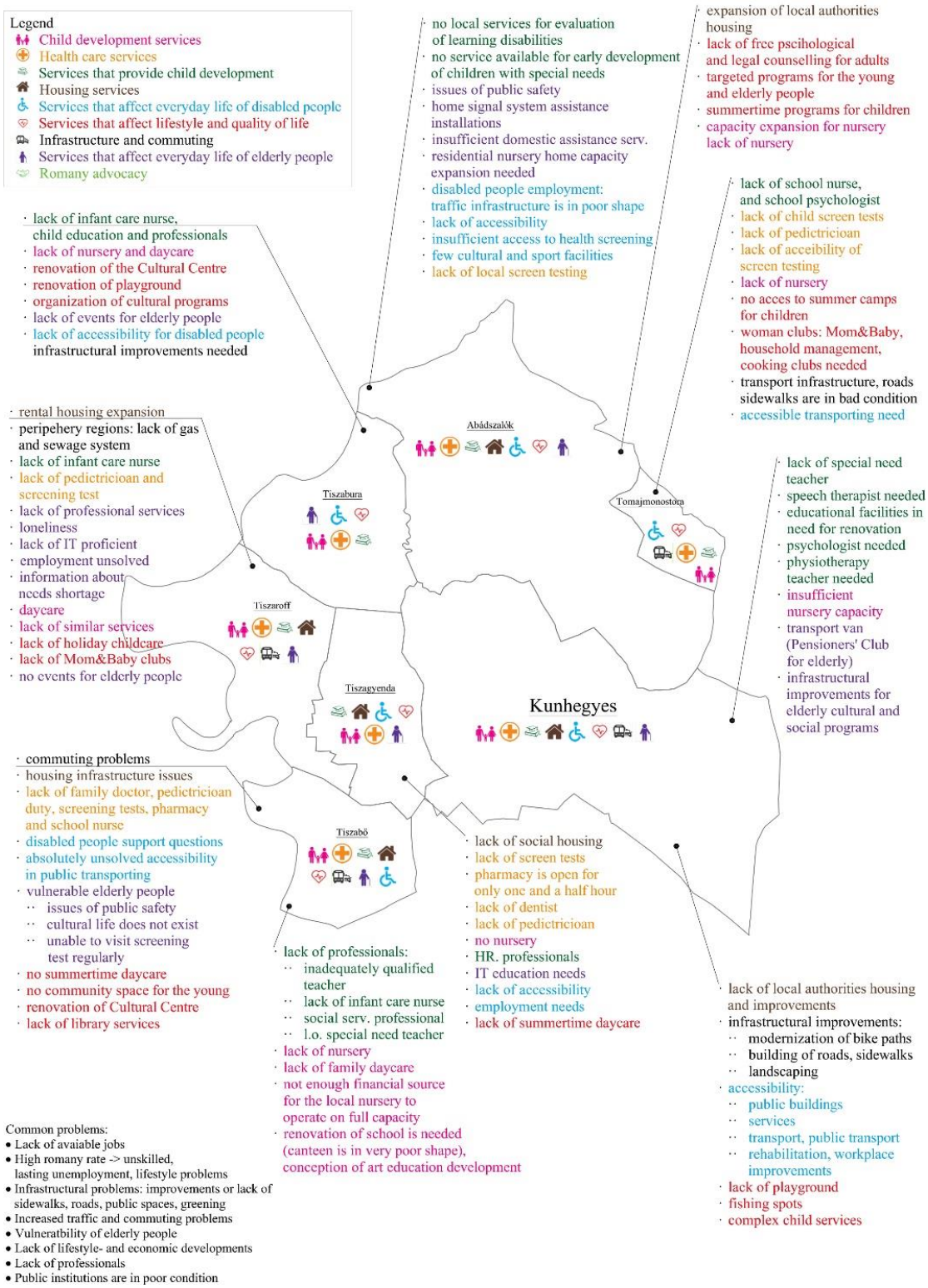

Figure 3. The identified deficiencies in social services in Kunhegyesi District
Source: Own research and edition, 2020

Besides depicting the deficiencies in public services identified in the LEOPs of all the localities in the District, in order to find out what could contribute to fostering favourable social tendencies other that external financial resources, an online survey was conducted with the mayors of the local councils in February 2020 on how the development funds of the 2013-20 budgetary period have been leveraged. Based on the replies of five out of the seven municipalities, as well as interviews with local decision makers, the following findings were made.

Experienced and committed development expert staff are not sufficient or is completely lacking in all municipal offices of the District. In four out of five offices even the indispensable skills and experience for local decision making are missing, which obviously hinders efficient use of the funds, both economically and socially. All of the survey respondents, either mayors, deputy mayors or officers responsible for development funds found that it was necessary for decision makers, mayors, councilors and/or Roma minority representatives to expand skills in the following fields: public administration and basic legal knowledge, good governance and transparency, financial and budgetary skills, project management, taxation basics and crime prevention.

Even though the amount of EU funds drawn by the municipalities is impressive, all responders complained about the excessive administrative burdens, the difficulties to produce their own financial contributions, which, occasionally, hindered their ability to even consider running for a badly needed development, as well as the lack of local expertise, while one mentioned the difficulties in cooperation with the managing authorities. The mapping of the deficiencies of public services based on the Local Equal Opportunities Programmes has illustrated which public services are in need of development, while each respondent highlighted some more deficiencies and are ready to push for a more efficient use of development funds in the next budgetary period of 2021-27 in the following areas:

- Five out of five respondents: more access to social housing, more efficient youth protection and drug prevention;
- Four respondents: more efficient social inclusion programmes for Roma and the poor, more intensive elderly care;
- Three respondents: better health services, better access to commuting, improvement of road infrastructure, programmes for energy efficiency, more childcare services to help women’s reengagement in the labour market;
- Two respondents: improvement of qualification levels, installation of sewerage, investments for alternative energy sources;
- One respondent: improve opportunities of women, improve accessibility and support services for people with disabilities, more community organising.

Conclusions

Social and economic progress, which is never independent from the integration of Roma and people living in deep poverty, especially in communities with higher than average proportion

of Roma and poor population, is obviously not merely a question of the amount of support funds absorbed by the local development programmes. Rather it depends on the leadership and expertise of the local decision-makers as well as the efficiency, at which these funds are harnessed. Respondents and interviewees are hopeful to engage in further urgent investments in order to slow negative social and economic tendencies in the Kunhegyesi District in the next budgetary period. Such planned investments include elderly homes, general practices, nurseries, playgrounds, early development centre, community centres, family service centres, police station or patrol's office, post office, library, dentistry, and fieldward, combined with meaningful education and community building soft programmes, targeting for example young Roma women in order to improve social mobility of whole communities.

Acknowledgement

This is to express our gratitude to supervisor Dr. Krisztián Ritter, for his tireless motivation, Zsófia Hermann Molnárné, late project manager at the Jász-Nagykun-Szolnok County Council, for her invaluable contributions to the map of the public service deficiencies, and finally Dániel Tóth, who gave a helping hand in the graphic design.

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STUDY OF TRAINING COURSES FOR JOBSEEKERS IN THE COUNTY OF SZABOLCS-SZATMÁR-BEREG

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Abstract

Adult training for jobseekers aims to help participants reintegrate into the labour market as quickly as possible. As with all training, the success of the training is measured by the job placement rate. According to OSAP statistics, Szabolcs-Szatmár-Bereg county had the highest number of adult education participants in the country. The research highlights the county's unemployment situation, the distribution of training participants, their placement rates and the factors influencing their participation. The research was conducted using primary and secondary data. Secondary data was conducted using data from the Department of Innovation and Technology, OSAP 1665 Statistical Interface information, and data from the National Employment Service. The employment rates in the primary labour market showed a sharp decline during the period under study due to the rise of public employment.

Introduction

Education, its efficiency and accessibility have an impact on the competitiveness of regions (Lengyel, 2012). Therefore, the knowledge-based economy, which focuses on knowledge, intellectual capital and lifelong learning as the driving force of the economy, has a key role to play (Kálmán, 2012). The quantity and quality of the potential labor reserve can be considered as an endogenous factor, therefore it is justified to analyze its composition when examining competitiveness (Győri – Egri, 2020). One of the great advantages of adult learning is that it helps to adapt to changes in the labour market as quickly as possible, whereas school-based training could provide the right workforce for the same problem in years (Mayer, 2000).

Workers with low educational attainment are increasingly excluded from the labour market because they lack even minimum competences (Köllő, 2009). In Hungary in 2019, jobseekers with a primary education were mainly concentrated in two counties, 16.63% of them lived in Borsod-Abaúj-Zemplén county and 14.22% of them in Szabolcs-Szatmár-Bereg county (Győri – Juhász, 2020).

The reasons for this include the fact that nowadays, education is not the only factor in filling a job, but that those with knowledge that can be quickly upgraded, easily retrained and moulded are preferred (Ábrahám, 2015).

Participation in adult learning is a necessity for some and an opportunity for others, who are open to learning new skills. Participating individuals also have different perceptions of the effectiveness of adult learning in promoting employment opportunities. Most often, jobseekers in the counties where adult learning is most needed miss out and reject opportunities, and for this reason, disadvantaged counties have the lowest rates of adult learning, contributing to the decline of the county, which in the long run causes even greater disadvantages (Köllő, 2009).

VET in adulthood mostly takes the form of training outside the school system, but it is also possible to start training within the school system (Váradi, 2004). Labour market training accounts for the bulk of out-of-school training, which also includes complementary and vocational training (Kraiciné-Tibori, 2007). The main providers of non-formal training are employment centres, educational institutions and employers.

Adult vocational training is mostly delivered as non-formal education and training, with the task of improving and maintaining the employability of workers and jobseekers, and therefore the efficiency of the system is of paramount importance (Card, 2011).

Lifelong learning enables workers to adapt to the constantly changing needs of the labour market. But supported training also plays an important role in the labour market integration of disadvantaged people. (Hajdú - Koncz, 2021). The bulk of EU-supported training is training courses, competence training and general adult education, which contribute to the acquisition of a number of competences, but have little labour market potential and economic impact. (Hajdú, 2020).

In rural areas, the most important thing would be to provide training that can promote entrepreneurship, thus contributing to the strengthening of underdeveloped rural areas. Training for jobseekers is mostly concentrated in cities with county status, which further disadvantages people living in rural areas (Hajdú, 2021). The labour market situation is therefore an important component of harmonious territorial development (Egri 2017, Egri-Kőszegi 2018).

Material and method

My research focuses on Szabolcs-Szatmár-Bereg county. Before I started analysing the county's adult education-specific data series, I examined its position within the country and changes in its position after the turn of the millennium by means of some key socio-economic indicators. Since these descriptive analyses have served as a basis for my further investigations, I do not aim to be exhaustive, but to point out some of the more important correlations for further studies.

Before starting my investigations, I systematically collected and processed a systematic collection of national and international textbooks and journal articles, mostly available in full text on the internet, that were relevant to my choice of topic. Following the literature review, I based my research on secondary databases. I processed the time series of statistical databases on registered jobseekers, vacancies and participants in training courses for jobseekers for the period 2010-2020. The databases on jobseekers were compiled from data available on the website of the National Employment Service. Data on the number of participants in adult

education and training were collected from the OSAP 1665 statistical interface of the Pest County Government Office and then reblended into a database. My secondary research focused on Szabolcs-Szatmár-Bereg county. I compared the data of the county with the average values and trends in Hungary. I used data on the status (180 days after the completion of training) of those who completed labour market training provided by the Ministry of Innovation and Technology. The compiled databases were processed and evaluated using Microsoft Office 2013.

Results

The county of Szabolcs-Szatmár-Bereg has the largest number of adult education graduates in Hungary after the capital. The number of participants in adult education has been increasing steadily, although there have of course been years of slight decline, as in the country as a whole. The biggest drop was in 2016, where tender closures made it difficult for adult education staff to integrate smaller numbers into training due to a lack of resources. The decline in 2020 is not only due to this, but also due to the coronavirus epidemic, adult education groups were closed for 3 months and no new training could be started. The highest number of participants in training was in 2019, both in the county and in the country, but the county trained the highest proportion in 2018, when Szabolcs-Szatmár-Bereg county accounted for almost 8% of all adult education participants in the country (Figure 1).

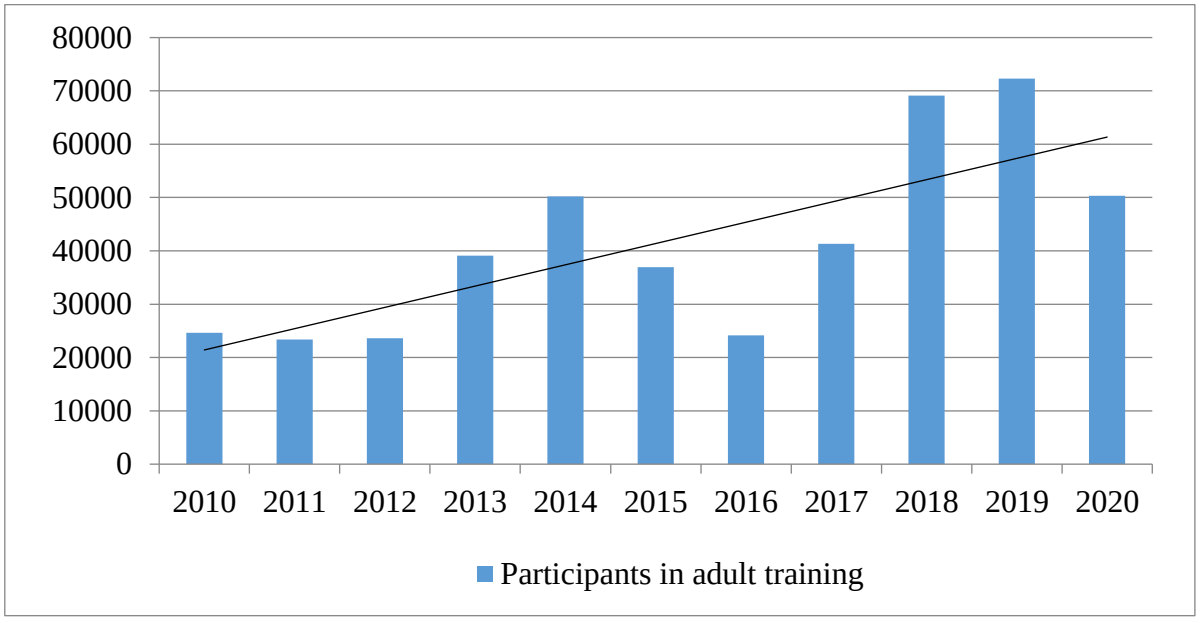

Figure 1. Participants in adult education in Szabolcs-Szatmár-Bereg county (2010-2020)
Source: own data (osap.mer.gov.hu)

In Szabolcs-Szatmár-Bereg county, the number of jobseekers involved in training by the Government Office showed a hectic pattern over the period under review. The 11-year period under examination can be divided into 4 phases, with an increase trend between 2010 and 2014, a continuous decrease between 2015 and 2016, a slight increase between 2017 and 2018 and a continuous, drastic decrease from 2019. Unemployment data for the county showed a slight decrease during the period under review. The highest proportion of jobseekers enrolled in adult training by the Government Office was in 2014, which was not due to the low number of unemployed but to the high number of people enrolled in training (Figure 2).

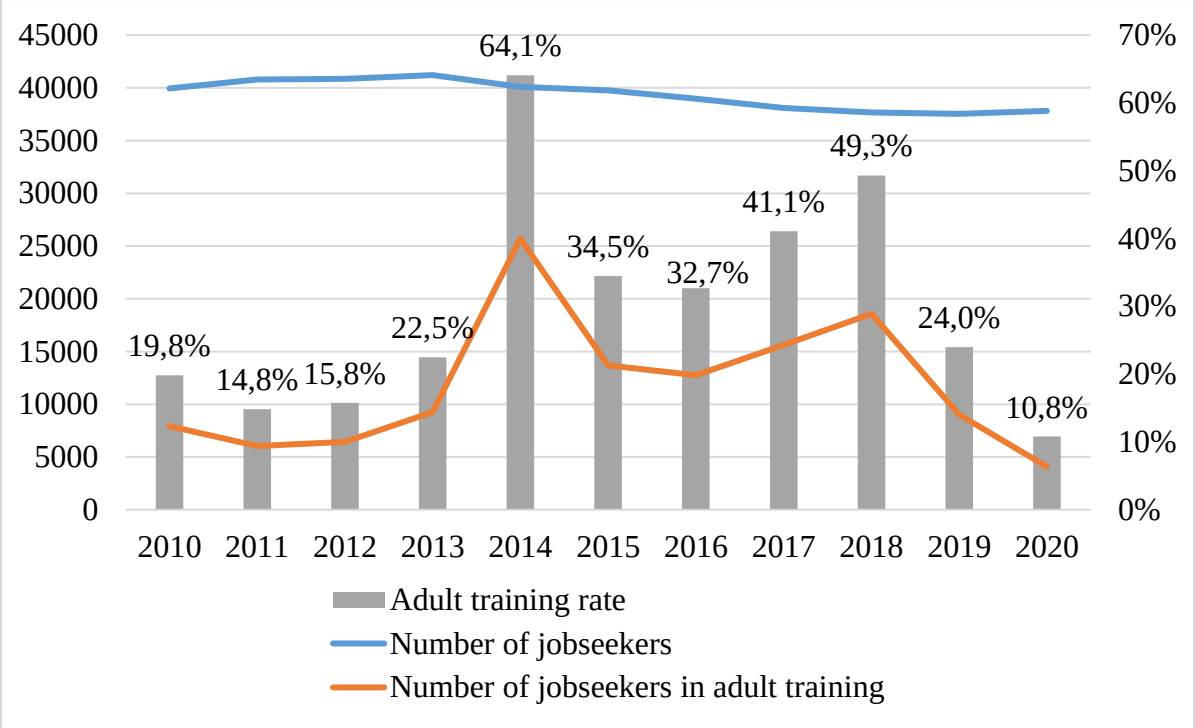

Figure 2. Proportion of jobseekers enrolled in training supported by the Szabolcs-Szatmár-Bereg County Government Office in relation to unemployment
Source: Own work (based on data from the Ministry of Innovation and Technology, nfsz.munka.hu)

The success of training and of adult education for jobseekers itself is measured by the take-up of training, i.e. the job placement rates. Szabolcs-Szatmár-Bereg county has undergone strong changes in terms of placement rates over the last 11 years. The term secondary labour market refers to public employment, the emergence of which has completely reshaped the employment structure of those who successfully completed training. Employment in the primary labour market was the most successful in the county in 2010, when public employment was not yet flourishing, and has been on a steady downward trend since then. The proportion of people in public employment (secondary labour market) showed a strong linear increase until 2014, when

the county had the highest number of people in training, and a sharp decline from then on. Looking at the co-location of the two labour market sectors, we can see that the emergence of public employment has reduced the number of people in the primary labour market, but the emergence of the secondary labour market in the first years has had an increasing effect on the employment rates (Figure 3).

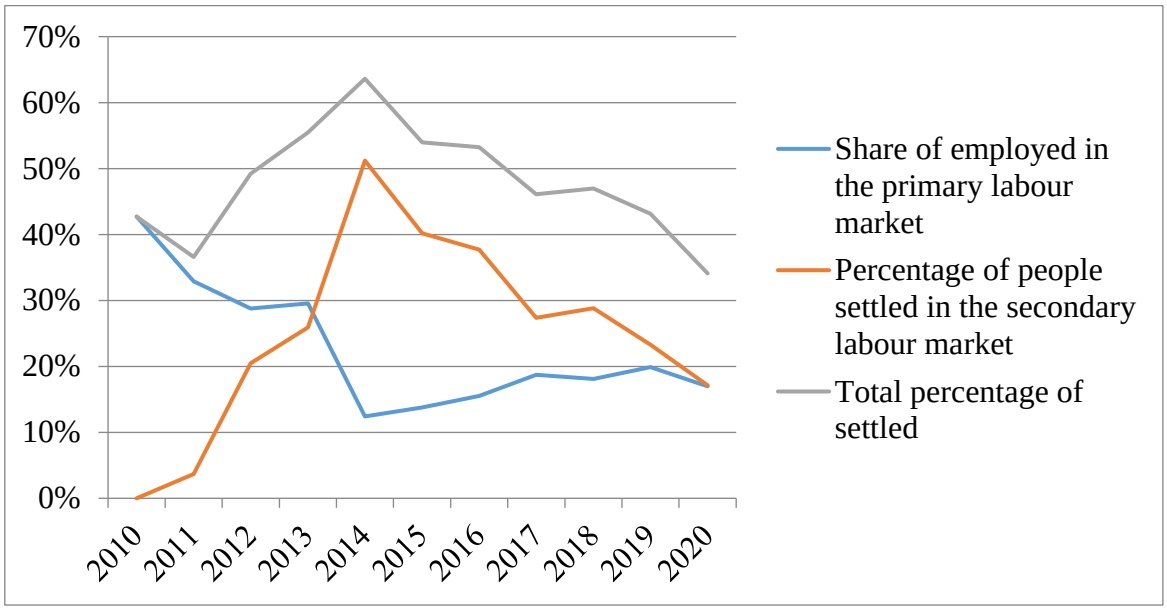

Figure 3. Employment rates of jobseekers in the primary and secondary labour market in Szabolcs-Szatmár-Bereg County (2010-2020)
Source: own production based on data from the Ministry of Innovation and Technology

When looking at the gender distribution of employment in the two labour market sectors, it was found that in the primary labour market, men and women are relatively equally represented, while in public employment, the employment rate of women is 4% higher. By age group, jobseekers under 25 years of age were more likely to find work in the primary sector, while the 25-54 age group and the 55+ age group were most likely to find work in public employment. The largest difference in terms of proportions was in the over 55 age group, where it was 21.3% more than the primary labour market. Looking at the highest educational attainment, the lower the educational attainment of those who successfully completed training, the higher the chances of finding a job in public employment than in the primary labour market. Jobseekers with at most primary education were the most likely to find a job in public employment, followed by 16% more likely to find a job in the primary labour market. For those with upper secondary education, this ratio has been reversed, as those with primary education found jobs in the primary labour market outnumbered those in the secondary labour market by 12.5%. Those with tertiary education were in the best position to find a job, with more than 40% of those who found a job in the primary labour market (Figure 4).

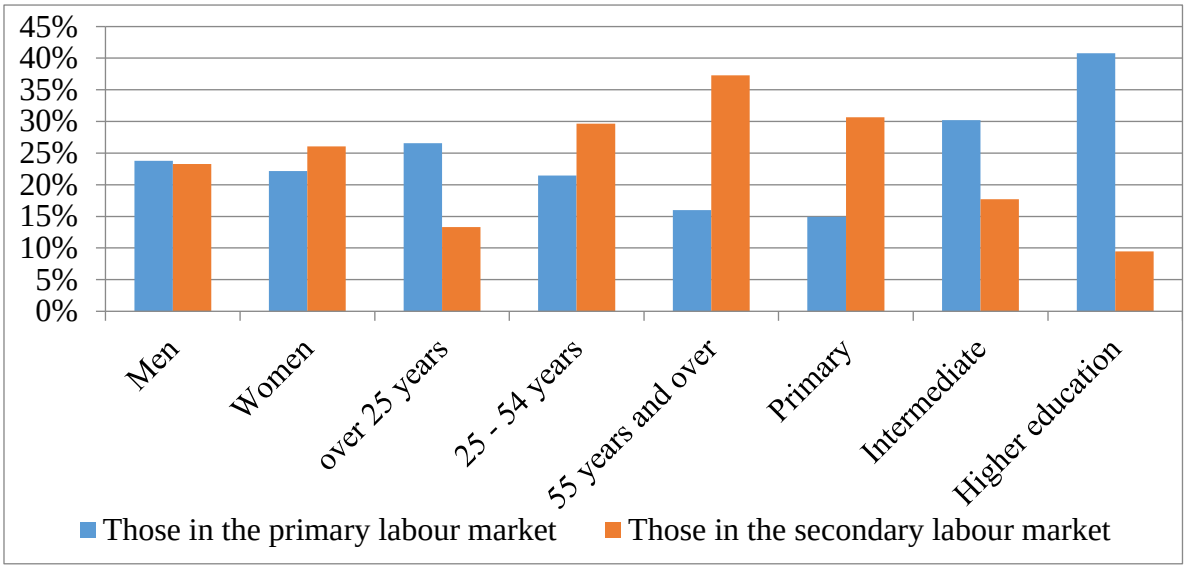

Figure 4. Employment rates of jobseekers in the primary and secondary labour market of Szabolcs-Szatmár-Bereg County Government Office in jobseekers' training courses by gender, age group and highest educational level in the 11 years of the survey
Source: Own work based on data from the Ministry of Innovation and Technology

Szabolcs-Szatmár-Bereg county has the largest number of participants in adult education in the country. The share of jobseekers trained by the Government Office in relation to the total number of participants in adult education has exceeded 16% on average over the last 11 years. The largest increase was in 2014, when 32.7% of the participants in adult education were jobseekers trained by the Government Office. There was a steady decline in the following years, with only 2.6% of jobseekers enrolling in training by 2020 (Figure 5).

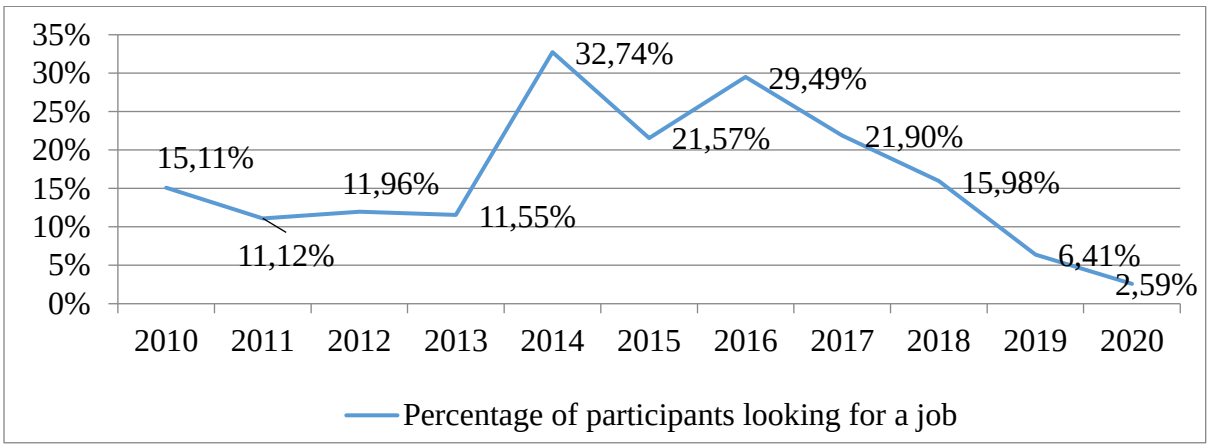

Figure 5. Proportion of participants in training for jobseekers in relation to the number of adult education places in Szabolcs-Szatmár-Bereg county (2010-2020)
Source: Own production (based on data from the Ministry of Innovation and Technology, osap.mer.gov.hu)

Conclusions, suggestions

According to the OSAP 1665 statistical interface data on adult education, Szabolcs-Szatmár-Bereg County had the highest number of adult education participants in the country in the period under review (2010-2020). Employment rates in the primary labour market have declined sharply over the period under review, with the rise of public employment. Due to the county's disadvantages, which are clearly visible in some indicators, the secondary labour market continues to play a more important role in employment.

The proportion of jobseekers enrolled by the Szabolcs-Szatmár-Bereg County Government Office is low compared to the number of jobseekers. In the future, the Government Office should offer more vocational training courses, which would make it easier for jobseekers to find a job than the EU's preferred employment training courses.

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BARRIERS TO EMPLOYMENT OF PUBLIC AND ROMA WORKERS FROM THE PERSPECTIVE OF AGRICULTURAL EMPLOYERS

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Abstract

One of the problems of the rural economy is labor migration. In the absence of a skilled and willing workforce, progress is difficult to achieve and negative economic and social impacts are common in the areas concerned. At the same time, they are often home to a large number of public employees and Roma / Gypsies, whose reorganization into productive work might solve the problems that arise. In our research we sought to answer the question of whether local farmers would contract publicly employed and Roma labor, and what the current obstacles are. Comparing the responses we found that there is a significant difference in approach between the target groups studied. Rejection of public employees is higher than of the Roma workforce. At the same time we commented on the business start-up opportunities of robotics and the tender system with the respondents, which could be an alternative solution to reduce the rural labor shortage.

Introduction

The labor demand of the sectors is mainly determined by mechanization and plant size. At the same time, technological advances in agriculture have not completely replaced the human workforce even today. Manual labor is the integral part of the agricultural sectors, depending on the quantity and quality of the activity carried out by the farmer. Individual farms can produce by using their own labor and in some cases with the help of external labor, and in the case of companies, the latter is typically used. However, the workforce must be available not only in the given place, in the right quantity, but also in the right quality (Mizik, 2018). In Hungary, disadvantaged rural areas are characterized by unemployment, a higher proportion of public employees and the Roma population (Hegyi-Kéri - Horváth, 2017). Based on the results above, also on the fact that according to Terluin and Post (2001) and Kulcsár (2006) the importance of local resources, local activities and local actors are decisive, as well as the integrated approach. (quoted by Ritter, 2008), we aimed to examine whether the integration of a large number of public employees and Roma / Gypsies into the labor market makes it possible to solve social and economic problems and whether labor market integration itself can be achieved.

Literature

In Hungary, due to the "peculiarities" accompanying the privatization of large socialist farms and the compensation of former landowners (see Abrahams, 1996; Brown et al. 2006, Burger 2006), agricultural employment increased from almost 18% to 5,4% between 1983 and 2003. With the decline in employment, the emphasis has shifted towards part-time farming and off-farm activities, so much so that in most countries part-time employment has become much more pronounced than full-time farming (Ritter, 2009). This trend has continued since the previously indicated period, to the extent that traditional farming has completely disappeared in several settlements in the Northern Hungarian region (Tornanádaska, Csenyéte, etc.).

Excess demand or supply in the labor market becomes permanent if the following conditions aren't met (Gábor, 1990):

1. Labor supply is a positive function of real wages, while demand is a negative function.
2. Wages are only affected by supply and demand.
3. The wage paid is the only cost to the employer, which is the net income of the employees.
4. The employee always performs the pre-defined task accurately and the employer always pays the wage for it.
5. Termination of the employment contract would not be to the detriment of either party.

The phenomenon of unemployment is therefore the result of deviation from one of the factors above. The livelihood of a certain stratum of the Roma has previously been determined by adapting to opportunities. Most of the activities considered to be "traditional gypsy employment" (adobe sowing, wood and metal works, trade) were not only and exclusively characteristic of gypsy groups, they were also cultivated by other socio-ethnic groups (Szuhay, 1993). As the result of the limited livelihood opportunities, these two-handed opportunities have almost completely disappeared. Current livelihoods are seasonal work and public employment, which is hampered by the very low quality of the workforce and, in many cases, the high proportion of the Roma population. According to Ábrahám and Kertesi (1996), the employment of the Roma population is hampered by discrimination and the level of education.

Regarding the employment characteristics of the agricultural sector, according to Bíró and Székely (2012):

1. The lower income available compared to other sectors of the economy results in the emigration of labor from agriculture, which also depends on education and age.
2. The spread of large-scale / industrial agriculture results in labor savings and leads to concentration within the sector.
3. As a result of subsidies, although in principle the use of labor also increases, rural development subsidies can basically contribute to the retention of labor, to a lesser extent to job creation.

4. Part of the rural unemployment remains hidden, the labor efficiency of those employed in agriculture is low.

In addition to all this, based on our own experience, in addition to the factors influencing agricultural employment, personal relationships and pre- and post-judgments also have an influence. The basis of our research was the circumvention of this.

Material and methods

In our article, we would like to present the basic employment problem of rural society, which is that there is no skilled, adequate and willing workforce for employers. In the focus of our research, we examine the basic employment problem of non-or only partially employed public and Roma labor in the rural area, in a causal context. Based on the questionnaire survey that formed the basis of the primary research, we sought the answer to why farmers do not employ any human resources that may be available locally. In compiling the questionnaire, we took into account that in some areas there is no other option to expand employment, only the involvement of the public employment and the Roma / Gypsy population. Respondents were given the opportunity in the form of open-ended questions to express their opinions on their perceived or real experiences and positions.

Primary data collection was performed using a standardized questionnaire and a written survey in the spring of 2020. Questionnaires prepared by contacting the registered agricultural consultants of the National Chamber of Agriculture (600 people) came from all counties of Hungary (205). My questionnaire survey was conducted on a target group (farmers and companies) selected in accordance with my research objectives. The questionnaire was created using the Google Drive questionnaire program. When editing the questionnaire, we formulated open-closed, queuing and scale type questions. The database was processed using Office Excel. The results are presented in figures and evaluated textually using descriptive statistics.

Results

We first asked respondents what, based on their own experience, is the barrier to possible labor expansion (Figure 1). According to 85.6% of respondents, employment is most hampered by the lack of a population willing to work. Additional barriers were identified by 58.2% of the aging population and 56.7% of the lack of skilled labor. Labor migration is also a major problem for 41.3% of respondents. Examining the responses to the survey from an employer perspective, a significant number of responses were received through high wage demands and high wage costs. 22.9% of respondents see an employment problem in large-scale benefits due to a childbearing-oriented benefit system. The fewest responses were received to the possibilities of commuting infrastructure problems.

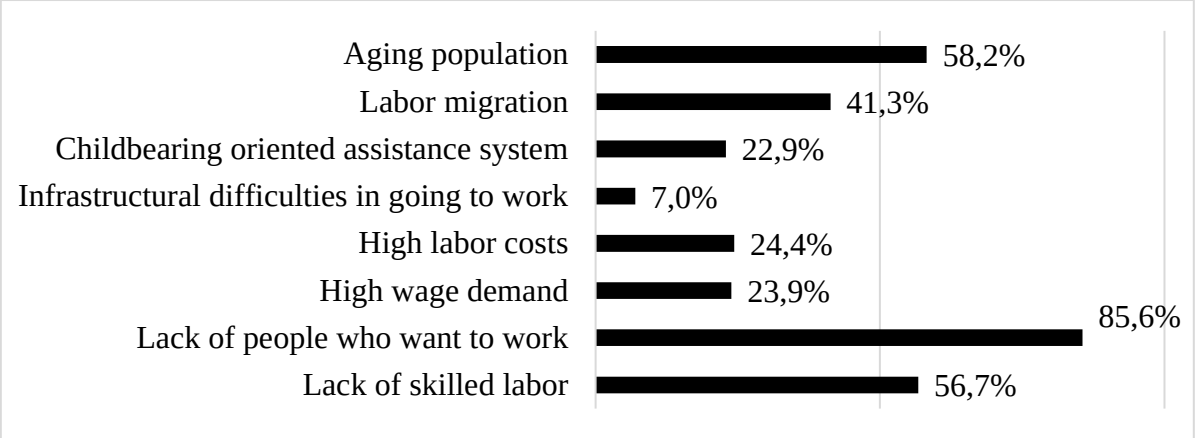

Figure 1. Distribution of barriers to labor force expansion by respondents (%)
Note: The three most characteristic had to be specified
Source: Own research and editing, 2020

Additional questions in the questionnaire related to why the employment of public employees and the Roma workforce is developing at the current level. In this context, we were the first to look for the answer (Figure 2) whether farmers would contract public labor. The majority, 71%, would not contract public labor and the other answers were almost equally divided between "yes" and "don't know".

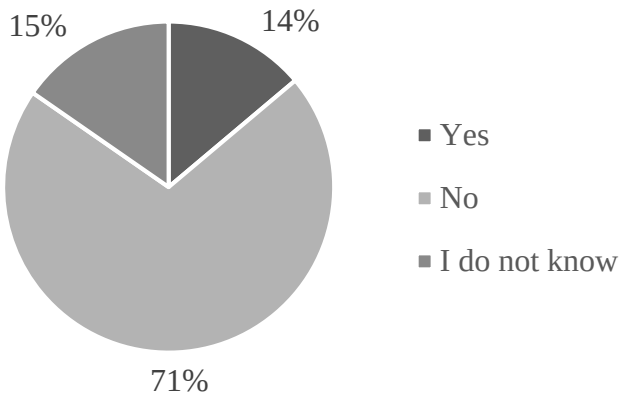

Figure 2. Respondents' views on whether they would employ a public employee
Source: Own research and editing, 2020

According to the Likert scale (Table 1), the level of agreement had to be rated on how reliable, persistent, team-player, professionally fit, punctual, demanding and willing to work the public employment workforce was. The majority of responses on the Likert scale disagreed at all with the findings. Most gave a "disagree at all" response, and there was a decreasing trend between agreement and the number of responses in the findings on the scale 1-5.

Table 1. Evaluation of public employment according to Likert scale

	Not true at all	Not typical	Typically true	Completely true	No experience
Trustworthy	119	45	16	4	12
Persistent at work	127	43	12	4	10
Able to work in a team	76	58	42	9	11
Well-trained	129	39	15	2	11
It adheres to working hours	119	29	26	8	13
Demanding for your work	139	31	13	4	9
Personal hygiene	109	45	26	4	11
He chooses a job instead of an aid	111	37	22	13	14
Answers (%)	**59,29**	**20,87**	**10,98**	**3,06**	**5,81**

Source: Own research and editing, 2020

In the textual justification for Figure 2, most cited incompetence, laziness, unskillfulness, and job avoidance. A small number of responses were made to the possibility that targeted retraining of public employees is possible through training and education. Several responses were based on the experience that in the past, some respondents had already tried to involve public employees in the operation of their economy.

Figure 3 classifies the possibility of employing Roma labor. 63% of respondents would not contract Roma labor. 23% rate such employment as an option and 14% completely reject the alternative of their employment. From the answers to Figures 2 and 3, it can be stated that the respondents place public employees and the Roma labor force in a separate aspect.

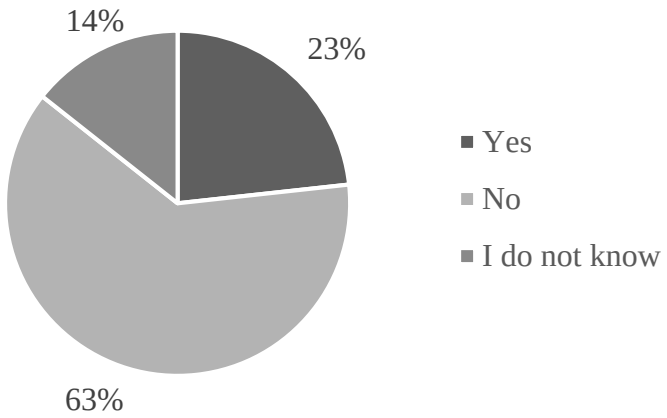

Figure 3. Respondents' views on whether they would employ Roma / Gypsy labor
Source: Own research and editing, 2020

Incapacity, laziness, unskilledness and job avoidance were cited as reasons for the high rate of rejection (Table 2), similar to those for public employees. Regular alcohol consumption and aggressive behavior were also identified as additional problems. The difference is that the

rejection of the Roma labor force is lower than that of the publicly employed labor force. A small number of overlaps between the two issues were noted, namely that the public employee and the Roma worker personally embodies the labor force of the rural economy.

Table 2. Evaluation of public employment according to Likert scale

	Not true at all	Not typical	Typically true	Completely true	No experience
Trustworthy	112	47	23	3	12
Persistent at work	107	51	21	4	13
Able to work in a team	97	38	35	10	15
Well-trained	120	46	15	2	11
It adheres to working hours	115	52	11	3	14
Demanding for your work	121	46	12	4	12
Personal hygiene	117	44	20	0	12
He chooses a job instead of an aid	114	34	24	7	16
Answers (%)	**57,63**	**22,85**	**10,27**	**2,11**	**6,70**

Source: Own research and editing, 2020

If it is not possible to use human resources, alternative methods should be used. As a result of agricultural labor shortages, farmers are moving towards technological development and robotization. Significant digitalisation is also expected in this area for the new Common Agricultural Policy period 2021-2027. According to the answers in Figure 4, as stated by the 69% of the respondents, robotization would be a solution to replace the labor demand. 22% say the use of self-propelled machines and robotics would not solve the problem.

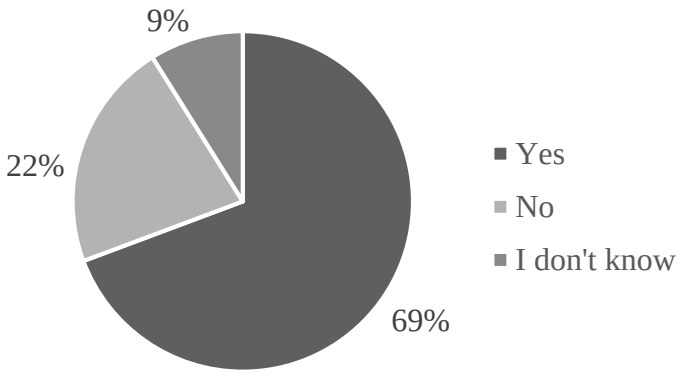

Figure 4. Respondents 'views on whether they would replace human labor with machinery
Source: Own research and editing, 2020

In the case of Figure 5, we sought the answer to the question of whether farmers would start a business in any field if they received the same funding of nearly 13.2 million forints as the young farmer. 57% of respondents say they would undertake a support scheme similar to the current Common Agricultural Policy 2014-2020, VP2-6.1.1-16, "Start-up aid for young farmers".

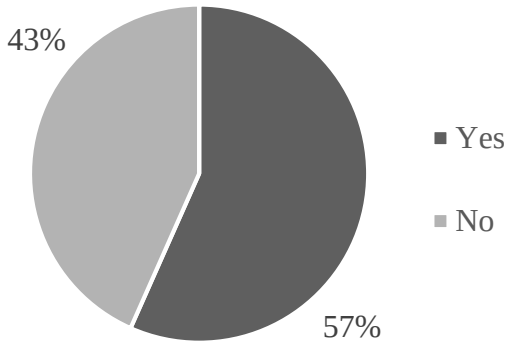

Figure 5. Respondents' views on whether they would start a business as a result of priority support
Source: Own research and editing, 2020

The conclusion of the last one, Figure 5, according to the respondents, is that approximately half of the farmers would not undertake to start a separate activity. As a result of the split opinion, the possibility of a tender may arise as a chance among non-agricultural actors, as the tender would not generate competition for the allocation of resources in the case of a certain grant. Priority for the second pillar of rural development policy 2014-2020, promoting social inclusion, reducing poverty, supporting economic development in rural areas, diversification, setting up new small businesses, job creation and local development, and information and communication technologies (Improving the quality and accessibility of ICT). Other researches (Ritter-Nagy-Tóth, 2013) also concluded that according to the majority of households, unemployment, agricultural and forestry developments, and the revival / utilization of agricultural traditions would be the solution to rural development.

Conclusions

As a result of our questionnaire survey, the position can be formulated that the employment problem of the rural economy can sometimes not be solved with the inactive resources of the local population. The answers show that it is not possible to confirm possible rural labor market deficits with public employees and the Roma population. The "tradition" of many years or decades of unemployment is no longer able to turn certain strata back into the market-based world. According to respondents, a certain stratum is no longer able to do any productive work, cannot change their work schedule, and alcohol consumption is a major problem in broad strata. A large number of responses were based on post-judgments: several respondents noted the theft

of property and violent behavior as a problem, the effects of which will be a major obstacle to future public employment and Roma employment. The question of the questionnaire on robotization focused on labor replacement, which is the only way to reduce labor shortages in areas affected by emigration. In the part of the research dealing with agricultural subsidies, we wanted to point out the need for business start-up applications with less success, because the answers showed that such an opportunity is not very important for farmers. The lack of interest of farmers in the tender may provide an opportunity for the subjects of the survey - publicly employed, Roma labor force - to start a business, thus promoting the economy and reducing unemployment.

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CHANGES IN THE NUMBER OF LARGE FARMS THROUGH POSITIVE AND NEGATIVE EXAMPLES BASED ON A QUESTIONNAIRE SURVEY

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Abstract

The number of Hungarian farmers is constantly decreasing. Small and medium-sized farms are being replaced by large and giant farms. Ownership of companies further complicates rural livelihoods through family mergers. Locals displaced from land ownership and use have to look for a different livelihood. In underdeveloped areas, the lack of job opportunities has a major impact on emigration, thus shrinking the rural economy. Another problem is that, as a result of the European Union's direct and rural development resources, agriculture has in many cases been degraded into an aid-producing resource. In the framework of the questionnaire research, we sought the answer to the specifics of the farmers' environment in relation to large farms, the advantages / disadvantages of the services, and the vision of the farmers in terms of farm sizes.

Introduction

In the agricultural economy, in addition to multifunctional agriculture and the countryside, food production also has ecological-environmental, social, economic and cultural functions. Nowadays, the production of raw materials has become the "one" function, which is complemented by several and in many cases more emphasized tasks. However, in our opinion, the implementation of certain functions can be realized to a limited extent with large plant sizes and large plot areas. According to a previous survey of the host society (see Lipcsei, 2020), the most important goal of the European Union's land-based subsidies is to maintain the landscape, to provide income and to keep the rural population in place, which can be implemented as a viable process for small and medium-sized farms.

Large-scale estates set up for industrial land use, with minimal input, striving for maximum output, produce large-scale raw materials and raw materials that meet the quality of standards at a lower cost than the world market price, while also transforming agriculture into a subordinate sector. Furthermore, in large-scale agriculture, the production of raw materials precludes knowledge- and enterprise-based development. Economic, social and environmental consequences of the large estate system: severe decline in employment, unemployment, deterioration of land subsistence, loss of rural population, destruction of villages, emigration of population, disintegration of local communities, impossibility of quality of life, social consolidation degradation, deteriorating living conditions of city dwellers, crime, suicide, drugs, etc. the spread, the destruction of cultural values and traditions that preserve the

community, and thus the elimination of life chances through the domination of capital (Tanka, 2004).

The key elements of the EU's agricultural policy, like those of the United States, are 1) a reduction in the area sown in order to reduce production; and 2) decoupling. Compensation for losses can be replaced by a fixed amount of income support, regardless of the development of production. According to previous U.S. surveys, as a result of quantitative crop regulation and decoupled support, 20% of grain farms received two-thirds of payments. Most of the subsidies are used by large farms, but the importance of subsidies in relation to total turnover is insignificant, and as the economic size increases, the role of subsidies in both turnover and income decreases (see Popp, 2002). Furthermore, large economies that receive the bulk of subsidies hardly need income support, because they have higher-than-average incomes and higher wealth (Popp, 2013).

Optimization of farm size, support for small and medium-sized farms is possible by setting a ceiling for support. Although regulation can be circumvented by artificially fragmenting farms, it does not change the fact that its effect is holding back the growth of farms (Popp, 2013). In the EU, the greatest support has been and still is being taken by the most productive farms, which are gradually acquiring small estates that are unable to take advantage of technical development and intensive production (Popp-Oláh, 2016).

In determining the optimal farm size, in order to achieve favorable economies of scale, personal ambitions and income goals must be taken into account in addition to production conditions. If the farm manager estimates that the disposable income provides the same standard of living as a non-agricultural occupation, he can count on the possibility of such an income (Castle-Becker-Nelson, 2012). In the context of this line of reasoning, we hypothesize that by supporting land use equal to the wages of local employment, the number of farmers could be increased, possibly to compensate for large and giant farms. Based on the above, the aim of the study is to present the trend of property concentration, as well as to present the role of large farms in the service functions they perform in the rural economy.

Material and methods

The examination of the topic was based on a secondary method, during which we used the relevant data of Eurostat and the MÁK (Hungarian State Treasury). This was supplemented by a questionnaire survey. The primary data collection was carried out using a written questionnaire in the spring of 2020, which was sent through registered agricultural consultants of the National Chamber of Agriculture (600 people). Farmers and companies were identified as the target group of our questionnaire survey. A total of 205 questionnaires were filled in covering all counties of Hungary. The questionnaire was prepared using the Google Drive questionnaire program, which included open-closed, queuing, and scale-type questions. The database was processed using Office Excel. Figures are used to illustrate the results, supplemented by textual evaluation.

Results

In the present study, before the results of the questionnaire survey, we want to point out the international and domestic process that characteristically influences the shrinkage of the rural economy. The decline of small and medium-sized economies can also be observed in the EU27 Member States. According to Eurostat data (Table 1), farms under 100 hectares decreased by 5-46% between 2010 and 2016. Growth data can be observed for the Czech Republic and Slovakia, for which no additional information is available. The most likely reason is the inclusion of unused areas in cultivation, as the Czech Republic is most characterized by a large estate system.

In the case of Hungary, farms under 100 hectares decreased by 26%. The difference between the data of Eurostat and the Hungarian State Treasury (MÁK) is due to the registration data. The application data of MÁK do not include farms under 1 hectare. Furthermore, as participants in the Agrárcenzus2020 census, we experienced a registration problem that in the case of Hungarian producers there are more registered than actual producers (members of the Chamber of Agriculture are all economic actors who have any connection with agriculture and those registered as farmers are also active).

Table 1. Changes in the number of agricultural holdings under 100 hectares between 2010 and 2016 (%)

Belgium	-15%	Ireland	-9%	Lithuania	-26%	Portugal	-16%
Bulgaria	-46%	Greece	-5%	Luxembourg	-15%	Romania	-11%
Czech Republic	+18%	Spain	-5%	Hungary	-26%	Slovenia	-6%
Denmark	-18%	France	-15%	Malta	-26%	Slovakia	+5%
Germany	-10%	Croatia	-43%	Netherlands	-24%	Finland	-26%
Estonia	-17%	Italy	-30%	Austria	-12%	Sweden	-13%
Cyprus	-10%	Latvia	-17%	Poland	-7%		

Source: own calculation and edition, based on Eurostat 2020

According to the data of MÁK, the decrease in the number of employees observed in the period of the current Common Agricultural Policy in 2014-2020 affected small and medium-sized economies the most. In the 0-20 hectare category, 10782 farms were closed, while in the 20-100 ha category, 2063. The farm size over 100 hectares appears uniformly in European statistics (average agricultural farm size was 16.6 ha in 2016), according to which there are 1324 farms in Hungary, the big and giant category has been expanded.

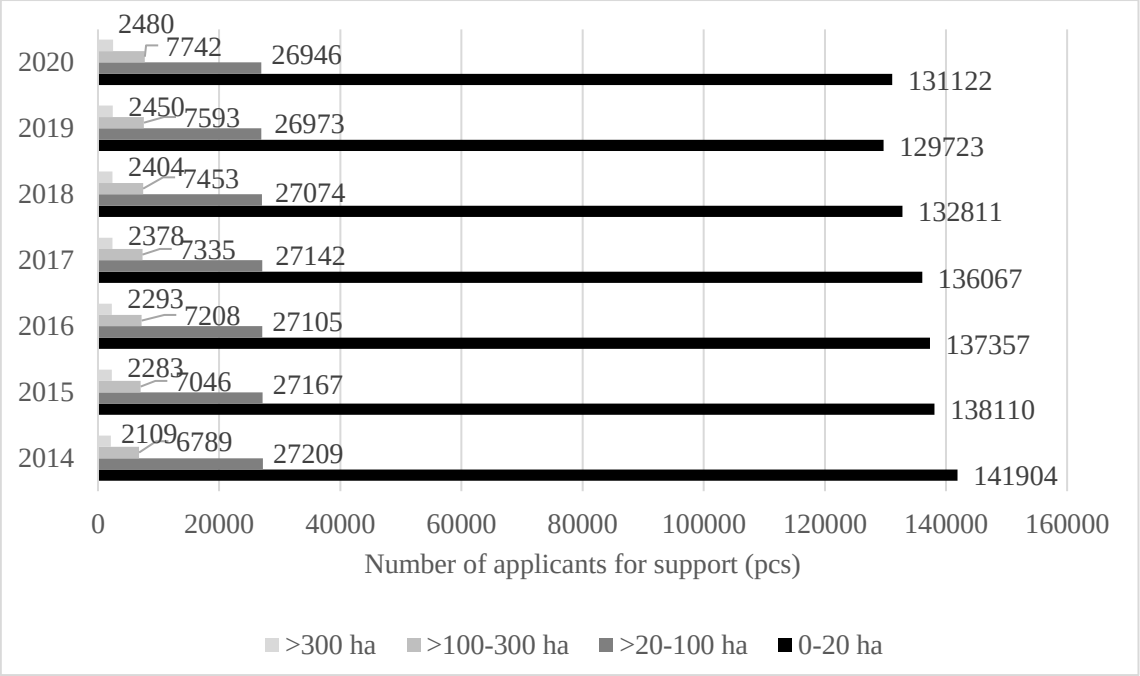

Figure 1. Number of applicants for support (pcs)
Source: own calculation and edition, based on MÁK data, 2020

The number of giant farms rose from 2,109 to 2,450, with a positive of more than 16%. The concentration of holdings and the negative rural processes are intensifying with the decrease in the number of farmers, emigration due to the search for new livelihoods, and due to the inhibitory effect of the concentration of holdings on certain interests. Large farms between 100 and 300 hectares and above 300 hectares use 72.1% of the total area, but account for only 1.2% of farms (Kerek-Marselek, 2009). The negative result of the establishment and operation of large farms is when a decisive part of the outskirts of a settlement becomes the property of an interest group / family. As a result of the concentration of holdings, the population retention power of the settlement decreases, the number of agricultural enterprises decreases and, based on our personal experience, moral problems may arise between the areas of interest. This already leads to the presentation of the results of the primary research.
According to 78% of the farmers asked in our questionnaire survey (Figure 2), it should be regulated that a family / interest group should not own a decisive part of the land of a settlement. 15% of the respondents do not consider it necessary to set a maximum holding for family sectors, while 7% have not taken a stance. Respondents in favor of the restriction mentioned maintaining and increasing the population retention power of the countryside, reducing emigration, competitiveness, fair distribution of resources and equal opportunities in their justification. Negative indicators identified the emergence of a "fidelity system," exploitation, depopulation of the countryside, and monopoly. Of the 15% of "no" responses, 21 justified their responses, 14 of whom were managers of large and giant farms. Proponents of land concentration justified their response by increasing competitiveness, economy, employment opportunities, reducing land fragmentation, land cultivation, market economy and free competition.

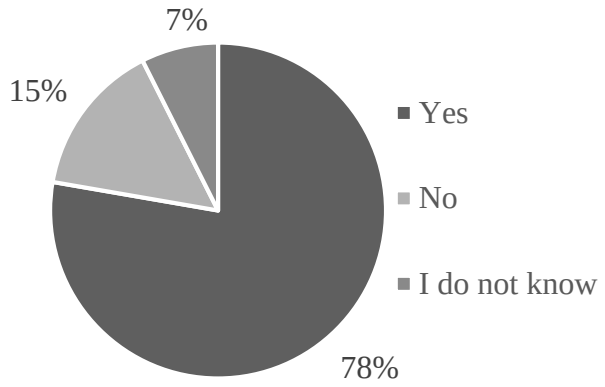

Figure 2. Restricting the ownership of a family / interest
Source: Own research and edition, 2020

It is a common example that in parallel with the concentration of holdings, the members of the large economy also take over the leadership positions of the settlement. According to the majority of respondents, the most common position held by large farmers is the role of the Land Commission. In any case, the role of controlling the sale and lease of arable land provides a unique opportunity for the individual interested in the concentration of the holding. The position of municipal decision-making is also extremely important among large and giant farmers. According to the respondents, the position of municipal representative is held by large farmers in 31% of cases and the position of mayor in 5%. In the case of other roles, 5% had the status of members of parliament, 1% had the status of the National Chamber of Agriculture (NAK) and 1-1% had the status of a Local Action Group and the Hungarian State Treasury. Respondents indicated a church title and a role in a municipal company as other positions.

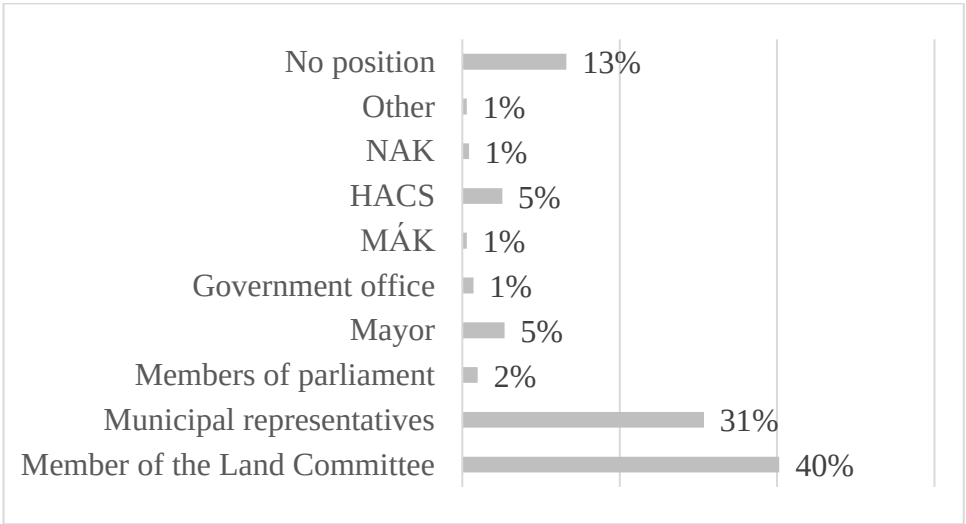

Figure 3. Leadership position of large farms
Source: Own research and editing, 2020

Figure 4 summarizes the other activities of the holdings, referring to which categories of holdings are engaged in contract work, sales, purchases, production and other services for the holdings in their environment. Based on the answers, each plant category is engaged in contract work. It also turned out that large farms have a significant function for the rural economy, which is essential for agricultural processes. The role of cultivation-sale-purchase appears in all categories, but with a decreasing trend.

Figure 4. Share of the analysed farms according their additional services (%)
Note: More options could be marked
Source: Own research and editing, 2020

It also follows that a rural economy cannot operate with the same categories of holdings. Acquisition and production have proven to be a small number of functions for farms under 100 hectares. Thus, the relevance of large farms can be established to some extent, with certain limitations.

The questionnaire survey also examined the current legal successors of the former Producer Cooperatives, what service function they perform, and whether they have any role in the rural economy. In 12% of the responses, there was no legal successor in the immediate vicinity of the respondents' registered office. As seen on Figure 5, according to 17%, the legal successor of TSZ does not provide services. Among these respondents, 6 indicated that they do all the work on the farm themselves. So, in 48 cases there would be a demand for local agricultural service. Most responses indicated wage labor and acquisitions, similar to the large economies in the previous question.

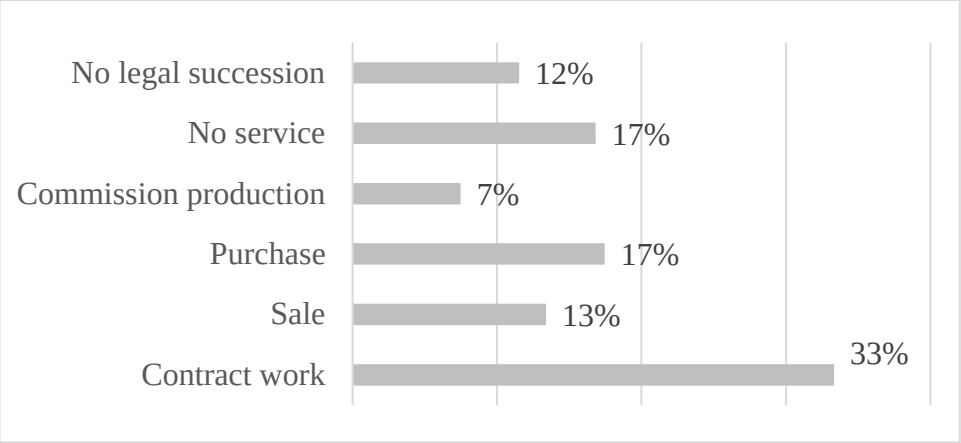

Figure 5. Activities of a company which has ceased to exist by legal succession (%)
Source: Own research and editing, 2020

Conclusions

The number of small and medium-sized farms in Hungary decreased by 11045 in the period of 2014-2020, while the number of large and giant farms increased by 1324. The trend is continuous and accelerating, the impact of which mostly negatively affects the life of the affected rural settlements. The trend observed throughout the European Union is leading to a decline in agricultural operators. In addition to the concentration of holdings, the role of the local leader is also decisive for the actors involved in it.

Our primary research also revealed that without the involvement of large farms, with the exception of wage labor, several settlement-level functions would disappear in the case of the rural economy. Acquisition activities of farms over 300 hectares are indispensable in the areas, which are provided by farms with smaller farms in only a few cases. We can state that it is necessary for large farms to operate until a certain amount of arable land is occupied.

For all these reasons, state control would be necessary for the concentration of holdings and the control of the ownership-lease processes of arable land belonging to one family. According to our views, the presence of small, medium, large and giant farms is indispensable in the rural economy, also in the form that small and medium-sized farms predominate alongside a large and a giant estate. In our opinion, increasing the number of farms under 100 hectares would provide an opportunity to increase the population retention of the countryside, specialize production, reverse emigration, and increase the effectiveness of environmental protection. Furthermore, EU funds could be used more fairly, equitably and efficiently.

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AGRICULTURAL PROSPECTS FOR 2021-2027

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Abstract

The EU- funded agricultural grant support cycle for 2021-2027 raises a couple of questions and is preceded by great expectations among the faming society. Following signing the conceptual arrangements on 21st October 2020, negotiations can be started with the European Parliament and the European Commission on finalising the frameworks. According to the CAP Strategic Plans Regulation, member states will have a much wider room for manoeuvre in developing their own policies of supports, which on the one hand will allow local conditions to be considered to a greater extent but require greater responsibility as well as accountability. A diverse and stressed work for the participants is ahead, the approval of secondary EU legislation and international rules of law, and the appropriate preparation of the paying agency are indispensable, simultaneously the Strategic Plan for member states ensuring the basics of the new CAP shall be developed and be made approved by the Commission.

Introduction

When the Treaty of Rome created the common market in 1958, agriculture was strongly influenced by the different government interventions in the six founding member states. To include agricultural products into the free movement of goods as well as maintain simultaneous state intervention into the agricultural sector, national intervention mechanisms inconsistent with the common market principles had to be cancelled and they were to be created on community level instead: that was the basic reason for developing and establishing the Common Agricultural Policy (hereinafter referred to as: CAP). Since its introduction in 1962, it accomplished its objectives related to the safe and secure supplies of food. Subsequently, with its policy addressing extremely high, supported prices as opposed to world market prices and an unlimited purchase guarantee, CAP generated an increasing amount of oversupply. To cease the increasing deviation between demand and supply and keep agricultural expenditure under control, the Council approved the radical transformation of CAP via changing the protection system provided by the prices into the system of supplementary income supports. That is the principle direction even today but CAP is renewed from cycle to cycle, it suits the challenges of new eras. What remains always unchanged: it is preceded by a long professional debate and great expectations, which is still the same. On 21st October 2020, following a reconciliation process of two and a half years, a conceptual arrangement was made, on the basis of which negotiations can be started with both the European Parliament and the European Commission on developing the ultimate frames.

Literature review

One of the first steps of the post-2020 CAP creation was the public consultation announced by the European Commission targeted to simplify and update policies. During the consultation, it was concluded that respondents would like to have answers as regards simpler and more flexible policies, providing appropriate income for farmers and new challenges of environment and climate protection. Using the results of the consultation as well, the Commission issued its statement for the future guidelines of CAP entitled 'The Future of Food and Farming' on 29th November 2017. In parallel with defining the policy content, the White paper that set out paths for the future of Europe also gave a start to the processes of creating the budget for 2021-2027 setting up the future resources of CAP. The Commission's concrete proposals for the professional and budgetary framework of CAP were also prepared on the basis of its EU-level professional forums and available reflection papers: the EU-level budget proposal (issued on 2nd May 2018) for the period between 2021-2027 and legislative proposals (issued on 1st June 2018) for CAP (the Commission has three proposed regulations for the programming period of 2021-2027: CAP Strategic Regulation, Horizontal Regulation, supplement/amendment of the regulation on Common Market Organisation).

In the CAP Strategic Plans Regulation (SPR), the Commission made proposals on the post-2020 fundamental CAP policy parameters such as CAP objectives, the scope of measures, the basic requirements for member states and financial issues. The legal proposal contains the frames of provisions financed by the European Agricultural Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD). Based on that regulation, member states would have a much wider room for manoeuvre in developing their own policies of supports, however they should handle promoting environment-friendly farming capable of ensuring long-term food safety and strengthening rural areas as important, general objectives; additionally they should treat encouraging innovation and digitalisation thus modernising agricultural holdings by using the new knowledge as horizontal, cross-sectoral objectives.

The wider room for manoeuvre for member states would allow local conditions to be considered to a greater extent but would require greater responsibility as well as accountability. To realise that, according to the Commission's intent, the member states are required to develop a so called CAP Strategic Plan on how to use resources, which includes the resources of both the 1st (e.g. direct supports) and 2nd (rural development supports) pillars. SPR 9 defines EU economic, environmental and social so called special objectives, based on which the member states create their support policies. The objectives focus on economic viability, supporting farmers, environmental and climate protection achievement of higher level and sustainability of rural areas. In the CAP Strategic Plan, member states select with which measures they intend to reach and perform the above objectives – considering local conditions as well. The measures to be selected will however be defined by the SPR. To measure the efficiency of actions taken and the performance of support policies, member states should set up planned numbers and result figures (i.e. indicators) to justify achieving the objectives, according to the frames provided by the SPR.

Material and Methods

Following the brief overview of current information, existing legislation and the evaluation of CAP factual history, it is to be presented what concrete steps can be foreseen in relation to the next agriculture support system, and what the temporary period means in this field.

On 21st October 2020 the big deal was made among the sectoral ministers of member states on reforming the Common Agriculture Policy (CAP), which will set up key frameworks on using 2021-2027 EU agricultural supports, especially via the compulsory accomplishment of environment and climate protection objectives. The member states have been negotiating on reforming CAP for two and a half years, debates have been on the agenda through all the fifth rotating presidency of the EU, when – during the rotating presidency presided over by Germany, the agreement was finally made in the Council compiling of member state ministers.

That milestone is of key importance both from the aspect of EU agricultural policy reforming and Hungary because of climate and environment protection perspectives, and because nearly one third of the 2021-2027 EU budget of 1074 billion euros is comprised of the resources allocated to CAP. Therefore it is indeed important for Hungarian farmers from financial aspect what decisions are made.

Main directions of the new CAP reform:

On the one hand, member states will be required to set up organic farming systems, and separate a financial framework of 20% from the direct payments (1st pillar) dedicated to realise such objectives. It means that each farmer, even the smallest one as well, shall take commitments of environmental protection kind (in return, they will have to keep simplified bureaucratic rules but for those taking more responsibilities such as participating in organic farming systems, can receive more resources and that is how the separated 20% could be spent).

On the other hand, a 2-year transitory period will be available for member states to prepare for the extensive transition, setting up the systems therefore some flexibility will be included in the system so countries will not lose their budget thanks to the high degree of change. This has greater importance related to longer programmes such as the supports provided for agri-environmental farming (AEF) and organic farming (ORG). According to the experiences, - also proved by the success of these programmes – keeping the rules, the system of farming according to the programmes can still last to a certain extent once the support is over, as it was indeed demonstrated by the period between EAFRD AEF closing in 2014 and the RDP AEF launched in 2016 (e.g. getting used to keeping the rules for mowing). However, famers currently can still claim for the supports of both titles with keeping the rules and obligations undertaken earlier in the transitory period therefore continuity is ensured. Extending the commitment for a prolonged period will be on a voluntary basis, which must be confirmed by signing a beneficiary statement. Extension for the commitment period can be initiated by the beneficiaries who are active participants of the programme at the date of submitting the claim.

Therefore extending the programme is expected to be feasible as regards the entire field of the support. Figure 1 shows the significance of extension processes for the transitory period, based on the current payments of AEF and ORG supports launched in 2016 (submitted in 2015) in Békés county and the number of clients concerned.

	AEF	ORG
2016		
Payment (HUF)	2235832222	1019277524
Client (number)	303	153
2017		
Payment (HUF)	2345393086	939248833
Client (number)	288	144
2018		
Payment (HUF)	2326807737	1053595031
Client (number)	274	131
2019		
Payment (HUF)	2350715999	1017346562
Client (number)	289	133

Figure 1. Data on payments of the AEF/ORG supports in Békés county

Thirdly, the latest summary of the arrangements lists some indicative examples for organic farming systems such as practices and methods like precision farming, forest management and organic farms but the member states can freely design their own actions according to the local demands.

Results and conclusions

The new cycle CAP agreement fundamentally sets up the future of Hungary's agricultural support system and the conditions of production for the period of 2021-2027, more explicitly for the period of 2023-2027 if we consider the transitory 2 years.

According to the payment data of the AEF and ORG supports in the county in the past 4 years, the continuity maintained during the transition period means an annual average of 2,35 billion HUF regarding only the two titles mentioned above, which is exercised in the county. Moreover, grants can be claimed for in several other titles in the transition period, through which the requirements of the application and receiving the grant are created and implemented according to the rules of the current cycle, so while member states are preparing for the expectations and requirements of the new cycle, the farmers' rights and obligations for claiming supports are still the same within the well-known system thus ensuring the successful exercise and use of grants.

The direct system of grants, the support of agricultural and food industrial investments, production related environment protection conditions and supporting young farmers or smallholdings will all collectively ensure the competitive development of Hungarian agriculture. It is a very important moment for both the livestock breeding and horticulture sectors that production related and transitory national grant supports are still available and maintain according to the latest pieces of information.

Summary

CAP for 2021-2027 is currently being created and the process just came to a significant milestone last week. The conceptual arrangement signed on 21st October is of key importance from the aspect of EU agricultural policy transformation as well as from Hungary's perspective because of climate and environment protection reasons on the one hand, and because a total of 1074 billion euros 2021-2027 EU budget includes a significant proportion (nearly one-third) of resources dedicated to CAP. Therefore, from financial aspect it is important for Hungarian farmers what decisions have been made, the agreement will fundamentally determine the future of the agricultural support system of Hungary and the conditions for production.

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RURAL FINANCE AND SUSTAINABLE DEVELOPMENT

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Abstract

This paper aims at shedding light on how rural finance can contribute to sustainable development, within the framework of the 2030 Agenda adopted by the United Nations (UN) in 2015. The starting point can be identified with defining the concept of rural finance and sorting out its most relevant subsets, such as microfinance and remittances. The next step revolves around sustainability issues that deal with economic growth in agribusiness and related market segments, with special emphasis on the financial needs of rural communities. Much attention is requested by innovative trends, including digitalization in the financial industry, and by the worrisome implications of the global health emergency caused by Covid-19. Conclusions draw upon lessons learned and best practices, that are worth replicating and sharing, to the benefit not only of the areas under investigation, but of our society as a whole.

Introduction

On November 10, 2020 the European Parliament and EU Member States in the Council, with the support of the European Commission (EC), reached a historic agreement on the long-term budget for 2021-2027 combined with the temporary recovery instrument that is known as the Next Generation EU initiative: this is the largest package that has been ever financed through the EU budget, amounting to a total of € 1.8 trillion; once adopted, this package will contribute to rebuild a post-Covid-19 Europe, which is expected to be greener, more digital, more resilient, and overall better fit for current and forthcoming challenges. Meanwhile the EC is preparing the ground for the swift disbursement of the funds and Member States are working on their recovery and resilience plans, though the end of the health emergency still under way is far from being close.

Underlying issues deal with promoting a smart, sustainable and inclusive growth in EU countries, as it was announced as the main objective by launching the Europe 2020 strategy (EC, 2010), to upgrade competitiveness and productivity in the Eurozone in the aftermath of the financial crisis that started in the US subprime mortgage market in 2007 and that rapidly evolved globally, also affecting the real sphere of the economy. The strategic role that finance traditionally plays leads to focus on the three acknowledged pillars of the financial system – namely: financial markets, products and institutions – and to highlight their contribution to sustainable development; as a matter of fact, the need to exploit the untapped potential for progress in line with sustainability footprints sounds like an invitation to pay special attention to the primary sector, that accounts for the largest portion of the economy in less developed countries and that is made up of industries involved in the extraction and production of raw materials, such as farming, fishing, hunting, logging and mining.

Within this scenario, it seems appealing to investigate on key implications, that have to do with rural finance and its subsets, and that are intimately associated with sustainable development. To this end, useful insights can be gained by overviewing the 2030 Agenda that was set up by the UN in 2015 and that is based upon 17 Sustainable Development Goals (SDGs), with related actions and targets: they provide a shared blueprint for peace and prosperity for people and the planet, and consist of an urgent call for action by all countries – both developed and developing – in a global partnership; actually, ending poverty and other deprivations must go hand in hand with strategies that are set to improve health and education, to reduce inequality, and to spur economic growth while tackling climate change and working to preserve our oceans and forests, to the benefit not only of the areas under scrutiny, but of our global village as a whole.

Material and method

Based on these thoughts, this is a conceptual paper that aims at providing a framework for analysis on how rural finance can help to promote sustainable development and particularly to reach at least some of the SDGs: the starting point can be identified with defining the concept of rural finance and sorting out its most relevant subsets, such as agricultural value chain finance and microfinance tailored to smallholder farmers; the next step revolves around sustainability issues that are closely linked with economic growth in the agribusiness and related market segments, with special emphasis on the financial needs of rural communities. Utmost attention has to be devoted to evolving trends, including digitalization in the financial arena, and to the global implications of the health emergency caused by Covid-19.

The massive potential of rural finance

According to the International Fund for Agricultural Development (IFAD, n.d.), "the vast majority of rural people do not have reliable, secure ways to save money, protect and build assets, or transfer funds" and "this is particularly true for vulnerable groups, such as women, youth, and displaced people". To make things worse, "basic formal financial services still reach only 10 per cent of rural communities": factors responsible for this complex problem include "weak infrastructure, the limited capacity of financial service providers, and low levels of client education"; yet, finance is crucial to support development, since "well-functioning financial systems contribute to growth and poverty alleviation by mobilizing and pooling resources, allocating capital to its most efficient uses, monitoring these investments after they have been made, and diversifying and managing risk" (World Bank, 2019).
Therefore, there is no choice but to recognize the massive potential of rural finance, because this subset of the financial industry is supposed to improve the livelihoods of rural people, beyond the results that have been attained in the last few decades thanks to unquestionable progress in the global financial system. New financial products, market segments and institutions have surfaced and proliferated, thus making the financial industry more inclusive: the list of fundamental ingredients include technological advances that have allowed people in remote communities to access a wider range of financial services; further positive developments can be expected but vigorous efforts are still required under today's fluctuating economic conditions, amidst financial crises and health emergencies, and with volatile food and

agricultural commodity prices entailing additional challenges, together with the realistic perils of climate change.
Not surprisingly, inclusive rural finance remains an essential element in rural transformation, which is still conditioned upon many threats affecting smallholder farmers and discouraging the private sector from investing in it: be it enough to stress that financial institutions often perceive small-scale agriculture as being too risky and hence tend not to lend money to farmers as well as – in more general terms – to agribusinesses; in turn, farmers are reluctant to borrow for agricultural production because of their difficulties in interacting with financial institutions and in selecting most appropriate funding schemes, as well as in managing risks, such as those concerning climate-related shocks and livestock disease. Needless to say, it is not just a matter of channeling enough loans to rural communities, as they need other financial services too, though the level of competence – and even awareness – about them is seldom adequate.

Key operating areas

In the light of widespread threats and challenges, it comes natural to explore not only traditional fields of knowledge in rural finance but also agricultural risk management, that should be designed to pursue a holistic approach to protect and strengthen rural economies and food production systems, at the same time as channeling funds to the agribusiness and leveraging investment in smallholder farmers. As such, insurance can be promoted as a valuable financial tool for dealing with unavoidable risks that cannot be managed in other ways: a comprehensive risk management approach and process should ensure that risks in agriculture are assessed, prioritized and tackled in a structured way; technical support should be provided to help developing countries move away from a culture of coping with disasters towards a smart management of risk, as well as to encourage insurance companies promote micro insurance innovations designed to specifically cover agricultural and climate risks.
Smallholder farmers and poor rural households are extremely vulnerable to local and global shocks: besides being agriculture their main source of food and income, the sector that these people belong to is the most seriously affected by the climate breakdown; clear evidence can be found everywhere in our global village, including industrialized countries such as the US, where about 46 million people live in rural areas and have been facing distinctive challenges during the Covid-19 pandemic, according to the Centers for Disease Control and Prevention (CDC). By the way, the need to leverage investments designed to boost the provision of services to rural communities could be hardly confined to the insurance industry, as shown by the importance to be attributed to other subsets of rural finance, including those that pertain to microfinance and remittances.
The former can increase access to financial services and loans, so that small-scale producers can invest in their own businesses and hence increase their productivity; the latter can foster financial inclusion and livelihood development in rural communities, as well as promote migrants' engagement in their countries of origin. Actually, people tend to move from rural to urban areas, and beyond borders, to search for better opportunities, that often come about in combination with flows of money sent back home by migrants to their families, to support their efforts to reach "their own SDGs" in terms of reduced poverty, higher standards of health and education, safer nutrition, improved housing and sanitation, entrepreneurship, financial

inclusion and reduced inequality, and enhanced ability to cope with the uncertainty in their lives by increasing their savings and building assets to ensure a more stable future.

Deep-rooted problems and ambitious goals

Helping these families make the most of their own resources is vital as a contribution to reach the SDGs, that provide a unique opportunity to create a convergence between individual plans, government development objectives, private sector strategies to tap underserved markets and the traditional role of civil society to promote positive change. As a strategic to-do list, the 2030 Agenda is set to stimulate efforts that should prove extremely rewarding to people living in rural areas: for instance, Goal 1 is intended to eradicate extreme poverty in all its forms everywhere while Goal 2 aims at ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture; since even details matter, it has been openly declared the commitment to "double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment" by 2030 (Section 2.3), as well as to "ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality" (Section 2.4).

In sight of fulfilling these ambitious goals, it sounds appropriate to prioritize the rural world as the starting point for a world without poverty and hunger, since most rural communities of developing countries depend on small, family farms for their income and sustenance: investing in rural people is a long-term solution to many of the problems that remain to be solved and that encompass hunger, poverty, youth unemployment and forced migration; they all can be fruitfully addressed by investing in small-scale agriculture and inclusive rural development. Furthermore, the generation pact that sustainable development is based on also stands as a catalyst for rural development, since young people mostly leave in the rural areas of low- and middle-income countries and are more likely to be unemployed and poor than adults.

As a result, unless investing in rural areas is intensified and rural economies are developed stronger, our planet and its population will keep suffering from deep-rooted problems that hinder its sustainable growth. From a financial point of view, the need should not be underestimated to support the areas at issue, their households and enterprises, by supplying customized services, thus promoting an inclusive financial industry both locally and globally: as it has been spelled out (Turvey, 2017), "in the process of rural transformation, access to credit can stimulate the production of commodities, encourage the use of inputs such as fertilizer and breeding stock, encourage investment in modern technologies and irrigation, and provide financial services to specific targets, such as low-income households, women, indigenous or under-represented peoples, cooperatives or specific producer groups"; anyway, "policies targeting inclusive finance for inclusive transformation should be targeted towards specific problems" to be as effective as desired.

Inclusiveness and sustainability

According to the World Bank (2014), “inclusive financial systems are those with a high share of individuals and firms that use financial services”: in other words, “without inclusiveness in financial systems, people must rely on their own limited savings to invest in education or become entrepreneurs” and “newly founded enterprises must likewise depend on their constrained earnings to take advantage of promising growth opportunities”; these constraints “can contribute to persistent income inequality and slow economic growth”. The financial side of the coin features underserved market segments and even unbanked people, who tend to rely on informal channels, populated with institutions not always as reputable as traditional banks, as suggested by recent studies (Mori, 2019).

Special thoughts should be devoted to agriculture and rural off-farm activities, that have enormous potential to foster inclusive economic growth, and to rural finance as a strategic tool to advance along the pathway towards fulfilling the SDGs. It can be referred to as “the provision of financial services to a heterogeneous rural farm and non-farm population at all income levels” and, as such, encompasses “a variety of formal, informal and semiformal institutional arrangements and diverse types of products and services including loans, deposits, insurance and remittances”; therefore, “rural finance includes both agricultural finance and rural microfinance, and is a sub-sector of the larger financial sector”, based upon a widely shared definition (Nagarajan and Meyer, 2004).

Examples of rural financial services range from working capital loans for agricultural or raw materials inputs to accessible and safe deposit services, from burial savings groups to rotating savings and loans clubs, from long-term loans for equipment or new technologies (e.g. micro-irrigation) purchase to equipment leasing, from in-kind input supply credit to purchase order financing, from index insurance for crops or livestock to trade financing, from money transfer to other payments services (intra-country or international), as suggested by Mennonite Economic Development Associates (MEDA). Given the wide scope of rural finance, it can definitely have a powerful impact in boosting pro-poor economic development that aligns with the 2030 Agenda: focusing on the agri-food market system, efforts towards sustainable development can prove especially beneficial to micro- to medium-sized enterprises, in terms of decent entrepreneurial work, resilience and empowerment; areas involved should experience progress that include their ability to move from an informal to a formal economic and financial system, hence accessing better healthcare and education options, as well as being better served by banks and other financial institutions, as a contribution to inclusive and sustainable finance.

Results

Looking backward, it can be stated that evolutionary trends in the global financial system and its local subsets in the last couple of decades have had an enormous, positive impact on rural livelihoods, despite what remains on the cards: ground-breaking institutions and new instruments have allowed financial services to grow and broaden their reach, while technology has enabled clients in remote communities to access a wider range of financial products; overall, forward steps have been moved in sight of making the global financial industry more inclusive, though rural communities remain the largest unserved market for financial services. Undeniably, ensuring financial inclusion to these potential consumers can unlock the considerable economic potential of the area they live in and can benefit the rural poor by

increasing household income and decent work, according to policy guidance notes issued by the International Labour Organization (ILO).

To be optimistic, it is interesting to sort out success stories as they provide valuable knowledge that is worth sharing. A case in point has to do with the African Postal Financial Services Initiative, a unique broad-based partnership led by IFAD's Financing Facility for Remittances that was established to bring together the World Bank, the Universal Postal Union, the World Savings and Retail Banking Institute and the United Nations Capital Development Fund, and that was co-financed by the EU: the joint goal was to enhance competition in the African remittance marketplace by supporting and enabling African post offices in offering financial services; more specifically, this initiative rolled out a large technical assistance programme involving private-sector stakeholders, regulators and policymakers in four countries (Benin, Ghana, Madagascar and Senegal) and was aimed at promoting a cheaper, faster, more convenient and more client-friendly transfer of remittances, particularly to rural areas, while fostering dialogue among stakeholders, regulators and policymakers.

Best practices too are worth disseminating, such as those that have been identified by the Food and Agriculture Organization (FAO) to promote rural women's access to finance: various examples of successful policies for providing financial services for rural communities and disadvantaged groups (such as not only rural women but also rural youth) have been made available, including innovative approaches and tailored services, that encompass those aimed at removing gender-based discrimination in the design, promotion and delivery of financial services and those entailing delivery mechanisms through the use of ICT; actually, much hope has been placed in the transformative power of digital financial inclusion, though evidence on the relationship between it and poverty is still limited. Among recent studies, a survey has been conducted on the effects of digital financial inclusion on farmers' vulnerability to poverty in China, based on 1900 rural households, and has unveiled farmers' use of digital financial services as a useful way to improve these people's ability to cope with risk or – in other words – to alleviate their vulnerability induced by risk (Wang and He, 2020).

Conclusions

To sum up, access to finance can be considered a pivotal factor for poverty alleviation but expanding access to financial services for rural communities and – in general terms – for agribusinesses remains an important challenge for formal financial institutions, which often leads these potential consumers to resort to informal, less reputable counterparts: high transaction costs, information asymmetry and the shortage of traditional collateral assets tend keep rural people largely underserved; however, digital financial inclusion should contribute to reduce farmers' vulnerability to poverty. Technological advances are set to spread from industrialized to developing countries, thus fueling feelings of optimism, though most of the world's poor still depend on cash.

At the same time, additional efforts should be undertaken to share best practices, such as those that are designed to promote rural women's access to financial services and that entail innovative approaches: they should allow to eradicate gender-based discrimination in the design, promotion and delivery of financial services, since an inclusive financial system implies that each segment of the population is adequately served in terms of available financial services;

as a result, specific assistance should be provided to certain population groups who tend to get excluded due to their location, income level or type of activity, besides their gender. All in all, financial institutions need to design and adapt their strategies for their rural clients through an understanding of the challenges associated with the agribusiness as a strategic economic sector, that is characterized by multi-faceted dynamics both in rural areas and within the agricultural sector.

On a broader scale – which should entail a wider scope, to include related industries (such as rural tourism, water supply, food quality and safety, to mention just a few of them) – a remarkable contribution to a more inclusive financial system could be made by financial institutions, for instance by promoting alternative forms of guarantees such as warehouse receipts, future harvests, or mortgages on moveable assets (e.g. farm machinery and livestock). Further challenges deal with improving financial education and access to pertaining areas of knowledge, since the average level of financial literacy tends to be low in rural communities, which often prevents households and businesses belonging to them from resorting to effective financial management strategies, including risk management decisions: for instance, using digital tools has proven rewarding in sight of boosting financial inclusion and actually digital financial services provided by ICT companies can generate a larger impact on farmers' vulnerability than comparable services supplied by banks; all in all, expanding understanding of evolving trends and building on collective insights can help to achieve the SDGs, which should allow to more fully exploit the potential of rural finance, to the benefit not only of those making up its traditional target markets but of society as a whole.

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POPULATION FIGURES AND LABOUR MARKET SITUATION IN BÉKÉS COUNTY BETWEEN 2010-2020

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Abstract

In the past 10 years the unfortunate turn of demographic figures has been prevalent in Békés county as well. The county population has been decreased by 10% due to depopulation tendencies and higher mortality as well as diminishing birth rates. However, as a result of the strengthening economy, employment figures and income ratios have significantly improved in the county.
In my study, I am presenting the population and employment tendencies of Békés county in terms of figures between 2010 and 2020. The data has been provided by the Government Office of Békés County and the Hungarian Central Statistical Office. The results are presented via a simple way of analysis. From them, it can be claimed that the county population has indeed decreased, however the rate of both employment and the active population has increased and the number of inactive people has also decreased. The ratio of people in public work has turned into positive, too. In overall terms, it can be stated that due to economic growth the county's population retention capacity has increased.

Introduction

Békés county is considered to be one of the less industrialised counties, thanks to the rural features the county's economy is mainly based on and made up of agriculture and the related manufacturing industry. That majorly and typically includes arable land cropping but so called alternative crops have started to be grown as well recently, which represents a rather higher added value (Futó 2019). Besides agriculture, service sector is to be highlighted. The overruling majority of industrial production in the region has never really been present, although such tendency has slightly improved so far mainly because of the 'cheap' and available labour force. As a consequence, more and more national and multinational companies have tended to set up their headquarters recently.
The past 10 years have left remarkable traits not only in Békés county but as regards forming the country's economy and population. It has several components. From demographic aspects, due to the age pyramid features child reproduction in succession of the so called Ratkó generation has been prolonged. Children of that age were not born in the relatively same period but during a prolonged period of time, even with a 15-year-long delay. Thanks to the opportunities offered by larger cities, young people move there to continue their studies and

stay further on or simply migrate, go to work abroad. Territorial differences, delimitation of rural areas play a large role in the processes (Egri 2019; Kovács et al. 2015). Therefore 10% of the county's population has disappeared in the past 10 years. Simultaneously, during that period the economy of both the country and the county has boosted to a growth, which is well reflected by the employment statistics.
Such population tendencies however are not only typical in our country as in the developing countries a population decline of at least such a rate is generally considered. However, there are countries in an even worse situation, for instance Romania, where up to 40-50 thousand people used to disappear from some larger cities during the same period, and the country's population has even shown a huge decline: with 3 million people minus in the past 10 years, and nearly 1 million people minus in the past 20 years – mainly due to migration to foreign countries (Kiss és Csatári 2016).

Material and method

During my research work, I am observing and making an overview of the population and employment figures typical of Békés county. Data is derived from the statistical resources indicated and the records registered by the Government Office of Békés County's Department of Employment, Labour Affairs and Occupational Safety.
Through the processing works, I am applying the method of a simple analysis thus drawing the conclusions as regards the tendencies.

Results

Tendency changes of the economically active population

Békés county's population was 330.542 in January 2020. The number of the county's population declined by 9,8% (with 36.014 people in numbers) during the period between 2010-2020. Within the population the age group of 15-64-year-old that is considered to be the most active one, composes 64,6% of the population. Their number declined by 13,6% (with 33.720 people in numbers) between 2010 and 2020. According to the demographic figures, our county is featured by an ageing society, which causes a heavier and heavier burden for the active population living here. The old-age dependency ratio in the county was 47,5% in 2010, while it is currently 54,8%.

Similar to the national processes – despite the unfortunate demographic features (declining number of population and ageing society), the figures for economic activity have been increasing in Békés county as well; as such the level of employment has increased while the level of unemployment has decreased. The virus outbreak situation put a brake on the gradual improving tendency of the figures for economic activity but the current data still exceeds the figures measured in 2010.

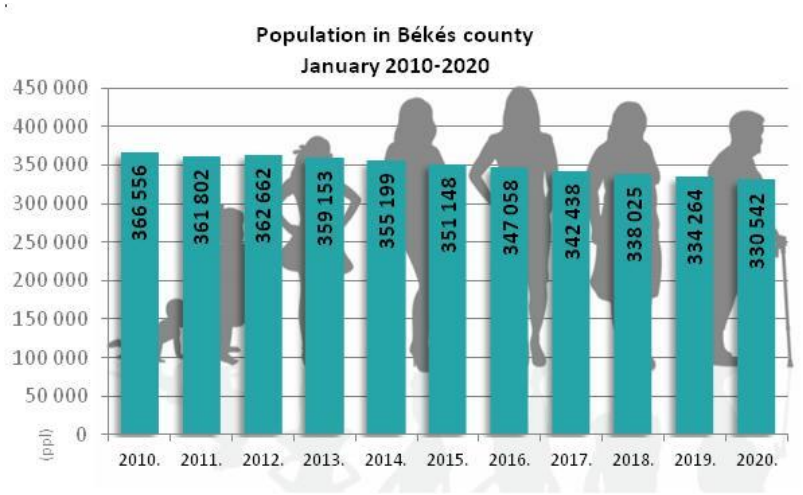

Figure 1. Békés county's population between 2010-2020

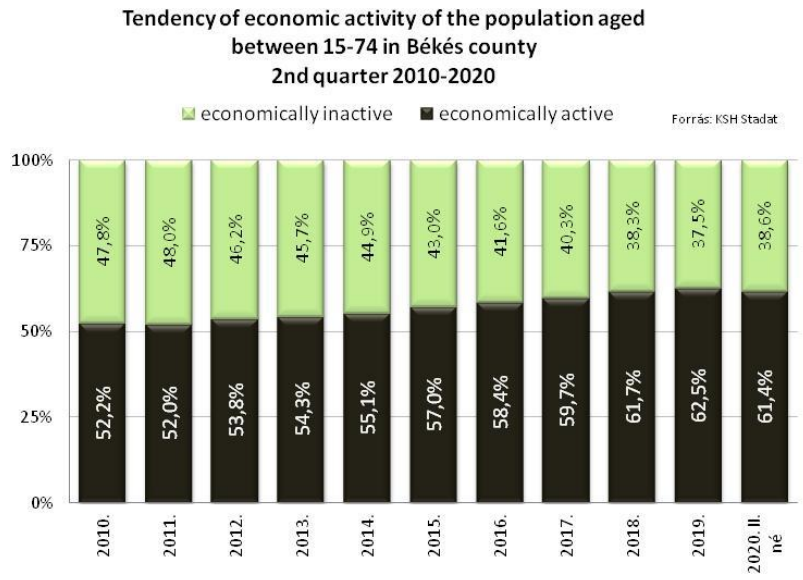

Figure 2. Economic activity in Békés county

Besides population decline, the number of the economically active population within the age group of 15-74, who can be considered relevant from the aspect of economic activity, has reached the number of 154.000 by the 2nd quarter of 2020 as opposed to the number of 147.500 shown at the beginning of the period observed for the 2nd quarter of 2010-2020. During the 10 years examined, the economically active population has increased with 6.500 people. In the same age group the number of people considered to be economically not active has been moderating therefore less and less people remain out of the labour market (Figure 2).

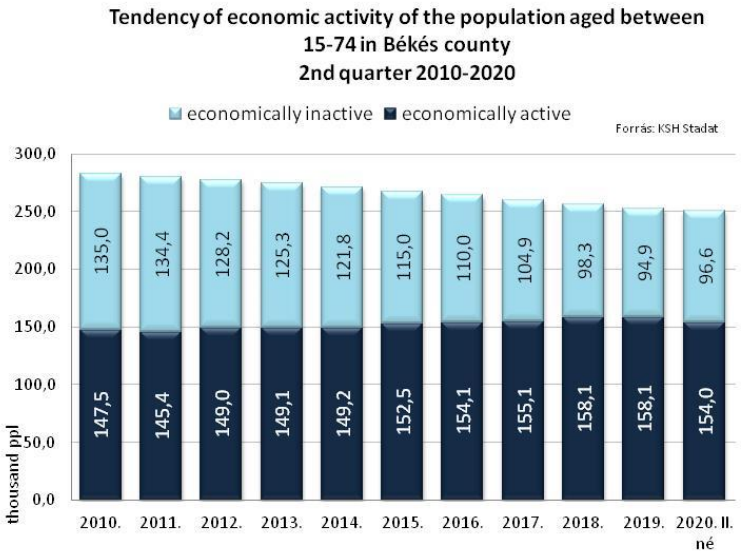

Figure 3. The number of the economically inactive in Békés county

During the period of ten years, the number of the economically inactive within the age group of 15-74 declined with 38.400 people. In terms of the ratio of the economically active and inactive, an intense increase in activity can be seen. According the most recent data, of the population aged between 15-74 residing in the county, 61,4% belongs to the economically active and 38,6% belongs to the economically inactive group. In 2010 that ratio was closer to each other with 52,2% belonging to the economically active and 47,8% belonging to the inactive group.

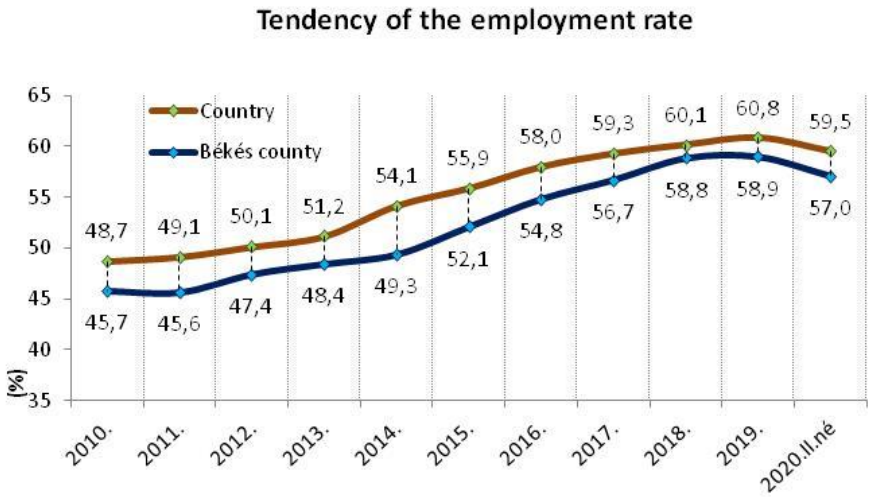

Figure 4. Employment rate in the county

According to the most recent figures, in Békés county 143.000 people belong to the group of the employed (Figure 4). The number of them has been continuously increasing from 2010 onwards; the number of 129.200 shown ten years ago has increased with 13.800, which means a 10,6% increase in staff numbers. Employment rate in Békés county was 45,7% in 2010, which has been continuously increasing in the past few years, and by the date of the most recent survey it has changed by a total of +11,3% point. The rate of the employed within the economically active population is currently 57% in Békés county. That county-level ratio does not reach the level of the national one. Employment rate is in accordance with the national tendencies, it was continuously increasing until 2019, then a moderation process has started recently as a result of the pandemic alert. According to the current data, the employment rate in our county is behind the national average by 2,5% point.

Registered jobseekers

In Békés county the number of registered jobseekers has continuously decreased until the outbreak of the pandemic. Within the period examined, the highest number of jobseekers following the economic crisis was registered in 2011, when a monthly average of 27.782 people was registered (Figure 5).

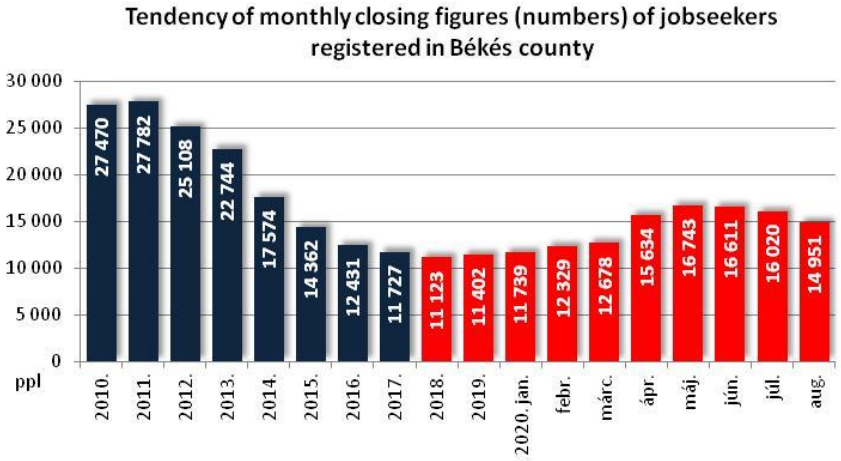

Figure 5. The number of registered jobseekers in Békés county

The number of people seeking for employment diminished by approximately 10% on a yearly basis then, and a significant decrease by 22,7% in 2014 and a moderate decrease by 18,3% could be seen in 2015. By that time, the number of jobseekers registered by the National Employment Service diminished back to 14.000 people. The decreasing tendency continued up to 2018, with a moderation of 5-10%, then in 2019 it came to a halt therefore we were supposedly close to the 'natural level' of unemployment, which meant an approximate number of 11.000 on county level. The year of 2020 started with a moderate increase, then the pandemic outbreak resulted a significant inflow of people into the system. From March to April, more than 35.000 people were registered, later on by May, their number was nearly 17.000 (16.743) with a slight increase. As an impact of the economy protective actions and the boost in labour market, a continuous moderation could be seen during the summer months. The number of

people registered diminished under 15.000 (14.951) by the end of August, and a further slight decrease is expected as regards the number in case the favourable processes are ongoing

The tendency of public work related activities

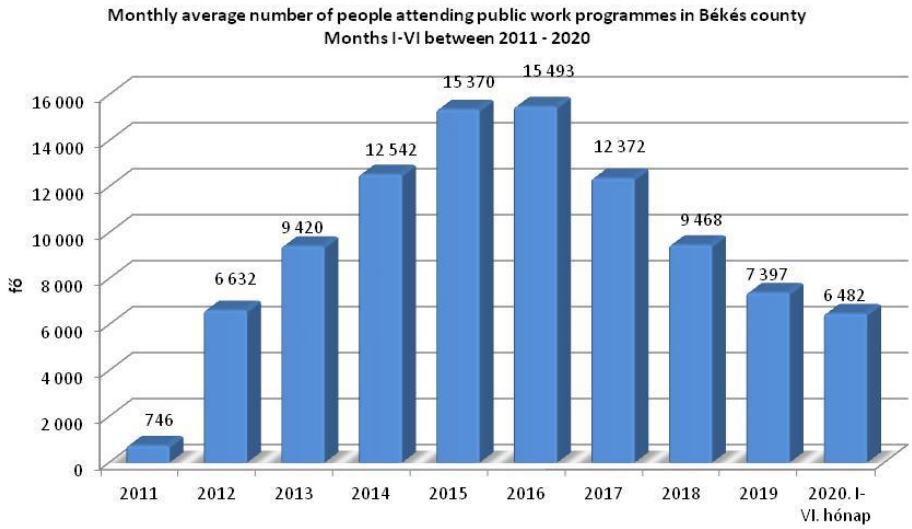

Figure 6. Figures of public work in the county

As regards active employment policy measures, the programme financing public work is one of the tools requiring and using the largest amount of resources in 2020, which is simultaneously an active measure generating and reaching the highest number in supports within the county.
With regards to the disadvantaged labour market situation of Békés county, public work programmes are significant factors of local employment relations even in 2020, the dominant role of it is still of key importance similar to the other backward regions in Hungary.
This year, until the COVID-19 pandemic alert – thanks to the fortunate changes in Békés county's labour market situation – the number of people attending public work programmes has decreased to a great extent. While it was an average of 15.500 in 2016 at the closing day of months, the number **decreased to 6.227 by March 2020**. Following the pandemic however, the number of people in public work was significantly under the expectations if we observe the composition of people (with permanent employment, high qualification or vocational qualification, etc.) losing their jobs due to the economic impacts of the pandemic. Although the number of people in public work (6.414) slightly increased until June, it diminished in July again with a moderate number of 6.366 people.

Conclusions

In the past 10 years, in Békés county similar demographic processes have been taking place as in several other counties with rural features in Hungary, and even in other similar eastern European countries. Employment data however has been favourable, the rate of employment has risen, the number of the active has increased, the number of the inactive has decreased.

Békés county has also accomplished outstanding results as regards public work. These are the obvious consequences of the economic growth occurring in the past 10 years.

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EXAMINATION OF FERMENTABILITY OF ROUGHAGES BY MODEL ENSILING AND DISCONTINUOUS TITRATION

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Abstract

The authors investigated the fermentability of green wheat *(Triticum aestivum)* and alfalfa *(Medicago sativa)* in model ensiling. The samples were after the shredding direct (without wilting) ensiled. The opening of bottles was performed after 6 weeks (at 46th day). The silage samples were immediately organoleptically and chemically examined. The chemical analysis was performed by discontinuous titration, using the method of Kovátsist (1982). Examined at the time of harvest, wheat gave in all respects better results, than the alfalfa. The fiber composition (ratio of NDF and of ADF) and the rumen degradability of NDF were more favorable by green wheat. It produced higher yields (green crop t/ha, dry matter t/ha, and crude protein kg/ha), than the alfalfa. However, by the wheat silages, there was visible mildew in 2 samples. In case of alfalfa, there was no organoleptically objectionable sample. Based on the chemical tests, good (second class) silage was made from wheat, and medium quality (third class) silage from alfalfa. Combining the two methods (model ensiling and discontinuous titration) promises to be a good option, if the samples can be compacted to a sufficient degree.

Introduction

Due to climate change, temperature rises, longer dry periods and less rainfall are expected. The increasing of water shortages in non-irrigated conditions make the cultivation of water-intensive plants risky, such as the corn silage. In the future, we can base the roughage production on the winter cereals with greater safety, which require less water and make good use of winter rainfall (http1). In other cases, winter cereals are sown to reduce erosion, i.e. to keep the bare soil until spring. Then in the spring this cover crops is utilized as alternative forage (Harper et al., 2017). Cereals harvested green are preserved by ensiling (lactic fermentation). The study of the fermentation properties of plants can be greatly aided by chemical processes that are simple and inexpensive, so that they can be performed even in large numbers, but with satisfactory accuracy. In our experiment, we used the method of Kovátsist (1982) to compare a wheat *(Triticum aestivum)* silage and an alfalfa *(Medicago sativa)* silage.

Literature review

The farms with higher forage requirements use double-cropping management, to produce cereals in the winter semester and corn silage in the summer semester. Thus, they can harvest roughage from the area twice a year. However, it is important that the time of harvest is chosen correctly, because it affects the nutritional value of the given plant on the one hand, and the efficiency of growing the next plant on the other (Jacobs et al., 2009; Harper et al., 2017).

Jacobs et al. (2009) showed that cereals (triticale, winter wheat, winter oat) can usually be made into preserved silage, the pH of which is below 4.5 by direct ensiling, and below 5.0 by wilted material. The date of harvest (plant development) significantly determines the metabolisable energy, crude protein, and neutral detergent fibre content. The fermentation processes can also be influenced by wilting or silage additives.

The date of the harvesting affects not only the NDF content, but also the digestibility of the NDF. The NDF and ADF digestibility of wheat harvested at middle flowering is significantly better than that of wheat harvested at the end of the milk stage (Arieli and Adin, 1994).

Harper et al. (2017) found that high milk production can be achieved by feeding of cereals (wheat, triticale) silages, although milk production may decrease and protein utilization for milk production may reduce compared to corn silage. The authors explain the results by saying that the cereals contains more fiber and protein, but less starch than corn.

El-Emam et al. (2014) examined the effect of feeding triticale silage, berseem silage, and mixed (50-50%) silage on lambs. The lactic acid content of cereal silage was higher, and accordingly its pH was lower than that in case of legume silage. The digestibility of TDN and crude fiber as well as the growth performance of lambs proved to be the most favorable when feeding mixed silage.

Material and methods

For our study, plant samples were collected one day (mid-May). At that time the wheat was in the boot stage (head remains inside the stem), the alfalfa was at the end of the young stage, at the formation of flower pre-buds. The samples were after the shredding direct (without wilting) ensiled. The compaction was performed in 700 ml bottles by hand. We filled 5-5 bottles per plant. The samples were stored at room temperature (23-29°C) protected from light. Under practical conditions, it is recommended to wait at least 6 weeks before the beginning of the feeding (http2), accordingly, opening of bottles was performed at 7^{th} week (at 46^{th} day). The silage samples were immediately organoleptically and chemically examined. For both process was used only the lower third of the silage volume.

The organoleptic evaluation was performed in a 20-scores system, in which the odor (max. 12 scores), texture (max. 5 scores) and color (max. 3 scores) of the samples were taken into account.

The chemical analysis was performed by discontinuous titration, using the method of Kovátsist (1982). The essence of the process is to prepare an aqueous extract from the silage feed. The pH of 100 ml of the extract was adjusted to 5.0 and then to 6.0 with n/4 NaOH solution. From the ratio of the two alkali depletions (Mh-value) it can be deduced the acid composition of the

silage (the ratio of lactic acid and of volatile fatty acids). The method gives indicative results, but if this is satisfactory, complicated and costly gas chromatographic examinations can be avoided.

The content of green crops was examinated by the Feed Analysis Laboratory of Animal Production Performance Inspection Ltd.

Results

The post-harvest chemical composition of the green crops

The content values of green crops are shown in *Table 1.*, and the yields in *Table 2.*

Table 1. The results of laboratory analysis of green crops (content)

	Dry matter	Crude protein	Crude fibre	Ash	Sugar	NDF	ADF	ADL	NDF d-48
	g/kg	g/kg DM	g/kg DM	g/kg DM	g/kg DM	g/kg DM	g/kg DM	g/kg DM	% NDF
Wheat	239	174	232	84	146	516	254	21	69.8
Alfalfa	230	229	257	95	70	426	311	48	48.2

Table 2. Calculated yields (applies only to harvest date)

	Green crops (t/ha)	Dry matter (t/ha)	Crude protein (kg/ha)
Wheat	31.3	7.48	1302
Alfalfa	24.2	5.57	1275

Examined at the time of harvest, wheat gave in all respects better results, than the alfalfa. The fiber composition (ratio of NDF and of ADF) and the rumen degradability of NDF were more favorable. It produced higher yields (green crop t/ha, dry matter t/ha, and crude protein kg/ha), than the alfalfa. Its fermentability was also better than that of alfalfa, as the sugar content improved, but the crude protein and ash content reduced the fermentability. In case of wheat, 1 g (crude protein + ash) received 0.57 g of sugar, while in case of alfalfa only 0.22 g (2.5th less). None of the crops contained 300-400 g/kg dry matter, which would be desirable for ensiling.

Results of the organoleptic examination of silages

In case of alfalfa, there was no organoleptically objectionable sample. This is probably related to the absence of mildew in alfalfa. By the wheat silages, there was visible mildew in 2 samples, which affected only the uppermost part of the sample. Because mildew species are aerobic

organisms, they can only grow in poorly compacted or poorly sealed silos (Schmidt, 2015). In the case of wheat, two samples may be classified in the first class and three samples in the second class. The samples in class II. had only a slightly objectionable odor, but their texture and color were normal.

Results of the chemical examinations

The results of laboratory testing of silage samples are shown in *Table 3.*

Table 3. The results of laboratory testing of silages

Samples		pH	Quality class (I-V.)	Mh	Quality class (I-V.)
Wheat	1.	4.12	II.	0.69	II.
	2.	4.56	III.	0.48	III.
	3.	4.51	III.	0.51	III.
	4.	4.04	II.	0.73	II.
	5.	3.97	I.	0.77	I.
	Average (n = 5)	**4.24 ± 0.28**	**(II.)**	**0.63 ± 0.13**	**(II.)**
Alfalfa	1.	4.51	III.	0.48	III.
	2.	4.51	III.	0.48	III.
	3.	4.52	III.	0.49	III.
	4.	4.51	III.	0.50	III.
	5.*	4.97	IV.	0.05	IV.
	Average (n = 5)	**4.60 ± 0.20**	**(III.)**	**0.40 ± 0.20**	**(III.)**

*Repeat test, the result of the repeat is the same.

The experiment was performed as a preliminary study with a small number of samples, therefore, the quality of silage samples did not differ significantly according to the Welch-test. However, evaluated by the method of Kovátsist (1982), they are in different quality classes. Using the chemical test, a different quality order can be established, than by the organoleptic test.

- Wheat

The samples, based on both pH and quality quotient (Mh), are shown in quality class I-III. Based on the average values of the 5 samples, class II. silage is made of it. The result is in line with the data obtained during the examination of the content of green crops, according to which the fermentability of wheat is better than that of alfalfa.

- Alfalfa

  With the exception of sample 5, all can be classified into a quality class III., and a small standard deviation was observed (the quality is very uniform). The results of sample 5 were remarkably weaker, despite the fact that they were organoleptic no different from the others. The reason for this was clearly not clear. Overall, despite the very low dry matter content (below 25%), without additives, it was made into medium quality silage under the conditions of the study.

Conclusions

Based on the results, this model silage technique seems to be suitable for the examination mainly of alfalfa. The moldiness of some of the wheat samples suggests, that there may be compaction and sealing difficulties in the case of cereals, and it is more difficult to ensure suitable (airtight) conditions for fermentation.
The discontinuous titration by Kovátsist (1982) can be used to compare the fermentability of different crop samples, because the difference between wheat and alfalfa can be detected, which was expected based on the content of green crops. It can reveal fermentation defects that we don't yet notice with a simple organoleptic test, and especially with little practice.
Combining the two methods (model ensiling and discontinuous titration) promises to be a good option, if the samples can be compacted to a sufficient degree.
If visible mildew develops in the upper layer of the samples, the quality of the lower parts is also not more than medium (class III.) by chemical examination, for such a silo size (700 ml).
Based on a simple pH measurement and discontinuous titration (Mh-value), the assessment of the quality of the samples is very similar (in our case completely identical). We found a very close linear correlation ($r = -0.97$) between pH- and Mh-values.

Recommendations

As a continuation of the study, it would be worthwhile to repeat the examination with cereals. More attention should be paid to adhering to the small and even chopping size, and sealing as airtight as possible! In practice, if the right amount of hay is fed to the animals, the chopping size of the silage can be up to 6-8 mm, which is favorable for fermentation (Schmidt, 2015). This would presumably improve compressibility because less air could remain inside and between the hollow stems. In case of cereals in particular, the use of more than 5 replicates should be considered in order to have a sufficient number of data for a more thorough statistical analysis.

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WINE TOURISM DESTINATION IMAGE: THE CASE OF GEORGIA

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Abstract

Competitiveness of a destination depends on numerous factors; among them one of the key aspects is an impression that travellers have about a place. When people have an attractive image of a destination, it positively affects their travel destination choice. In a fierce competitive environment, it becomes harder for the destinations to be strongly positioned in their target travellers' mind. Georgia is an emerging wine tourism destination with long history, distinctive culture, gastronomy, and exceptional nature. Based on previous studies the destination is often positively perceived by the travellers. This research aims to find out travellers' perceptions of Georgia's destination image with a qualitative methodology. Recent studies have explored Georgia's holistic functional and holistic psychological image dimensions, while our study is focused on the unique dimension; it means that our paper uncovers the attractions that travellers consider as unique for Georgia.

Introduction

Today's independent traveller seeks tailor-made experiences, authentic culture and more involvement with locals (Fang, 2020); as it is predicted by Fang (2020), travellers who are increasingly curious will keep pursuing special interest, intriguing adventures. Wine tourism is one of these special interests which introduces the culture of the wine regions to the tourists in a fascinating way.

UNWTO declares wine tourism as an essential constituent of gastronomy tourism, which can contribute to the conservation of cultural and natural resources and to the sustainable economic and social development of the destinations (World Tourism Organization, 2016). Tourism fosters wineries' promotion, sales, brand loyalty and customer relationships and stimulates rural development, destination marketing opportunities and sustainable regional development (Alonso, Bressan, O'Shea, & Krajsic, 2015; Carlsen & Charters, 2006; Koch, Martin, & Nash, 2013). Wine tourism directly and indirectly facilitates job creation and progress of the local businesses (Carlsen & Charters, 2006).

Based on the added value for the wine industry, the development opportunities for the rural areas and regions, and its nature of being a special interest for curious tourists, wine tourism will very likely keep flourishing in future. Hence, DMOs of the areas with wine tourism

resources will need to reinforce their positioning strategies to overcome the augmented competition for target travel markets.

Although wine tourism destination (WTD) image is extensively studied internationally, the research about Republic of Georgia is in its nascent period. A wine tourism is a relationship between the destination, stakeholders, and wine tourists; in this research we decided to analyse the current image of our target area, Georgia, from the travellers' perspective. WTDs need to be competitive to attract desired tourist markets. Image of a WTD is a crucial factor for successful competition. Hence, our research is timely for Georgia in increasingly competitive environment.

Literature review

According to the WTO for many destinations, food-making as well as winemaking represent an integral part of their history and identity and have become the key element in the nation's brand image. Gastronomy tourism has a broader meaning and is characterized by the visitor's experience linked with food and related products and activities while travelling. Besides many definitions (Hall, 1996, Macionis,1996, Getz&Brown, 2006; Dávid& Bujdosó, 2007), as a part of gastronomic tourism wine tourism, also referred as enotourism, oenotourism or vinitourism means travelling with the purpose of tasting, consumption or purchase of wine, often at or near the source. Wine tourism also can consist of visits to wineries, tasting wines, vineyard walks, or even taking an active part in the harvest. Beside diversifying tourism in a destination, gastronomy and wine tourism contribute to promoting and branding destinations, maintaining and preserving local traditions and diversities, and harnessing and rewarding authenticity; however wine tourism also can be utilized for regional development (Hall&Mitchell, 2000).

Wine tourism destinations try to attract the visitors with the guidance of positioning strategies based on the features such as magnificent landscapes, unique wine styles and winemaking culture, heritage and so forth. There are some destinations that managed to form the impression of the outstanding wine tourism destinations in the eye of the wine tourists; examples of excellence are Bordeaux, Tuscany and Napa Valley (Scorrano, Fait, Iaia, & Rosato, 2018). It is crucial for the DMOs to be aware of the destination image that is perceived by the prospective wine tourists or the ones who already visited the wine regions. Knowing the perceptions of the wine tourists will help DMOs understand how well their positioning strategies work, or it will aid them in designing a new strategy if they do not have one.

Researchers agree that the studies about destination image originate from 1970s (Baloglu & Mccleary, 1999; Echtner & Ritchie, 1991; Gallarza, Gil Saura, & Calderón García, 2002; William C. Gartner, 1994; Stepchenkova & Mills, 2010). Authors have covered wide range of topics among which some of the most dominant ones are related to the conceptualization (Echtner & Ritchie, 1991; Gallarza et al., 2002), destination image formation (Baloglu & Mccleary, 1999; William C. Gartner, 1994; Santos, 1998), destination image measurement (Chen & Hsu, 2000; Echtner & Ritchie, 1991, 1993; W. C. Gartner, 1989), changes in destination image (William C. Gartner & Hunt, 1987; William C Gartner & Gartner, 1986),

destination positioning (Ahmed, 1991; Alford, 1998; Calantone, Di Benedetto, Hakam, & Bojanic, 1989; Guthrie & Gale, 1991) and so forth.

The link between wine and tourism is increasingly important for the competitive advantage of the territory and its productions, and it must be adequately communicated, in particular, online. Scorrano et al. highlighted, as in today's communication environment, a strong brand can be created and maintained by strengthening the linkage between identity and image (Scorrano et al., 2019). They proposed a framework which allows a tourism destination to increase the flow of information on which to build or strengthen the brand identity by aligning with the brand image. They stated that this could be particularly useful for smaller and less-popular destinations.

Place marketing and branding is also important to attract actors of tourism (tourists, investors, new inhabitants) and building an attractive place image (Christiaans, 2002; Stubbs et al., 2002; Ulaga et al., 2002) or a cultural and tourism destination image (Dahles, 1998; McCann, 2002; Seo, 2002). According to Dawsan et al. (2011), many studies exploring place-marketing images have considered 'the past' as a resource that can be exploited in order to craft a place image (Boyer, 1992; Chivallon, 2001; Graham et al., 2000; Kearns, 1993) and stories of the people, places and processes behind wine production are particularly important in the marketing of wine and wine-related experiences and they also stated that many wine producers rely on wine tourism for sales and as a means to build brand loyalty (Fountain et al., 2008; O'Neill and Charters 2006).

Material and methods

Echtner & Ritchie (1991) have defined the dimensions which help researchers in measurement of the destination image. The first dimension differentiates functional component of the destination from the psychological one; the second dimension refers to the attribute-based measurement of a destination image versus its holistic perception; and last dimension differentiates the common characteristics of all the destinations versus the uniqueness of a specific destination (Echtner & Ritchie, 1991). A destination image and its dimensions can be measured with the number of methodologies (Gallarza et al., 2002; Nghiêm-Phú, 2014; Pike, 2002; Stepchenkova & Mills, 2010). The imagery is studied both with quantitative and qualitative methodologies while for more precise results it is advised to utilize them simultaneously (Echtner & Ritchie, 1993).

Ritchie & Crouch (2003) note that measuring a holistic image of the destination is frequently carried out by asking the respondents the following open questions:

„1. What images or characteristics come to mind when you think of XXX as a vacation destination? (functional holistic component)

2. How would you describe the atmosphere or mood that you would expect to experience while visiting XXX? (psychological holistic component)

3. Please list any distinctive or unique tourist attractions that you can think of in XXX. (unique component)" (Ritchie & Crouch, 2003:193).

Our research aims to overview the touristic destination image of Georgia based on recent studies and to contribute to them by answering the following research question:

What is the unique component of Georgia's destination image?

To reach our study goal, an unstructured methodology in form of an online questionnaire was used. On the one hand, the questionnaire incorporated the open question suggested by Ritchie & Crouch (2003:193) for studying the impressions of the travellers and to answer the research question. On the other hand, close-ended questions were asked to capture respondents' demographical profile. The sample of respondents was people with origins other than Georgian. The data was processes in Excel.

Results

Destination image of Georgia

Georgia is an ancient winemaking country whose natural, cultural, and other resources turn it into a competitive wine tourism destination. Tourism has a key role in country's economy. Based on the Georgian National Tourism Administration (GNTA) in 2019 tourism share in the country's GDP was quite large reaching 8.1% (Georgian National Tourism Administration, 2020). In recent years total expenditures by international visitors were gradually growing, amounting 8.5 billion GEL in 2019 (Georgian National Tourism Administration, 2019).

Georgia's image was studied by Ecorys Polska Sp. z o.o (2017) between August-October 2017. In one part of the research local stakeholders and residents were asked about Georgia's uniqueness, where they responded that „Unique features of Georgia include untouchable nature, diverse climate, geographical vicinity of sea and mountain resorts, as well as rich water resources, balneology resorts, ancient historic sites, unique Georgian cuisine, wine and hospitability." (Ecorys Polska Sp. z o.o., 2017:30). In our research we will try to find out the unique component of Georgia's destination image and compare it to the one that is suggested by the local stakeholders and residents in the abovementioned quote.

Georgia's image is also researched in two of our preceding studies focusing on some of the dimensions of destination's image (Sekhniashvili, n.d., 2020). Sekhniashvili (2020) studied the holistic image of Georgia with the qualitative methodology suggested by Ritchie & Crouch (2003:193). In the research respondents had to answer the following question: "Write three words what comes in your mind when thinking of images or characteristics of Georgia as a travel destination" (Sekhniashvili, 2020:1000). The paper revealed that words related to „mountains, nature and landscapes", „wine" and „cuisine" were the first three most frequent associations when asking the respondents about the images or characteristics of Georgia as a travel destination (Sekhniashvili, 2020). The Table 1 was created based on the results of the research by Sekhniashvili (2020). We can clearly see that most of the associations are more

functional or tangible than psychological. With this research it was not possible to study the more psychological characteristics and neither the unique qualities of Georgia as a tourism destination.

Table 1. The holistic image of Georgia as a travel destination

Mountains, nature and landscapes	28%
Wine	14%
Cuisine	13%
Positive characteristics	10%
People and hospitality	7%
Heritage and architecture	6%
Culture and traditions	6%
History	4%
Geographical places	4%
Unlisted	2%
Adventure	2%
Negative	2%
Affordability	2%
Color green	1%

Source: Sekhniashvili, 2020:1000

Another research related to Georgia's destination image was devoted to explore the holistic but more psychological characteristics of the image of Georgia as a tourism destination (Sekhniashvili, n.d.). The research explored the dimension of image which was missing from the Sekhniashvili's (2020) paper. The methodology was adopted from Ritchie & Crouch (2003:193); the respondents were asked to write their associations when thinking about the atmosphere or mood what they would expect to experience when visiting Georgia (Sekhniashvili, n.d.).

The study discovered that in terms of psychological holistic characteristics, most often travellers associate Georgia to the „welcoming", „relaxing" and „happy" atmosphere or mood

(Sekhniashvili, n.d.). The rest of the associations with the corresponding shares in the responses are displayed in Table 2 which was built upon the results of the research by Sekhniashvili (n.d.).

Table 2. The holistic and psychological image of Georgia as a travel destination

Welcoming	28%
Relaxing	14%
Happy, lively	9%
Positive	8%
Nature	6%
Historical & traditional	5%
Food & wine	5%
Negative	5%
Authentic	4%
Culture related	4%
Curiosity	3%
Exciting	3%
Unlisted	3%
Beautiful	3%
Adventurous	2%

Source: *Sekhniashvili, n.d*

Our research is focused on understanding the remaining unique component of Georgia's touristic destination image which will help us see the full image of Georgia from the holistic point of view.

Survey design

The research was conducted between March 24th and May 6th of 2020 through Google Forms. The online questionnaire was created and tested by five people before sharing it with the

respondents. The replies were gathered on Facebook groups and the nationalities of the respondents where other than Georgian. Otherwise the sampling was random.

The survey contained four different sections of questions. The first section was a close-ended question which tested the eligibility of respondents by asking the following question: „Have you ever heard that Georgia (the country) is a tourism destination?". Replying to this question with „No" automatically excluded the participants from the survey. Overall, 345 people submitted the online questionnaire from which only 77% of respondents were aware that Georgia was a tourism destination.

Second section intended to create a demographic profile of the sample, more precisely the respondents' age, gender, nationality, education, marital status, and occupation. 64% of the respondents was female, 35% was male, while 1% preferred not to say. The sample was distributed through all age categories, but most people (49%) were 25-34 years old. 92% of the respondents had higher education and most of them were employees (53%) or students (25%). 43% of people were single, while others were married (26%) and in a relationship (23%). The respondents were from 66 different countries that were classified in four regions. 75% of people were from the region of Europe and Eurasia.

While the research had to know the impressions of the travellers, the third section had to find the respondents' frequency of travel. Most of them travelled either 1-2, 3-4 or 5 times in a year. Even though 3% of respondents did not travel at all, while representing a very low share, their responses were included in the data analysis.

The purpose of the final section was to find an answer for the research question. An open-ended question which was asked to the sample was adopted from Ritchie & Crouch (2003:193) and it was formulated as follows: „Write three distinctive or unique attractions what comes in your mind when thinking of Georgia as a travel destination". With this question we explored the uniqueness of Georgia which differentiates it from its competitor destinations. The survey provided overall 687 words and, in some cases, short phrases. Initially, the words were read, and the same or alike ones were grouped together by the authors. Each group then was labelled with the most representative titles. Consequently, 20 labelled groups have been formed.

The unique characteristics of Georgia's destination image

The unique characteristics of Georgia's destination image are listed in Table 3 which demonstrate the most important groups of words and short phrases that were provided by the online survey respondents. At a glance to the Table 3 and considering the Table 1 and Table 2, it is evident that in our research some new group of words have appeared which prove that our goal to know more about the unique characteristics of Georgia's image was successfully reached.

A group of words related to *wine and food* has highest share (18.5%) in the Table 3 which means that Georgian gastronomy and wine are key unique attractions in travellers' opinion. This group involved words such as "wine", "wineries", "food", and names of few dishes, such as "Khachapuri" and "Khinkali". *Wine* and *cuisine* also occupied one of the highest positions in Sekhniashvili's (2020) research of holistic image of Georgia. This fact reveals that wine and

gastronomy has a core role in the travellers' impressions about Georgia and it is perceived as a distinctive attraction.

The next largest group of words (14.3%) is labelled as *Tbilisi*. This group incorporates the word "Tbilisi" and sights in the capital like "Narikala", "old city", "baths", "Holy Trinity Cathedral" and others. *Tbilisi* did not have any significance in none of the preceding research, which ones again makes us convinced that the question asked to the respondents successfully collaborated with our goal to find out unique attractions.

Without our current results we would not be able to know whether *Mountains and nature* is just a part of Georgia's holistic image which is common characteristic for many destinations, or it also is a feature that differentiates Georgia from competitors. Consequently, receiving 14% share in the responses, and occupying third place means that Georgian *Mountains and nature* is not simply a part of its holistic image, but travellers certainly consider it as a distinctive attraction.

The next group of words was labelled as s*ights (general & specific)* and it has 8% share. In s*ights (general & specific)* there are grouped different kind of words, such as some specific attractions like cave city of "Uplistsikhe" which was mentioned 6 times, a town of "Borjomi" (mentioned 5 times), as well as more general words like "castles" (mentioned 6 times), a little town of "Chiatura" (mentioned 3 times) and so on. However, none of the words was mentioned more than 6 times which could mean that these specific attractions are not widely known by the travellers' audience yet.

Adventure has been represented both in Table 1 and Table 2 with 2%. When asking about unique attractions, it received higher share of 5.7%. People mentioned words related to "skiing" 11 times, "hiking" 10 times and some others without greater importance.

There were some respondents who wrote that they had *no information* about Georgia's unique attractions. The replies were: "I don't know any", "no information", "I don't remember" and so forth.

We labelled the next group as *churches (general & specific)* and it has 3.9% share. You can find churches and monasteries everywhere in Georgia, and there are many ancient examples too. A visit to at least one church is often included in the tours planned in Georgia. In this group the words were mainly general like "churches" and "monasteries", however few more precise names have been mentioned too; for instance, "Gelati Monastery" (mentioned 3 times).

Culture, history group received 3.5% in responses and it mainly was composed of the words such as "culture" and "history" themselves.

The following labels were *Kazbegi* with 3.3% and *Batumi* 3.3%. We grouped the words like "Kazbegi", "Gergeti Church" and few others in *Kazbegi,* while *Batumi* was principally composed of the word "Batumi" itself. *Black Sea* also got recognizable share of 3.3%. The rest of the groups have quite low weight, but it should be emphasized that in our results there are many labels that were not significant in none of the previous research.

Table 3. The unique characteristics of the image of Georgia as a travel destination

Wine and food	18.5%
Tbilisi	14.3%
Mountains and nature	14%
Sights (general & specific)	8%
Adventure	5.7%
No information	4.8%
Churches (general & specific)	3.9%
Culture, history	3.5%
Kazbegi	3.3%
Batumi	3.3%
Black Sea	3.3%
Not classified	2.9%
Svaneti	2.8%
Stalin, soviet	2.3%
Vardzia	1.9%
Villages	1.9%
Kakheti	1.9%
People	1.6%
Mtskheta	1.5%
Negative	0.6%

Source: Own construction based on the survey result)

Two word clouds have been created for better visual representation of our results. The Figure 1 is built on the results of the 20 groups which were classified from the pool of 687 words, while Figure 2 displays words without any classification. The Figure 2 was necessary to show the most important words which might have been hidden behind the labels.

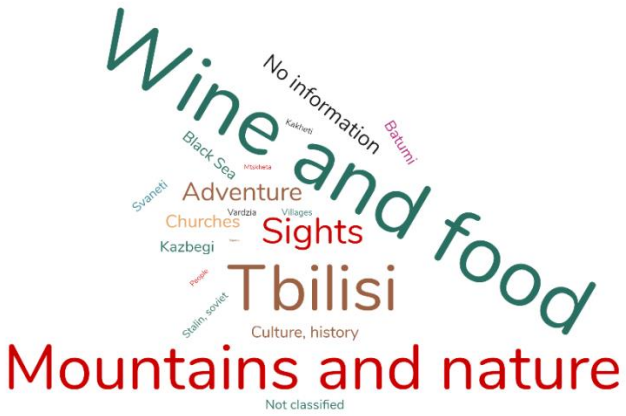

Figure 1. Word cloud illustrating the unique image of Georgia as a travel destination (a)

A research by Ecorys Polska Sp. z o.o. (2017:30) explored that according to the Georgian stakeholders and residents "untouchable nature", "diverse climate", "geographical vicinity of sea and mountain resorts", "rich water resources", "balneology resorts", "ancient historic sites", "unique Georgian cuisine, wine and hospitability" are the unique attractions of the country. Based on our results, most of these unique attractions had significant role in travellers' impressions too. However, "rich water resources" and "diverse climate" have not been directly mentioned by travellers. Probably these two points are too general to note separately as a unique attraction of a destination. To sum up, with our research we discovered that travelers have the similar image about Georgia as a touristic destination as the local stakeholders and residents.

Figure 2. Word cloud illustrating the unique image of Georgia as a travel destination (b)

Conclusions

Our research aimed to find out the unique dimension of the Georgia's holistic destination image from travelers' perspective. In this way we contributed to the WTD image studies related to Georgia. The research about Georgia's image was carried out by few authors (Ecorys Polska Sp. z o.o., 2017; Sekhniashvili, n.d., 2020). As the previous papers have not studied a unique component of Georgia's image, which is one of the key dimensions according to Echtner & Ritchie (1991), it can be considered as a novelty of our research. Georgia's distinctive attractions from the travelers' perspective are not only some particular sights, but also its mountains, nature, food, wine, villages and others in general. The respondents mentioned such specific attractions like Tbilisi, Batumi, Black Sea, Svaneti, Vardzia and so forth. GNTA or other interested oragnization can use this information and strengthen the promotion of any attraction that is not firmly represented in our results.

We suggest that the research about Georgia's destination image should involve larger samples as well as country-specific studies to find out what are the impressions of particular target travel markets, for instance highest-spending travel markets that Georgia aims to attract (Georgian National Tourism Administration, 2015). Moreover, we advise that future studies involved both holsitic and attribute-based image measurement methodologies as it is recommended by Echtner & Ritchie (1993).

Summary

In Georgia, where the winemaking is centuries old, a new way of development in a form of wine tourism has been reinforcing through last decade. This development does not only refer to a wine industry, but also social and regional development. Wine tourism has often played principal role in revival of the rural areas and regions. However, for significant results, wine tourism destinations need to be more competitive and attractive than their rivals. While destination image is one of the determinants of competitiveness of these areas, DMOs try to understand the image perceptions of their targeted travel markets. In case of Georgia, destination image has been scarcely studied. Our research aimed to contribute to the existing and ongoing researches about wine tourism and destination image of Georgia. We have overviewed preceding studies and we have discovered Georgia's unique attractions based on our online survey. Our paper used qualitative methodology in form of online questionnaire. It was found that Georgian wine and food occupies a principal part in people's impressions about distinctive or unique attractions of Georgia. In addition, the capital of Georgia - Tbilisi, and Georgian Mountains and nature have all great values based on the respondents' replies. Our study clearly displays the importance of each attraction which was gathered from travellers through the open-ended question. By using methodology, respondents were not limited to evaluate specific attractions, but they were free to list any attraction that came in their mind. In this way we guaranteed more precise results about unique dimension of Georgia's image.

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QUALITY OF THE RURAL TOURISM IN HUNGARY

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Abstract

The development of the rural tourism helps the conserving force of the countryside and the operability of the small and medium-sized enterprises. To conserve the dynamic of the rural tourism's growth, the winning of the young generation and the creating of cooperation between the individual NUTS levels (processus, counties and regions) would be important. Besides of this more attention has to be paid on the development of tourist cities, because on the field of growth they bring the increase. At the marketing activity of the rural tourism nature, traditions, silence and good air could be brought into focus, and it is necessary to improve these attributes (e.g. to take measures so the young people would think on getting know the local gastronomic culture, traditional living conditions and professions). The network of FATOSZ manages the local and regional destinations with big knowledge and professionalism, therefore the support of the association is surely necessary for further development. The FATOSZ is also an association serving renewal, opposite to the competitors the touristic product cannot renew without the configuration of a diversified quality tourism.

Introduction

Since 2010, the number of guests, rooms and hosts of rural tourism have been decreasing, it fell back during the pandemic. The main target groups of the rural tourism are, families with children, who participate in domestic tourism, and young people related to youth tourism, furthermore in 2009 in Hungary, the economic and financial crisis hugely reduced these people´s discretional income. In point of motivations, it can be shown that domestic tourists do not show too much interest about the townships of Alföld. Contrarily with foreign people, besides traditional activities (the cognition of cultural-historical heritages), they are interested in hiking, get familiar with folk crafts (pottery, embroidery, hand-loom weaving) not mention the involvement of the work around the house.

Earlier, the tourism products disposed of positive data about the average stay per night, to increase those numbers again, the modernization and the quality reparations of the rural accommodations would be indispensable. The number of guests of rural accommodations have been analyzed in regional dispersion, this could tell that the most tourists arrive in the region of Heves and Borsod-Abaúj-Zemplén, however they've been closely followed by Vas and Győr-Moson-Sopron regions, where the quality of the accommodations also shows salutatory changes.

For the qualification of the accommodations, several kinds of trademarks will be available (exp.: ökoporta), in theory all of these types could be an effect on the rural tourism as well, if it would be true, it could make a bigger difference among the 1253 sunflower-guest houses (Csizmadia, L. 1992).
At the rural accommodation establishments 1-4 sunflowers are used in conformity with several quality criteria, the external (building, courtyard) and internal (building, installation) spaces, the variety of services and their necessary staff requirements are classified separately.
The trademark that certifies the rural accommodation establishments with a sunflower is created and operated by the ministry led by the minister of tourism, whose fundamental purpose in accordance with the 239/2009. (X. 20.) government decree that contains the detailed terms and conditions of the accommodation service activities and the order about the issuance of licenses for operation of accommodation, is to guarantee high-quality accommodation services that meet the professional expectations. The classification of services is executed on the basis of professional criteria that was developed by the Association of Rural Tourism and Agrotourism and was approved by the ministry led by the minister of tourism.

In the sunflower system of the National Trademark certification, 1253 accommodations have been registrated until the end of 2016. The high number shows that it is necessary to make quality renovations in the area of lodging.
From the 1253 rural guest houses (FATOSZ 2016):

- 2 sunflower: 24
- 3 sunflower: 160
- 4 sunflower: 1069

From this data, it can be seen that the system does not work correctly, because its aim should be the branding, so they could make an actual qualitative difference among the rural accommodations. By analyzing the data, it can be told that during the classification almost every accommodation has got the 4 sunflowers, this is the reason why it is so difficult to make a difference in quality within the system. The re-valuation is in progress, but the systematization under these conditions is unserviceable.
Regarding the distribution of trademarks, Borsod-Abaúj-Zemplén county leads, then Szabolcs-Szatmár-Bereg county follows on the second place, while Heves and Baranya counties are on the third and fourth place.
Each of the accommodation rating marks can affect the rural tourism, as a tourism product. However, it would be worthwhile to separately mark the eco-receptions that engage in organic farming with a green sunflower eco-label as well. The definition of eco-label refers to a certificate of a certain level of environmental performance that can be acquired voluntarily. Its attainment is based on objective criteria and any product, manufacturer or service provider that complies with the given conditions can obtain it. (Bodnár, L. 2005)
Eco-labels encourage the entrepreneurs to be more mindful during their activities of the requirements of environmental, social, cultural and economic sustainability, thus present a responsible attitude towards their environment. Eco-labels are capable of distinguishing those products and services that meet the environmental, social and economic standards on a higher level than as it is required by the legislation. This distinguishing mark allows consumers to

consciously choose the certified product and the companies that manufacture and sell it can gain a competitive advantage (WTO 2004).

Material and method

The number of asked people was 250, and the exact residence of the respondents is going to be shown in the Appendix.
As it was already mentioned before, the questionnaires were sent out to the writer's relatives and friends through e-mail, furthermore it was available on a social network as well. This is the reason why the residence and the age of the asked people is diverse and the most respondents do not belong to the 18-25 age group. As the interviewees have stated that most of their guests are families and retired people, it is an advantage of the writer that the quantity of more than 26 years old people (140 out of 250) is significant. This will help the writer to get more precise results.
The distribution of the answers among the guests was very similar. A little more than half of them marked the answer that they did not go for a vacation more often before 2020. 'Did you go for a holiday more often before 2020 (before the pandemic crisis)?" Table 1. represents the answers for this question.
In connection with table 2., the author raised a question about the frequency of making a holiday. There were several answers which are not shown in table 3. as people chose "Other" option and wrote down their own precedents. 26 respondents chose this option and most of them wrote that they go for a holiday less often than once a year. There are some who can afford it only in every 5, 4, or 3 years, there are only a few people who said every 15 years and there is only one person who has never been anywhere yet. Still the most people have the chance to go for a vacation at least once a year which is not a too bad ratio if we consider that most of Hungarian people have financial problems nowadays.
For the delight of Hungarian accommodation providers, the most of respondents'holiday destination is within the country, only 27.82% choose to go abroad. Table 4. is showing these results, furthermore table 5. is indicating the popularity of seasons, when people are willing to make their journeys.
Both tables corroborate the interviewees' experience in connection with the seasonality of the business. Hosts all explained that the busiest time of the year is July, August and so go the asked people for holiday. As it is shown in the table, 71.3% of the travellers make their trips and vacations in summertime. Out of the 34 people who marked winter, only 18 go with the reason of doing winter sports (shown in table 6.). As most of the people can afford themselves to get out from their everyday life only once a year, it can be guessed that they tend to choose a place where they can practice recreation and relaxation. The author asked the respondents to mark the given reasons why they usually go for a holiday and they even had the chance to mark more than one answers. Table 6. is going to show which answers were the most popular among them. Some other answers have been received as well, such as visiting relatives or being
together with the whole family. For many people, holiday making is not only a getaway possibility but a precious time which is used for being with those family members whom they can not see every day. It has been already explained before, that the most respondents spend their holiday in guesthouses and the hosts also declared that families visit their homes a lot of

times. Now it can be considered that people's first aim is relaxation combined with trip makings which are primary key elements of a rural guesthouse's feature.
The author asked her respondents to make an order among the given services which are possibly available at a rural guesthouse. This way the author can conclude, what are the needs and requisitions of tourists towards a guesthouse.
It might be not surprising that a separate bathroom, breakfast and closed parking facility are the most wanted services among tourists. On the writer's opinion, the free WiFi, laundry service, gym and fitness centre and jacuzzi services are on the same level as none of them are usually available at a rural guesthouse. Although free WiFi reached a quite big amount of votes, which is mirroring back how today's people are depending on and addicted to computers and the internet. It gained even more votes than renting a bike or motorbike, which would be a much relevant way of spending free time. In case of dining, the results show an accurate order as breakfast then dinner are more popular needs than lunch. The writer raised the same question, but this time the respondents were asked to mark their most important needs towards a 3-4 stars hotel.
The three most wanted services are the same as it was in the case of a guesthouse: separate bathroom, breakfast and closed parking facility. After these three, a very tight competition can be seen among the services. On the author's opinion, the reason for this is that people's demand towards a hotel is much higher than towards a guesthouse.
When people stay at a hotel, they desire more comfort and services than a rural guesthouse and its runner can offer. This is why the interviewees and the hotels'managers both told that they are not competitors to each other. The guests of each accommodations have different expectations, service needs moreover hotels are more popular and can be seen more often in the media. Besides these, hotels make more efforts in advertising as well. The way of advertising by rural hosts has been already discussed, but tourists were also asked in the questionnaire that how they choose their holiday destinations.
Despite the fact that respondents had the opportunity to mark more than one answer, there were not numerous variations in the table. Altogether there are 385 markings for the answers of this question which means that the average marking of one person is only 1.54. So one person prefers only one or two types of advertising methods which is usually an advertisement or website on the internet or suggestions of friends. There are a few people of the respondents who do not care about any advertisements and they just start going somewhere then they stop at a place which they like. This kind of holiday making is usual among young people but the writer personally knows some families as well who choose this kind of holiday planning every year.
People may choose their holiday destination upon many reasons. There are some who like going back to the same region where they were in the previous years, there are those who prefer going to new places every year and their aim is to get to know local culture and there are those kind of people who look for programme facilities and they choose that place where there is the most to do. The writer set up a question in which she gave possibilities why people might visit a place and she asked the respondents to make them in importance order. (1 meant: the most important and 4 meant: less important)
Local attractions are those kinds of conditions which are not depending on the hosts but so are programme facilities. This is why people do not really care about region, they are even willing to travel long hours in order to reach the destination which can bring them excitements.

Dining facilities have been already discussed and on the basis of a previous question it was clarified that most of the guests need breakfast and dinner during their stay. But how is a guest's food demand differing at a hotel than at a rural guesthouse? It is obvious that while staying at a hotel, people prefer getting food which is made of bio or healthy ingredients, but they definitely do not request to get food which is home made or contains home-grown ingredients. The writer cannot even imagine that a hotel guest asks for real cow milk with his/her coffee. But while staying at a rural guesthouse, there is a much greater possibility that people will be interested in home grown vegetables, real milk or meat which does not come from the market, but from the host's garden. This is why the author dealt with this issue in her questionnaire.
On the writer's opinion, people are on the way of getting more and more health conscious. Nowadays magazines, billboards, television and radio advertisements all tell us about conscious consumption of food. This time the quantity of those who answered "Yes it is important" and "No it is not important" is almost the same amount. 66.4% of the respondents said that it is not an expectation, only an advantage. On the basis of the first sentence of this section: if we asked the same question from the same people in one or two years, we might received totally different ratios for each given answers. But it has to be mentioned that according to this result, people are on a good way of getting aware of the value of real, healthy food.
The people, contrary to our original idea, are conscious travelers. According to their answers, their travel decisions are made prudently, after preliminary information gathering (91.1%). More important to us is a service provider's own website (39.1% always, 43.6% almost always visits) than a Facebook page (29.1% always, 47.2% almost always visits). Within social media, Facebook is the best known and most used (95.5%), followed by YouTube (92.7%) and Instagram (65.5%). Relatives, friends, acquaintances are also consulted before a trip (19.2% always, 60, 1% almost always).
The quality of service providers and services is considered more important than the price when it comes to travel, safety over the experience. More and more people are paying attention to protecting the environment and expecting it from service providers as well.

Results

The number of hosts in the statistical regions shows fall back considering to the previous years, the first in the regional ranking is North-Hungary, which is followed by West and South part of the Dunántúl. The ranking of these regions traces back to historical reasons. The formation of the rural tourism also connected to the Mátra, the East-Mecsek, the Őrség and last but not least, to Lake Balaton. These regions kept their comparative advantages, which was made in the 30's, and they still use it as the main engines of the rural tourism's development.
In the view of the nights, in the regional system, the numbers are increasing, the Mid-Dunántúl and the South-Alföld have datas above the national average. The reason of the rise of these two statistical regions' nights, is the growing number of the foreign tourists. There is an increase of German tourists in the region of Mid-Dunántúl, furthermore Danish and Dutch tourists in the region of South-Alföld, the tourists' motivation goes around seeking folk traditions, seeing special sights and of course reasonable price ratio.
In point of number of guests in county level, Heves region is the first in the ranking list (with 2207 people), however in the previous year, Komárom-Esztergom and Csongrád regions

showed higher growth. In level of domestic visitors, Heves region's numbers were higher, but in growth Veszprém region was the leader.
In view of the number of hosts, Borsod-Abaúj-Zemplén region's first place is unquestionable, rapid growth can only seen in Pest, Zala and Veszprém regions. In respect of rooms, beds and capacity, the situation is very similar, nevertheless in point of growth, Fejér region is catching up, next to the first 3 regions.
The growth of the regions depends on the efficiency of the leader of the FATOSZ (The National Association of the Rural and Agro-tourism), the willingness of EU's contest, thus Pest, Zala, Veszprém, Fejér, Csongrád, Győr and Vas regions are counted as the most active ones in the area of applications. Furthermore, it is true that these regions have the biggest turistic GDP and the highest Touristic Penetration Index as well in a national level, of course the people with higher disposable income are also contributing to the faster progression.
The analysis of these datas could tell that the most tours are in health-tourism and in rural tourism. The leaders are the rural guest houses near Eger, around Demjén and Egerszalók, moreover the guest houses, which are around Bükkfürdő, Balf, Lipót, Cserkeszőlő, Kehidakustány, Berekfürdő and Pápa. These are closely followed by the traditional centers, which were formed due history and where the cultural and the green tourism prevail (Hollókő, East-Mecsek, Őrség and Mátra). Rural tourism plays an important role in the wine regions of Hungary (Dunay A. et al 2015)

Conclusion

To sum up, we can say that by all means the introduction of the new sunflower trademarks' system by Csilla Szalók has set prosperous developments afloat in the field of rural tourism (Szalók 2017). The Association of Tourism and Agrotoursim (FATOSZ) jointly with the Ministry of National Economy have decided to improve the quality of the tourism product. Their common goal is to attract the target groups that participate in rural tourism back to rural Hungary. They would like to enhance the quality of accommodations and aim to meet the needs of the "responsible rural tourist" as well. The "responsible rural tourist" aspires to have the least possible effect on the environment and culture of the visited region. The responsible visitor minimizes the damage caused by himself and with his awareness of consumption promotes the local people's welfare. The responsible tourist shows great interest in the agrotourism and getting to know the local folk culture.
It would be rewarding to introduce additional trademarks so the visitors could gain more trust in quality, which contributes to the development of the responsible rural tourist model. The operation of the trademarks promotes the local products' improvement and their presence in the market (Kósa, L. 1984, 1998).
In the context of the experience, rural tourism can also be interpreted in 4 main areas (Figure 1).

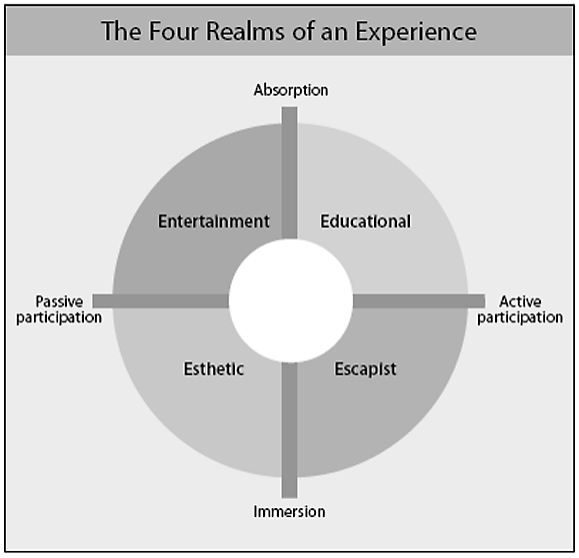

Figure 1. The 4 realms of an experience
Source: Pine – Gilmore (1998) https://hbr.org/1998/07/welcome-to-the-experience-economy

The tourist experience is influenced by several factors (Michalkó − Rátz, 2005, Komppula, 2005,, Kim – Ritchie – McCormick, 2010), which can also be interpreted in rural tourism.
In conclusion, according to the respondents, learning about and carrying out natural values and traditional activities typical of the village dominate in rural tourism. Young people are happy to take part in rural festivals and gastronomic programs. This means that among other tourism products, the development of the offer of natural tourism (eg hiking, ecotourism, geotourism) and gastrotourism specific to the place is interesting for us. In the latter case, of course, where possible, wine tourism in the broadest sense can be a point of connection, which, moreover, is becoming increasingly popular among young people. Wine regions and wine regions have a lot of attractions. In addition to the favorable geographical and climatic conditions, the press houses, wineries, wineries, the technology used in them, the processing plants, the settlements of the given wine region with their historical past, entertainment, traditions, milieu, wine museums, local history and ethnographic exhibitions, country houses, events and festivals, and of course the wine product itself can be included in the offer. In addition to tasting foods, it can also be interesting to learn how to prepare them. In addition, wine tourism can be well combined with cycling tourism (this is supported by well-functioning examples in Northern Hungary, for example) (Molnár, 2015).

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THE DUALITY OF SETTLEMENT-LEVEL CONVERGENCE IN HUNGARY (2012-2018)

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Introduction

(Territorial) Convergence and equalization have a strong impact on the main policy objectives of the European Union. Article 158 of the Treaty of Rome (1957) already states clearly: 'In order to promote its overall harmonious development, the Community shall develop and pursue its actions leading to the strengthening of its economic and social cohesion. In particular, the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favored regions or islands, including rural areas.' The above idea was later confirmed by the Single European Act (1987), and then the Treaty on European Union (2012) included the territorial dimension alongside the economic and social indicator, emphasizing the spatial importance of convergence. Hungary's regional development policy (Act XXI of 1996 on Spatial Development and Spatial Planning, OTK 2005, OFTK 2014) also clearly reflects these goals, such as the need to reduce territorial disparities, promote territorial socio-economic growth, and dynamize external and internal peripheries and underdeveloped areas.

Science (and reality) provide different answers and outputs to the above goals. Neoclassical growth theory — assuming perfect competition and constant returns to scale — suggests convergence under spontaneous market conditions. Postkeynesian regional theories basically accept the existence of territorial differences, which, although they can be reduced, remain divergent in the longer run. In addition to the increasing returns to scale, the endogenous theory assumes the constancy or increase of the territorial differences, the development of the convergence / divergence processes is basically a function of the spatial spread of technology and knowledge. The new economic geography accepts monopolistic competition, with increasing returns to scale and agglomeration creating a stable spatial center-periphery inequality. Similarly, according to evolutionary economic geography, larger agglomerations generate positive externalities, thereby increasing the advantage and dynamism of metropolitan regions, thereby contributing to divergent processes. (Solow 1955, Perroux 1955, Myrdal 1957, Friedrich-Eckey-Türck 2007, Krugman 1991, Fujita et al. 1999, Lengyel 2010, Glaeser 2011)

The basic and primary goal of my research is to map territorial catch up and convergence in the period following the economic and financial crisis that started in 2008-2009. This is particularly important today, as the economic crisis caused by the Covid-19 pandemic has caused and will continue to cause similar damage. Thus, the issue of recovery, catch up, and its territorial aspects can be considered particularly important. At the same time, the study of this

phenomenon takes place at a hitherto not really discussed territorial level in Hungary: the settlement.

Experiences in the Hungarian space

Several excellent analyzes described the development of territorial inequalities in Hungary, but the income convergence studies did not fully explain them at lower (smaller than county) territorial levels. The main related settlement and micro-regional focus analyzes describe the development of inequality trends, the factors shaping inequalities, as well as the positioning and change of the situation of a settlement group in a privileged position (the most backward or a certain circle of cities) (Nemes Nagy-Németh 2003, Dusek 2006, Németh − Kiss 2007, Pénzes 2013, Pénzes 2014, Molnár et al. 2018, Korompai 2019, Egri 2020). The vast majority of income convergence analyzes are organized by the Williamson hypothesis (σ-convergence), and a negligible β-convergence study appears. (Table 1.)

Table 1.: The main features of income convergence studies at the settlement and micro-regional level in Hungary

Sources	Period	Territorial level	Main results
Nemes Nagy-Németh (2003), Dusek (2006), Németh−Kiss (2007), Kiss (2007), Pénzes (2019), Egri (2020)	different	settlement	the initial lower level is followed by rapid differentiation, followed by stagnation and decrease (σ-convergence)
Németh-Kiss (2007)	1990-2004	settlement	description of the factors determining inequalities within the micro-region (settlement structure, location)
Major (2008)	1990-2003	microregion	detection of mobility characteristics
Csite-Németh (2007)	1994-2005	microregion	existing absolute and conditional β-convergence, spatially different σ-convergence and divergence
Balás et al. (2013)	2000-2010	settlement and microregion	σ-convergence without Budapest, divergence with Budapest
Balás et al. (2013)	2000-2010	microregion	existing absolute β-convergence
Czaller (2016)	1993-2012	microregion	rapid conditional β-convergence
Pénzes (2019)	2000-2016	settlement	results with spatially heterogeneous micro-regions: convergence, stagnation, divergence
Dusek (2006), Németh-Kiss (2007), Balás et al. (2013), Korompai (2019)	different	settlement	detection of implicit club convergence

source: own editing

Methods

Danny T. Quah (1993, 1996) strongly argues against "traditional" β- and σ-convergence studies that they do not adequately present the phenomenon of income convergence, dynamics, and mobility. In his view, β-convergence analyzes (cross-sectional and panel regressions) can be 'misleading in understanding convergence' (Quah 1996, p. 1353), and the 2 percent convergence rate declared uniform may be caused by reasons regardless of the dynamics of economic growth. Nor does σ-convergence provide meaningful information on how spatial equalization occurs. Instead of the above methods, Quah proposes a method based on the income distribution of observation units (countries, regions) that responds to criticisms and describes past shortcomings. With the Markov chain he used, he estimated the behavior of income distributions. According to the studies, on the one hand, they indicate persistence, immobility (in the case of the USA states), and on the other hand, polarization (between the countries of the world) and club convergence, rather than catch up.

The method – with the so-called stochastic transition probability matrices – allows the movement of observation units from one period to another to be detected. Any element (i, j) of the transition probability matrix of the Markov chain shows the probability that an element in state i enters state j. Values in the main diagonal indicate the probability of remaining in place. The rows of the matrix describe a distribution, showing what the expected distribution of the state of the next period will be based on a given state (Le Gallo 2001, Major 2008).

The key phenomenon of the Markov chain to be examined is mobility. If the probability of transitioning from one class to another is high, then mobility is high. If, on the other hand, the probability of staying in the same class is high, then mobility is clearly low.
Basically, the mobility and stability index is available to express movement. Both indicators use the values in the main diagonal of the transition probability matrix to measure mobility, in the former case a higher value means higher mobility. The stability index provides information on the stability of the process - on the probability of remaining in the given category.
The so-called ergodic (invariant, stationary) distribution assumes a state when the formed distribution no longer changes, it can be interpreted as an equilibrium state. In addition, the convergence index can be calculated, which measures the movement (downward or upward) towards the middle class (the average or the median). If its value is low, then the distribution is multimodal, i.e., convergence clubs have emerged (Pellegrini 2002).
The velocity at which the current distribution is presumably approaching equilibrium can also be determined. This is called the half-life of the chain, which expresses how long it takes from the current distribution to reach halfway to equilibrium (Monfort 2020).
The LISA Markov model can also be used to study the dynamics of spatial dependence. The method is part of the ESTDA (Exploratory Space-Time Data Analysis) package and provides an opportunity to analyze the movements of local positions during the study period. The method is based on the quadrants of the Moran scatterplot, which give the possible states of the Markov chain. The four quadrants are HH (High-High), LH (Low-High), LL (Low-Low, Low-Low), and HL (High-Low), where the first letter indicates that the territorial unit is above or below average, while the second refers to neighbors in the same respect (Rey 2013, Le Gallo-Fingleton

2013). Individual spatial groupings, based on local statistics, can also be interpreted as convergence clubs (Fischer-Stirböck 2006).
I use personal income per capita as a basic indicator of municipal convergence processes. The indicator has several advantages (availability of long time series, same methodology), but the disadvantages can be found in the same way (it does not give a full part of the total macro-income, it does not include entrepreneurial incomes (Major − Nemes Nagy 1999, Kiss 2007).

Results

To discretize the state space, I used the selection based on the same number of observations, I divided the population into five equal parts (quintiles), each income class has 20 percent of the settlements. The first category lasts for 73.4 per cent, the second for 90.1 per cent, the third for 106.0 per cent, and the fourth for 125.2 per cent. In the fifth case, there are settlements with a performance above this.
Based on the results based on the distribution of settlements, the income distribution can be considered very stable, in the period between 2012-2018 the proportion of non-moving settlements is 84.74 percent. The most marked concentration (with a 90 percent ratio) is basically observed at the two extremes. The proportion of settlements affected by the poverty trap (the lowest category) is slightly lower than that of the most developed ones.

Table 2: Transition probabilities of the income per capita of Hungarian Settlements 2012-2018

income class	transition probabilities				
	1	2	3	4	5
1	*0.896*	0.101	0.002	0.000	0.001
2	0.069	*0.806*	0.120	0.003	0.001
3	0.003	0.091	*0.806*	0.097	0.003
4	0.001	0.004	0.099	*0.823*	0.073
5	0.000	0.001	0.003	0.092	*0.904*
initial distribution	0.200	0.200	0.200	0.200	0.200
ergodic distribution	0.136	0.192	0.245	0.237	0.190

source: own editing

In the case of the lower two categories, it is mainly upward movement (in the first income group, this is obviously only possible), the probability of catching up is clearly higher than that of downward leveling. In the case of the middle-income group, the chances of two-way movement are almost the same. This phenomenon may predict a future “twin-peaks” phenomenon (bimodal distribution, i.e. club convergence), but a more certain answer can only be given in the consciousness of ergodic distributions. In this - near-average - income cluster, in addition to the one-category jump, there are also two- and more-category jumps.
The intensity of downward mobility is very significant for the two most advanced categories. (10.4 percent for the fourth income class and 9.6 percent for the fifth.) That is, territorial convergence is an existing process between 2012 and 2018, consisting of two factors for the Markov chain based on the number of settlements. On the one hand, the catching up of the lowest-income regions and the downward leveling of the most developed ones. The ergodic

distribution is close to normal (although slightly skewed to the left), i.e. no significant polarization (club convergence) develops in the future.

Next, I investigated the dynamics of spatial dependence, first modeling the probability of mobility between the four quadrants (High-High, Low-Low, High-Low, Low-High) of the Moran scatterplot. During the analysis, the individual quarters were also determined based on the queen neighborhood weight matrix[1]. (It should be noted here that a direct comparison with the base matrix is not possible here, as it is only possible to create a 4x4 matrix based on Moran scatter plots.)

Between 2012 and 2018, the presence of 'pure' states is pronounced, with nearly eighty percent of the observations found in the HH and LL quadrants. Within this, spaces with low-income-low neighbors predominate, while among spatial outliers, LH groups. The probability of not moving is very high overall.
It is important to emphasize that there is practically no direct transition between the poorer and richer spatial clusters, according to the figures, rather rigid and stabilized spatial blocks can be detected. (This is also indicated by the stability and mobility indicators – Table 3.) The figures are partly due to the 'traditional' convergence clubs, which in many cases appear at a higher territorial level (Lőcsei 2010).

Table 3. Transition probabilities of quadrants of Moran scatterplots (2012-2018)

categories	number of observations	transition probabilities			
		HH	HL	LH	LL
HH	6845	*0.956*	0.017	0.025	0.002
HL	2072	0.063	*0.832*	0.007	0.098
LH	2168	0.093	0.002	*0.836*	0.069
LL	7839	0.001	0.026	0.021	*0,952*
initial distribution		0.362	0.109	0.115	0.414
ergodic distribution		0.396	0.103	0.113	0.389

Note: HH – High-High, LL – Low-Low, LH – Low-High, HL- High-Low
source: own editing

Thus, according to this Markov chain, the phenomenon of settlement club convergence based on neighborhood relations is very clear, characterized by stable, clearly separated time and space center-periphery relations. Although not comparable to the original base matrix, here the club convergence and the associated polarization can be clearly seen in action.

[1] The value of Moran I shows an almost equal average pattern between 2012 and 2018 (.552-0.585), with very high and statistically significant Z scores showing similar income values in space. In other words, settlements with a high income per capita are also of high value to their neighbors, while those with low incomes are also considered to be of low value to neighboring settlements.

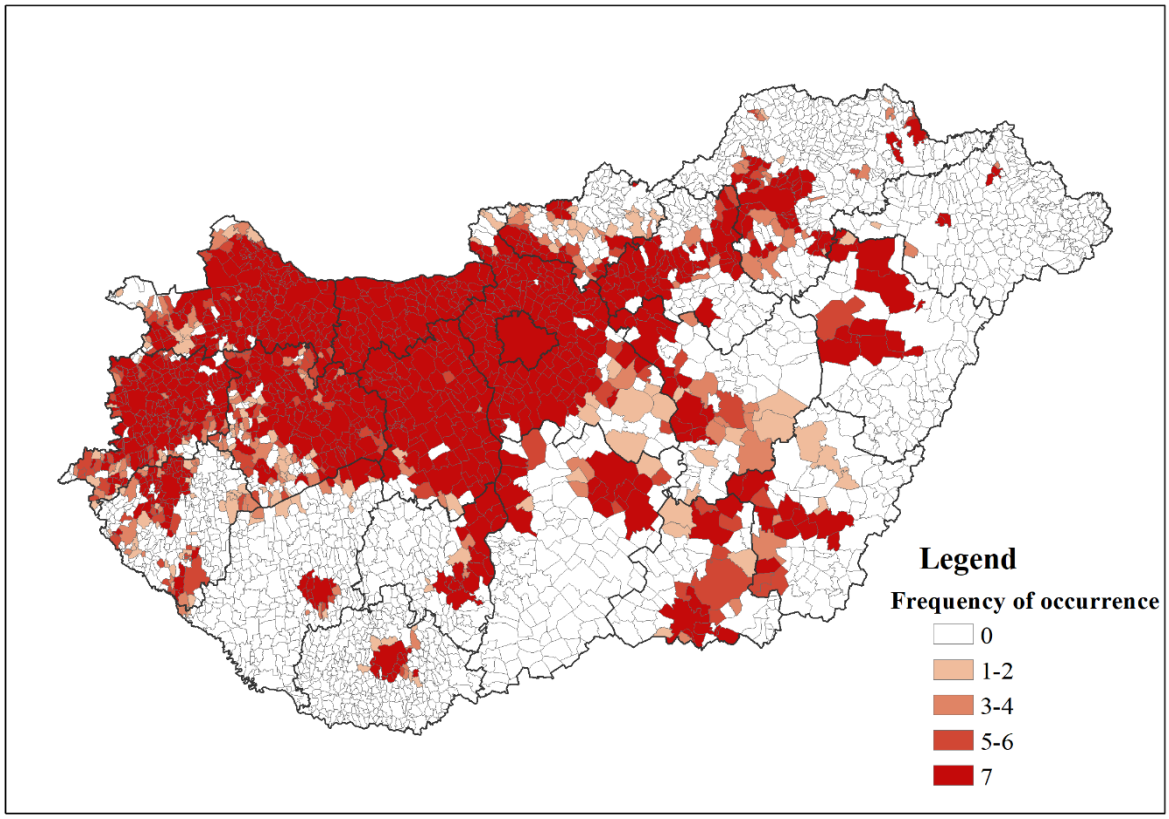

Figure 1. Frequency of the settlements in high-high (HH) category between 2012-2018
Note: non-significant high-high (HH) settlements can also be found in the figure
source: own editing

Further motion can be observed between LH and HL and spatial clusters. Mobility according to the neighborhood environment is more typical, i.e. those spaces that have a lower income, but the neighbors are higher, there is a better chance to get to the HH spaces. HL settlements (high self-income and low-developed environment) are more likely to fall back into the low-low cluster. At the same time, it should be seen that the movement in the opposite direction is also characteristic, moreover, the difference between the two directions is not very high.

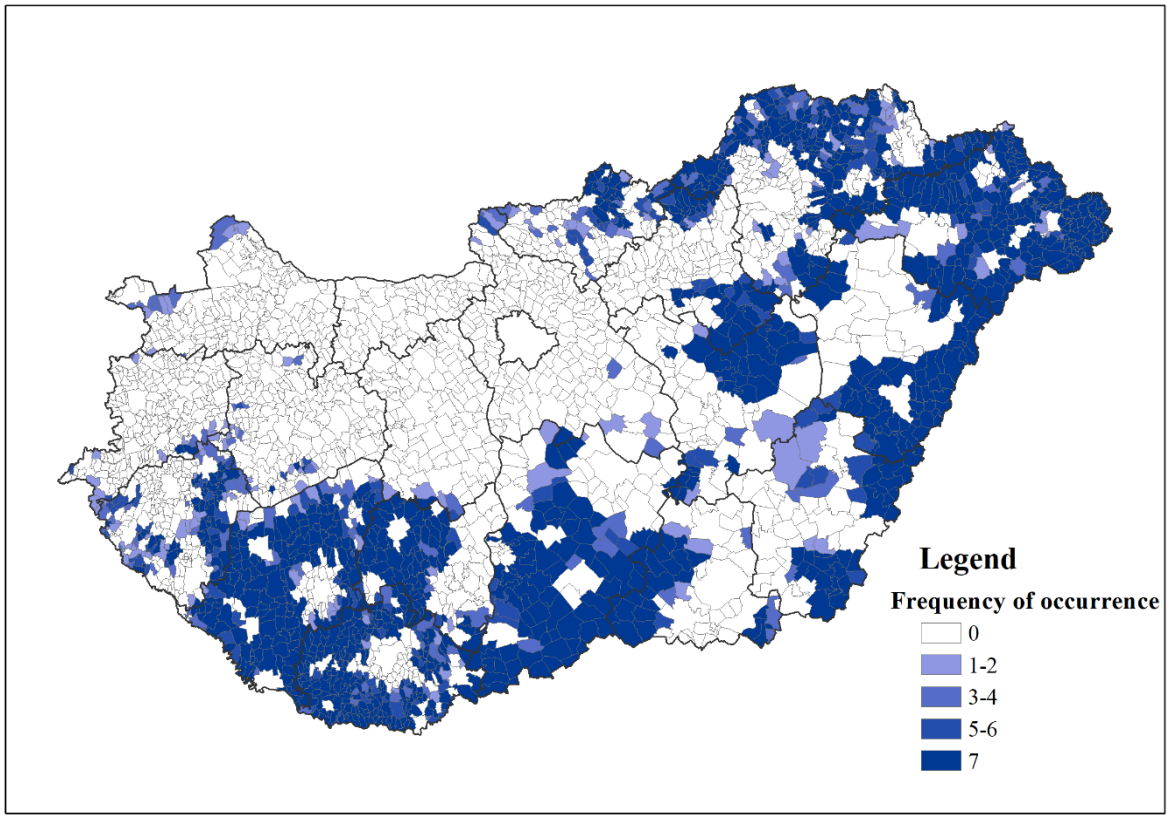

Figure 2. Frequency the low-low (LL) category by settlements (2012-2018)
Note: the figure also includes non-significant low-low (LL) settlements
source: own editing

Overall, therefore, spatial stability based on neighborhood relations can be considered very persistent in the period under review, with a total of 92.7 percent of settlements being considered non-switching. The ergodic distribution also expresses this, there is no significant shift compared to the initial distribution, in the longer term LL and HH settlements also dominate.

Table 3. The main characteristics of settlement convergence in Hungary

	base model	LISA Markov
stability	0.847	0.894
mobility	0.191	0.141
half-life	13.057	14.752
convergence index	0.245	-

source: own editing

Summary

In the course of my research, I mapped the settlement convergence processes of Hungary between 2012-2018. In my study, I used the Markov chain method proposed by Danny T. Quah and its spatially extended version.

Although the two methods cannot be directly compared, their results still indicate significant differences. Convergence is almost non-existent, meaning there is significant stability and low levels of mobility. However, the ergodic distributions that can be calculated based on current mobility indicate different paths. According to the original chain, the middle and fourth classes are charged (the distribution is not polarized), while LISA Markov says the phenomenon of club convergence is clear. The settlements of the convergence clubs show spatially connected groups, dynamic north-western regions, and lagging-stagnant remaining spaces.

The analysis highlights the different nature of spatial settlement convergence, which cannot be ignored.

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Plenary lectures, presentations 10.00 – 12.20

10.00 – 10.30 Dr. Andrea FEHÉR: Accelerating the European Funds Absorption - an Absolute Priority (USAMVBT, Romania)

10.35 – 11.05 Prof. Dr. Emiliana SILVA: Decision Making in Agriculture (University of Azores Faculty of Agriculture, Portugal)

11.10 – 11.45 Prof. Dr. Imre FERTŐ: Do Local Food Purchases Help Local Economies? (Centre for Economic and Regional Studies, Hungary)

11.50 – 12.20 Prof. Dr. Margherita MORI: Rural Finance and Sustainable Development (University of L'Aquila Department of Industrial and Information Engineering and of Economics, Italy)

Session – Lectures, presentations 13.30 -

Gvantsa SEKHNIASHVILI – Dr. habil Zoltán BUJDOSÓ (Doctoral School of Economic and Regional Sciences, SZIU): Wine Tourism Destination Image: The Case Of Georgia

Dr. habil. Károly BODNÁR (Institute of Irrigation and Water Management, SZIU): Moneasa The Sleeping Beauty

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Poster Session