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DO BETTER SOCIOECONOMIC FEATURES OF POPULATION MEAN MORE COMPETITIVE REGIONS?

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INTRODUCTION

The limited number of available goods is generating competition between market participants. Economic operators are competing with each other for these economic goods. From this point of view, the literature classifies the economic operators into three subgroups. Employees are competing for workplaces, companies are rivalling for higher market shares and profits, while regions are about to increase their living conditions. Choosing a location for establishments is one of the basic and most important parts of business decision making. Settlements are also interested in competition, since the companies are free to choose the location of their business establishments. They can utilize different kinds of economic tools (e.g. tax reductions or aids) in order to seem more attractive for the desired company. Regarding to the location theory, the beneficial business environment (e.g. infrastructure, R+D activities, transparency of the legal system) sometimes more important than the previously mentioned exemptions. Regions which are above-average of social indicators (e.g. GDP per capita, employment level, age structure, labour productivity) take precedence over others [Horváth 2006]. The previously mentioned issues are resulting in competitive and peripheral regions. Favourable geographical access and technological externalities are creating clustering forces. Clustering has its own effect on the labour market also. Competitive regions are providing better life standards which leads to larger scale of available labour force [Venables 2005]. Population raising and capital accumulation is effecting on development, growth of the knowledge sector and more frequent R+D activities. Growing share of employees, who are interested in the previously mentioned sectors are increasing economic growth. The literature uses the term of endogenous growth to refer these links [Morley 2015]. The role of regional

development and the population retention of rural areas are becoming more accentuated since the very beginning of the 21st century. The European Union's action programme, the Agenda 2000 proposed numerous goals, which are in connection with the growing differences between regions. A few of them were to develop the vitality of rural areas and stabilize agricultural incomes [EC 2000]. The development of rural areas should be sustainable. Sustainable development could be defined as a development process which is meeting the needs of the current generation, without harming the without harming the ability of future generations to meet their own needs [United Nations General Assembly 1987]. The importance of rural areas could not be ignored since most of the total area of EU-28 is described as a rural, as well as more than the half of its population is living in these areas. Important activates like raw material producing and tourism are also linked to rural areas, resulting in a significant share from employment and economic performance [Siudek et al. 2016]. Rural areas and even more peripheral areas are needed to be supported in order to preserve the values which are provided by these areas and mitigate the harmful effects of clustering forces (e.g. rural-urban migration). Without any kind of intervention, the processes would end up in serious differences between regions.

MATERIAL AND METHOD

The objective of the case study was to give an overview of differences between Hungarian regions from the aspect of socioeconomic factors. Assembled and assorted secondary statistical data (e.g. life expectancy, average age of population, educational attainment, number of early school leavers, GDP per capita) on the Hungarian population were intended to characterize NUTS 2 regions by socioeconomic factors. The sources were provided by the Hungarian Central Statistical Office (KSH) and National Territorial Development and Spatial Planning Information System (TeIR). Following indexes were calculated in order to highlight the differences in 2014:

- population growth (actual reproduction to total population);
- vitality index (population aged 20–39 to population aged over 60);
- old age dependency ratio (population aged over 65 to population aged 15–64).

ANALYSIS OF SOCIAL CONDITIONS ACROSS HUNGARIAN REGIONS

Regarding on the data by Hungarian Central Statistical Office (KSH), Hungary is a Central European country with an area of 93,011 km^2 and population of 9.9 million citizens (date from 2014). It is surrounded by Slovakia, Ukraine, Romania, Serbia, Croatia, Slovenia and Austria. Since 1981, the population was decreasing by 0.24% annually. Hungary is described as a rural country, 66.3% of its area is described as rural, while 33.1% classified as intermediate and just 0.6% is urban [EC 2015b].

The country became the member of the European Union in 2004. Table 1 represents the NUTS classification of the country.

During 1996 and 1998 one NUTS 1, seven NUTS 2 and twenty NUTS 3 regions were formed as the part of preparations of Hungary's accession to the European Union.

TABLE 1. The NUTS classification of Hungary

HU	NUTS 1	NUTS 2	NUTS 3	LAU 1	LAU 2
	statistical large regions	planning and statistical regions	counties + Budapest	statistical sub-regions	settlements
Number	3	7	20	174	3152

Source: EC 2013.

The Hungarian Central Statistical Office revisited the NUTS classification of Hungary in 2003. Three NUTS 1, seven NUTS 2 and twenty NUTS 3 regions were created as the result of the revision in 2005 [Jusztin et al. 2015]. Table 2 summarizes some general data on NUTS 2 regions.

TABLE 2. Characteristics of the NUTS 2 regions in Hungary

NUTS code	NUTS label	Area (km^2)	Population in 2014 (people per km^2)	Average age in 2014
HU10	Central Hungary	6 915	2 964 769	41.8
HU21	Central Transdanubia	11 085	1 097 560	42.3
HU22	Western Transdanubia	11 328	990 947	42.7
HU23	Southern Transdanubia	14 197	947 458	43.2
HU31	Northern Hungary	13 428	1 205 319	42.0
HU32	Northern Great Plain	17 723	1 521 318	41.1
HU33	Southern Great Plain	18 335	1 312 799	43.0
HU	Hungary	93 011	10 040 170	42.3

Source: National Territorial Development and Spatial Planning Information System (TeIR), available at https://www.teir.hu.

The averages of NUTS 2 regions (2014) were like the following: area (13,287 km^2), population (1,166,260 citizens) and population density (106 people per km^2). Although Central Hungary was the smallest of among all (6,915 km^2), the population was concentrated in that region since the 29.5% of the country total lives here. Southern Transdanubia has the lowest population (947,458 citizens), and that region was also disadvantaged from the aspect of population density (65 people per km^2) and average age of a citizen (43.2) which was the highest of NUTS 2 regions. Central and Western Transdanubia are approximately in the same situation by area (11,085, 11,328 km^2), average age of a citizen (42.3 and 42.7) and population density (96, 87 people per km^2). Northern Hungary was close to country averages with the total area of 13,428 km^2 and population of 1,205,319 citizen. Northern Great Plain and Southern Great Plain are relatively similar from the view of total area (17,723 and 18,335 km^2). There are major differences in the structure of population. While Northern Great Plain was the most favourable (41.1), Southern Great Plain was facing with serious aging. The previously mentioned region was also one of the most sparsely settled areas, with population density 70 people per km^2. Southern Transdanubia, Northern Hungary and Northern Great Plain was the most disadvantageous

NUTS 2 regions from the aspect of substantial unemployment, society, economy and infrastructure (Table 3). Share of 84% of the most disadvantageous local administrative units (LAU 1) were also situated in the previously mentioned NUTS 2 regions (Fig. 1).

TABLE 3. The most disadvantageous regions of Hungary

NUTS label			
Southern Transdanubia (HU23)	Northern Hungary (HU31)	Northern Great Plain (HU32)	Southern Great Plain (HU33)
Most disadvantageous local administrative units (LAU 1)			
Barcsi Csurgói Kadarkúti Lengyeltóti Sásdi Sellyei Szigetvári Tamási	Abaúj-Hegyközi Bátonyterenyei Bodrogközi Edelényi Encsi Hevesi Mezőcsáti Ózdi Sárospataki Szerencsi Szikszói Tokaji	Baktalórántházai Berettyóújfalui Csengeri Fehérgyarmati Mátészalkai Nyírbátori Tiszafüredi Vásárosnaményi	Bácsalmási Jánoshalmai Kisteleki Mezőkovácsházai Sarkadi

Source: Rural Development Programme 2014–2020, retrieved from https://www.palyazat.gov.hu/node/56582.

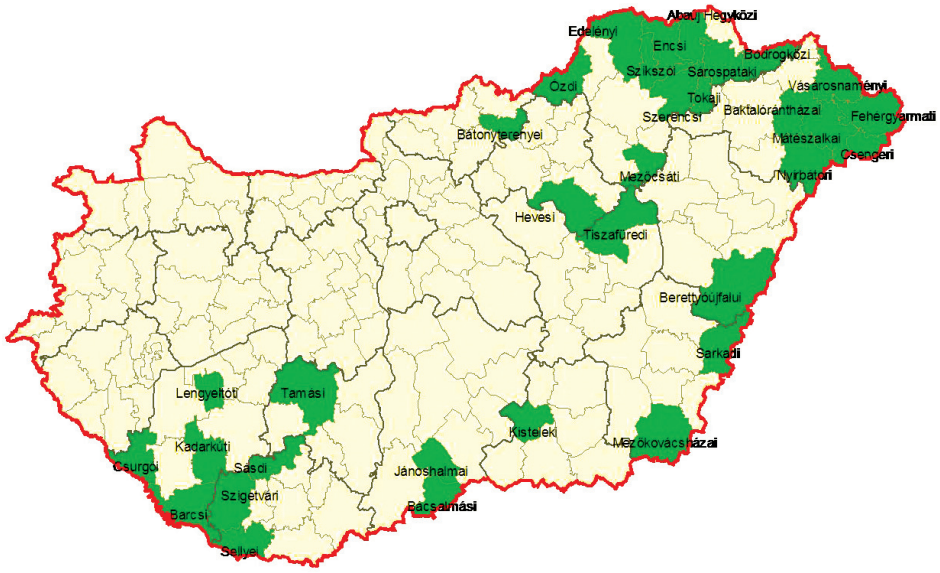

FIG. 1. The most disadvantageous regions of Hungary

Source: https://www.palyazat.gov.hu/doc/1254.

Central Hungary was in the best situation regarding the educational attainment. The share of people with higher education (56%) was above of the country average (43%). Southern Transdanubia, Northern Hungary, Northern Great Plain and Southern Great Plain are disadvantaged from that aspect, since the share of people with lower education are higher than the country average. Early school leaving was another challenge for Hungary. The share of early school leavers are 11.6% which are above the average of EU-28 (11.1% in 2014) [EC 2015c]. The proportion of early school leavers are the highest (18.4%) in Northern Hungary while that index in 2015 was just 7.2% in Central Hungary.

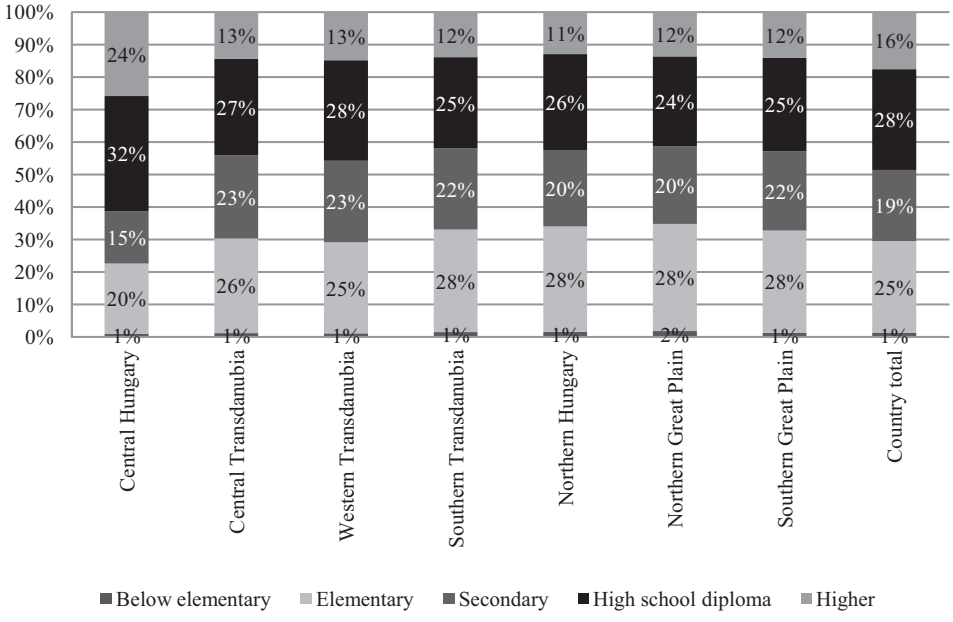

FIG. 2. Educational attainment in Hungary in 2014

Source: author based on the data provided by the Hungarian Central Statistical Office.

Table 4 presents the indicators which were calculated and assembled. These are also reflecting the inequalities between NUTS 2 regions of Hungary regarding socioeconomic factors.

Western Transdanubia, Central Transdanubia, Central Hungary and Southern Transdanubia are showing a favourable picture from the aspect of employment. All of these NUTS 2 regions have a lower or equal unemployment rate comparing them with the average of Hungary. Southern Great Plain, Northern Hungary and Norther Great Plain are facing serious difficulties from that view. The unemployment rate was higher in Northern Hungary and Northern Great plain than the averages of NUTS 2 regions of Europe (9.9% in 2014) according to Eurostat data.

The population growth was showing a diverse picture for us. The natural increase (–3.9‰) was unfavourable in all of the examined units. The net migration rate was com-

TABLE 4. Calculated indicators

NUTS code	NUTS label	Unemployment rate (%)	Population growth (%)	Rate of ageing (%)	Vitality index (%)	Old age dependency ratio (%)	GDP per capita (thous. HUF)
HU10	Central Hungary	6.2	0.15	121.9	1.14	27%	5 162
HU21	Central Transdanubia	5.6	–0.41	120.9	1.19	24%	2 941
HU22	Western Transdanubia	4.6	–0.31	129.3	1.12	26%	3 414
HU23	Southern Transdanubia	7.9	–0.64	132.6	1.09	26%	2 167
HU31	Northern Hungary	10.5	–0.75	117	1.16	25%	2 037
HU32	Northern Great Plain	11.8	–0.53	103	1.30	23%	2 062
HU33	Southern Great Plain	9.0	–0.69	135.4	1.10	27%	2 280
HU	Hungary (average)	7.9	–0.45	122.9	1.16	25%	2 866

Source: own elaboration on the data for 2014 provided by the Hungarian Central Statistical Office and National Territorial Development and Spatial Planning Information System (TeIR).

pensating the situation in Central Hungary (3.7‰) resulting in a positive population growth rate and favourable vitality index, while the tendencies are moderated in Western Transdanubia (1.5‰) because of the same reason.

Like many other EU countries, Hungary was also contending with ageing of its population resulting in an average age of population of 44.2 (data from 2016). The tendencies are also detrimental for the agriculture, since the average age of Hungarian farmers are 56, according to Hungarian Ministry of Agriculture data. The old age dependency ratio (25%) of Hungary was below of the average of EU-28 (28.1%). These results are very concerned from the aspect of sustainability regarding pension systems. The importance of old age self-sufficiency was getting more prominent because of the ongoing tendencies.

APPLICABLE INSTRUMENTS

Rural development is the second pillar of the Common Agricultural Policy. The national rural development programmes are supported from The European Agricultural Fund for Rural Development (EAFRD). For Hungary, there are 4.2 billion EUR available for regional development purposes for the current funding period of 2014–2020. The main aim of the Hungarian Rural Development Programme (RDP) is to moderate the problems of the society and inequality. The main objectives of the Hungarian Rural Development Programme (RDP) are in connection with the society and its problems such as:

– poverty;
– economic problems in underdeveloped regions;
– difficulties of social inclusion.

In order to solve these problems the programme appoints the following supportable areas:

– knowledge transfer and innovation;
– R+D sector;
– education;

– job opportunities;
– infrastructure.

Regarding to the RDP, it is justifiable to support R+D activities, information society, education and healthcare services and the evolution of road networks concerning accessibility (https://www.palyazat.gov.hu/node/56582). Figure 2 presents the main areas of Hungarian Rural Development Programme.

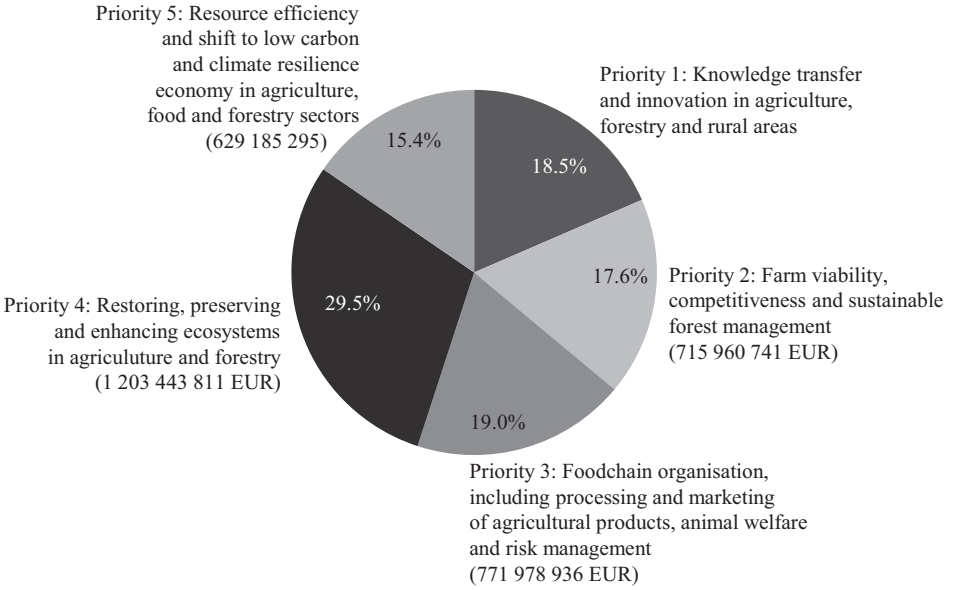

FIG. 3. The priorities of the Hungarian Rural Development Programme

Source: own elaboration on the data provided by the European Commission.

The supports from the European Social Fund (ESF) and the European Regional Development Fund (ERDF) could also offset these difficulties. The objective of European Social Fund is to support career opportunities by creating new jobs. To help job seekers to find their desired occupation is another aim of the fund. The most important intention for Hungary is to invest in human capital by improving people's skills, create training and healthcare opportunities and to develop the public administration system. The target groups of these supports are low-skilled and young people. At around 450,000 people are expected to benefit from education programmes, while 300,000 people will take a part in healthcare services. As much as 60,000 students and 40,000 teachers will be trained in order to reduce early-school leaving [EC 2015c].

The following few examples were supported by the European Social Fund:

– Opening to the Street programme. Central Hungary is considered the most developed region because of the distinct situation of Budapest. However, the number of homeless people is disquieting. To measure the exact number of homeless people is a difficult matter, we can only deduce to it from statistical sources. During the period of

2010 and 2014 an average of 5,529 people visited to shelters daily in Budapest. From March 2013 until October 2014 the ESF contributed 410,200 EUR to cover the expenses the Opening to the Street programme. During this period, 120 homeless people have received accommodation and education. Some of the have finally finished his or her primary education, while others were selected to participate in specific vocational or IT and communication training. Ten of them were employed for a year, while 75 homeless people participated in voluntary work. Another goal of the programme was to help them to get rid of their addiction [EC 2015c].

– Danish-Hungarian project reaches out to those on the margins. There were some examples for international cooperation within the ESF. The main aim of the project was about to help the people who faced with long-term unemployment by the application of the Danish education model. From June 2012 until February 2014 the ESF has allocated 578,168 EUR in order to achieve the purpose of the programme. Three hundred and ten people have benefited from the services, like receiving vocational education and obtain skills for more effective job-seeking activity. Thirty four of them were able to keep their job positions, while 22 participants gained a new profession [EC 2015c].

The main aims of European Regional Development Fund (ERDF) are to invest in small and medium-sized enterprises (SMEs), innovation and research, Information and Communication Technologies (ICTs), and to foster the transition to low-carbon economy [EC 2000]. Tourism, environmental protection, infrastructure, energy and resource efficiency, education and healthcare could be also supported (https://www.palyazat.gov.hu/erfa).

There are numerous examples for the utilization of ERDF supports in Hungary. The following programmes are strictly in connection with rural development:

– Kisbér, a village situated in Central Transdanubia (HU21) has received at about 1,773,000 EUR to modernize the education infrastructure. The village's elementary school, the grammar and vocational school and the kindergarten have benefited from the support [Local Government of Kisbér 2009];
– Komló, a village in the Southern Transdanubia region have also received from the fund. The village's house of arts and its museum have been renewed from the estimated sum of 55,6200 EUR [Local Government of Komló 2009].

CONCLUSIONS

Hungary is showing a twofold picture regarding the presented indicators. The economic importance of Central Hungary is disproportionate, since it is generating the 48% of the total GDP. The main aim of the structural funds is to support NUTS 2 regions, where the GDP per capita is less than 75% than the average of EU-28. Central Hungary consists of two NUTS 3 regions, Budapest (HU101) and Pest county (HU102). At the time of the accession Central Hungary (102.2%) has surpassed the previously mentioned criteria because of the predominance of Budapest (133.5%). There are aspirations since 2002 in order to divide Pest county from Central Hungary. The secession would be reasonable, since the GDP per capita in Pest county is just the 56.6% (data from 2011) of the average

EU-28. Central Hungary is also in an eminent role because it's social composition by education attainment. The situation of Central and Western Transdanubia are also favourable because of low unemployment rate. Although these economic related factors are better in the recently mentioned NUTS 2 region, Northern Hungary and Northern Great Plain has some potential because of their age structure. The utilization of the European Social Fund (ESF) is a great chance to improve people's skills in these regions by creating training opportunities and reduce early-school leaving. Entrepreneurship and employment are also supportable from the European Regional Development Fund (ERDF). To invest in R+D sector and education is a key issue for these regions since these activities are in a strong correlation with competitiveness of territorial units.

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Summary. The objective of the case study was to give an overview of differences between Hungarian regions from the aspect of socioeconomic factors. The paper deals with the distinct situations of NUTS 2 regions in order to get a general view of the country from that angle. Although, that approach is not the most detailed one, it makes possible to easily distinguish the competitive parts of the country. Secondary data were provided by the Hungarian Central Statistical Office (KSH) and National Territorial Development and Spatial Planning Information System (TeIR) were used to present the distribution of population by various expositions. Unemployment rate, distribution of educational attainment, population growth, rate of ageing, vitality index, dependency ratio and GDP per capita were calculated and assembled to present the differences. The results are showing clearly, that Central Hungary (HU10), Central Transdanubia (HU21), Western Transdanubia (HU22) are currently competitive. The population of Southern Transdanubia (HU23) and Southern Great Plain (HU33) are aging, but stable from the view of economy related indexes. Northern Hungary (HU31) and Northern Great Plain (HU32) are considered laggards from that aspect, but have a considerable potential because of the age structure of the population. The paper also introduces some national and EU programmes which are meant to mitigate the effects of unfavourable situations.

Key words: rural development, society, inequality, economy, education, innovation

JEL: O10, R51, R58

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