

Complex development analysis of the disadvantaged settlements of the Kistelek district in Southern Hungary

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Abstract

The central theme of the research is a complex study of the disadvantaged settlements of the Kistelek district in the Southern Great Plain. One of the poorest areas of Csongrád-Csanád county was mapped at two points in time (2014 and 2019) to identify the typical economic and social changes. A complex development indicator was used to analyse the economic, social, infrastructural, social and employment situation of the municipalities. The only town in the district, Kistelek, was ranked first on the basis of the complex development indicator. Kistelek is a service-poor district centre, yet it illustrates the centre-periphery relationship in the region. The district is rich in natural and human assets, which, if used wisely, could provide a breakthrough from the unfavourable economic situation. The analysis has led to proposals for solutions to problems relating to land use, rural society and life in the district, and local economic development.

Keywords: *disadvantaged district, complex development indicator, SWOT analysis, countryside*

JEL: *R11, R19*

Introduction

The analysis of spatial differences in social and economic development has been a focus of interest in the social sciences and politics for decades. The range of indicators that determine the development of regions and localities is very broad. At smaller territorial levels (district or municipality levels), the most useful is a complex analysis of economic and social indicators (Fabi–Szűcs, 2017). The annexes to Government Decree 105/2015 (IV. 23.) of the Republic of Hungary, the municipalities of the disadvantaged Kistelek district of the Southern Great Plain region were examined for 2014 and 2019 on the basis of four groups of indicators. The indicators were used to identify the economic, social, infrastructural, and employment situation of the municipalities. The social and economic development of the municipalities in relation to each other and the direction of territorial change were examined. The potential and opportunities for local development in the municipalities of the Kistelek district were studied. In the literature review, the basic concepts necessary to understand the topic were first clarified. We defined the main characteristics of rural areas, and then those of disadvantaged areas. We have summarized the factors of territorial underdevelopment and the possible direction of developments in the examined area. We concluded the literature review with a brief presentation of the Kistelek district. The settlements of the Kistelek district were analyzed using the Territorial Statistics of the Information Database of the Central Statistical Office (KSH) and the National Spatial Development and Spatial Planning Information System (TeIR) database.

Factors of territorial backwardness

In most countries in Europe, there are significant differences in territorial development. One of the main objectives of the regional policy of Hungary and the European Union is to reduce territorial disparities and thereby eradicate underdevelopment (Komarek, 2019). The economic and social development of a given area, according to Government Report J/3919 to the National Assembly (VÁTI, 2001), is essentially determined by (1) the advantages of its geographical location; (2) the share of foreign capital in the economy of the area, which promotes productive and technological change and creates jobs; (3) the level of entrepreneurial activity, which affects employment and promotes further economic activity; and (4) human capital, skills and innovation capacity.

First of all, it is essential to clarify the notion of rural areas and to emphasise their importance, since the settlements in the district under study have a very low population density and are basically located in rural areas. There are many definitions of the countryside and rural areas. In the most general terms, the countryside is a non-urban space with a sparse settlement fabric. According to the classical geographical approach, the countryside means a space with a special settlement, economic and social environment, as well as development characteristics, markedly different from the urban area. The concept of the countryside can also be approached according to the size, functions and the built environment of the settlements typical to this area (Csatári, 2001). One of the most important institutional definitions is the definition found in the European Charter of Rural Areas adopted by the Parliamentary Assembly of the Council of Europe, according to which the rural area specifically means a land, inland or coastal area that includes small towns and villages, forms an economically and socially unified whole and - compared to urban areas - the concentration of the population, economic activities, social and cultural structures are significantly lower, and a larger part of the area is used for agricultural, forestry, nature conservation and recreational purposes (Council of Europe, 1996).

In general, the situation in rural areas is also shaped by the effects of globalisation (Ritter, 2018). Different rural areas have responded to globalisation in different ways (Bengs-Schmidt-Thomé, 2005). For rural areas, globalisation brings opportunities but also threats (Swinburn et al., 2004). As a result of the economic and social processes of the past decades, needs have changed, and new elements of consumption have come to the fore. There has been significant economic and social erosion in the Hungarian countryside, thanks to globalised trends. (Káposzta, 2014). The continued drain of resources from the centres has exacerbated poverty and inequality in the periphery (Wade, 2003; Káposzta, 2014). In addition, the uneven development of rural areas is triggered by differences in capital and labour flows, the presence of different types of economic activities, the interests and location of different actors, and environmental factors (Sofer-Applebaum 2012).

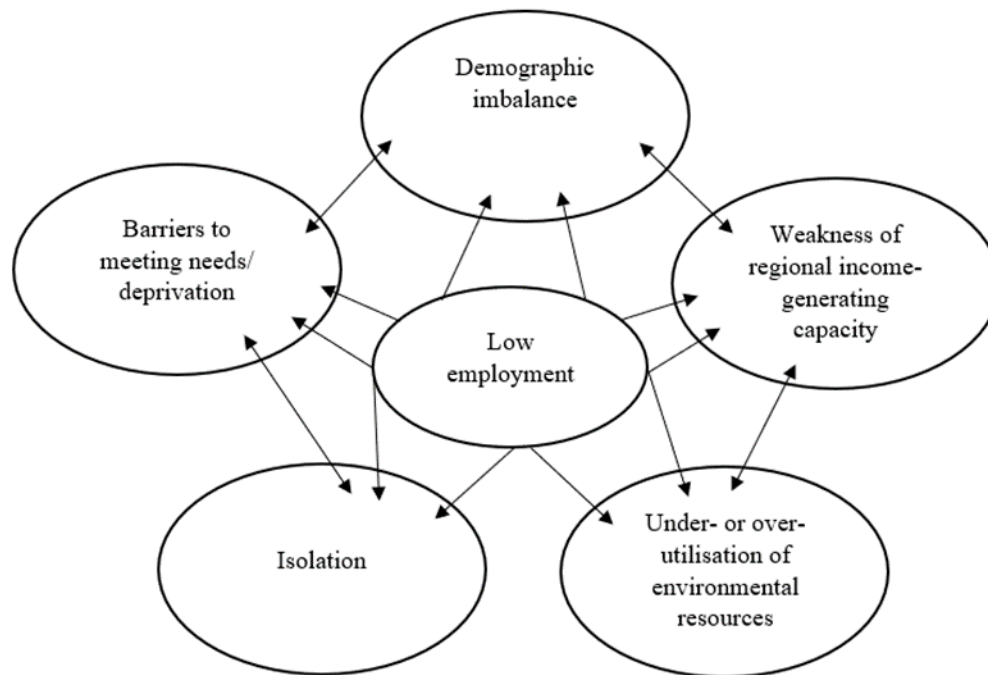


Figure 1. The five main factors of territorial underdevelopment

Source: G. Fekete (2006, p. 55.)

Young people living in rural areas have moved away, and the population is aging in most of the settlements. Existing family relationships function more as a regional resource-absorbing force than as an accumulation factor. The education level and mobility of the young people who remain here are also low. The roads leading to the region practically become one-way, for the more educated young people only outward, while for the poor only inward. Deteriorating demographic processes have a negative effect on other elements as well (*Figure 1*). The conditions for modern transport have not been developed in these backward areas. The channels for communication and information flow are also missing, and the coverage of mobile service providers is weak, and Internet access is at a low level (G. Fekete, 2006). Rural businesses, especially the small and medium enterprises, are also more affected by lower levels of digital readiness than in urban areas, creating a digital divide that affects their business activities (Morris, 2022). Kenyon et al. (2002) defines mobility-related exclusion as: "The process by which people are prevented from participating in the economic, political and social life of a community because of limited access to opportunities, services and social networks." The lack of accessibility also causes problems in other factors: it weakens the competitiveness of businesses and hinders the economic strengthening of the region, and poor access to mobility can also reduce the opportunity to participate in society (G. Fekete, 2006; Székely–Novotný, 2022). Due to the small number of businesses, the capital needed to catch up is not produced locally, which is the main obstacle to breaking out of backwardness. The lack of jobs causes unemployment across a growing population, which contributes to the reduction of family income and the degradation of available services (G. Fekete, 2006). Poverty has always been a feature of many rural areas. Unemployment, an ageing population, the decline of agriculture and migration are just some of the processes associated with rural areas, which tend to lead to deprivation and ultimately decline (Mitrică, 2020).

Development of disadvantaged areas based on endogenous resources

To boost the growth potential of disadvantaged areas, it is necessary to harness the tools that can strengthen communities and enhance social, economic and environmental well-being in the area (OECD, 2018). One of the greatest values of current underdeveloped regions is the relatively well-preserved natural environment, which becomes development potential if these values are recognized and explored, that is, if they find a way to utilize them (G. Fekete, 2006). The basic goal of eliminating regional inequalities is to catch up with regions that are lagging behind in development (Káposzta, 2014). The economic and social performance of a given area is shaped by many factors. Thus, the first task is to explore and examine the characteristics of the given area, and then to find possible solutions. With the spread of postmodern values, each region can get a new chance for development. New values come to the fore, such as the cleanliness of the environment, the development of the individual image of the region, and the preservation of local culture. Local knowledge, extensive farming, and the pursuit of quality and completeness in the face of growth are valued (G. Fekete, 2006). Accordingly, the new territorial policies emphasize the features and potentials of the regions, which are available as endogenous resources for development. The aim of the new territorial development is to activate and utilize the endogenous resources, that is, the potentials within the region (Káposzta, 2018).

Successful rural areas are regularly linked to the ability of local actors to exploit local resources and opportunities (Bryden–Bollman 2000, cited by Sofer–Applebaum, 2012). Based on international experience, new impulses reach those areas where developments are based on endogenous resources (Káposzta, 2015). Similar to international trends, endogenous resources are playing an increasingly important role in Hungary (Ritter et al., 2017). Those areas where local resources are built on can begin to grow by the fact that the natural, environmental, economic and human features of the area form a new unit, which causes the factors to be reassessed and reevaluated. There is a shift towards economic development directions that are capable of attracting external resources based on internal capabilities. As a result, new jobs will be created, which will be able to reduce the social crisis (e.g. emigration, ageing), and reduce the chance of economic and infrastructural disengagement. Building on the socio-cultural traditions of the given regions, the ever-stronger participation of the population in social decisions can use resources that have not been exhausted so far (Káposzta, 2015). However, most rural economies in Central and Eastern Europe still suffer from poorly developed agriculture and a lack of alternative economic activities outside of farming (Chaplin et al., 2007).

Brief introduction of Kistelek District

The study area, the Kistelek district, is located in Csongrád-Csanád county (Figure 2). The district is made up of six municipalities, Baks, Balástya, Csengele, Kistelek, Ópusztaszer and Pusztaszer. There is only one town in the district, namely Kistelek, which is also the centre of the district. According to TEIR data, the Kistelek district covers an area of 410 km² and has a population of 17 728, based on 2019 data.

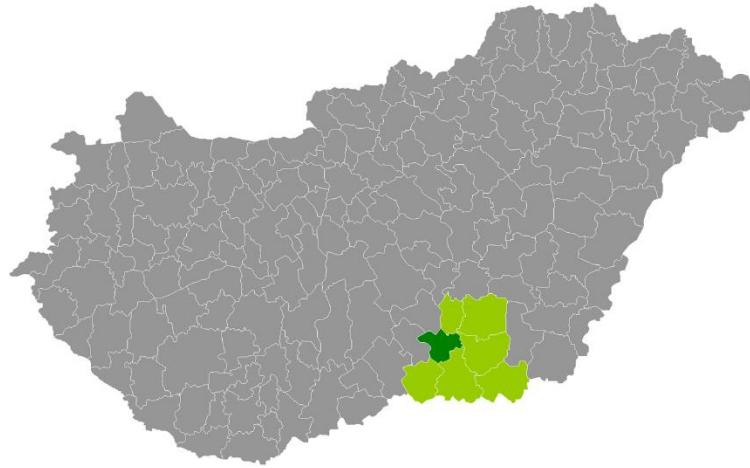


Figure 2. Location of Kistelek District in Csongrád-Csanád county

Source: Internet 1.

According to the Government Decree No.290/2014 (XI. 26.), the district is beneficiary and to be developed. According to the Government Decree No.105/2015 (IV. 23.), three settlements in the district are beneficiaries from the social, economic and infrastructural point of view (Baks, Ópusztaszer, Pusztaszer), but none of them is among the settlements with significant unemployment (Figure 2.).

Based on the 2014 values of the District Development Index (JFM) developed by the MKIK Institute of Economic and Enterprise Research, the development differences of 174 Hungarian districts were analysed. Based on the indicator, Kistelek district was the 39th least developed district in Hungary in 2014. In 2019, the study on the development of Hungarian districts was carried out again based on the data from 2017. Based on the methodology and indicators used by the MKIK GVI, Kistelek district was the 46th least developed district in Hungary, seven places lower, while it was the 5th least developed district in the Southern Great Plain region (MKIK GVI, 2016).

Materials and methods

Database and methodology for measuring complex development

The comparison of the settlements of the Kistelek district was carried out on the basis of the indicators formulated in Government Decree 05/2015 (IV. 23.). If no data was found for an indicator, it was not used or replaced by another indicator. The set of data used to calculate the complex indicator measuring the socio-economic and infrastructural development of municipalities is summarised in *Table 1*. To compile the indicators, we used the Territorial Statistics of the Central Statistical Office (KSH) Information Database and the National Spatial Development and Planning Information System (TEIR) database.

Table 1. Indicators used for complex developmental studies

Indicators
Indicators of social and demographic status <ol style="list-style-type: none"> 1. Urbanity/rurality index (population density of the given municipality) 2. Natural reproduction/weight loss per 1000 inhabitants 3. Migration differential, per 1000 inhabitants 4. Average number of people receiving regular social assistance per 1000 inhabitants 5. Average number of recipients of regular child protection benefits per 1000 inhabitants per year 6. Ageing index (60-x number of people aged per 100 0-14 years of permanent population)
Indicators of housing and living conditions <ol style="list-style-type: none"> 1. Share of newly built dwellings (%), i.e. the share of dwellings built in the current year in the year-end housing stock 2. Number of passenger cars, per 1000 inhabitants (pcs.) 3. Proportion of taxpayers (%), i.e. the number of people with income forming part of a PIT fund per 100 permanent residents
Local economic and labour market indicators <ol style="list-style-type: none"> 1. Registered jobseekers (%) of the working-age population, i.e. the number of registered jobseekers per 100 permanent residents aged 15-64. 2. Share of registered jobseekers in the total number of registered jobseekers over one year (%) 3. Share of jobseekers who have completed primary school in the total number of registered jobseekers (%) 4. Registered total economic organizations (year-end status) per 1000 inhabitants
Infrastructure and environmental indicators <ol style="list-style-type: none"> 1. Public utility scissors (%), i.e. percentage of dwellings connected to the sewerage network of dwellings (%) connected to the piped drinking water network 2. Number of Internet subscriptions per 1000 inhabitants, i.e. the share of dwellings connected to a public drinking water pipeline network (%) 3. Number of households consuming piped gas of the housing stock (%) 4. Dwellings connected to a cable TV network (%)

Sources: 05/2015. (IV.23.) government decree based on own editing

Step 1: Transforming the basic indicators into a scale of the same scope using a normalization process based on the following formula:

$$fa_{i,j,norm} = \frac{fa_{i,j} - \min(fa_{i,j})}{\max(fa_{i,j}) - \min(fa_{i,j})} \cdot 100$$

$fa_{i,j,norm}$: normalized base indicator

$fa_{i,j}$: basic indicator

$\min(fa_{i,j})$: the minimum value of the basic indicator

$\max(fa_{i,j})$: The maximum value of the basic indicator.

For those variables that have a negative impact on the development of settlements, such as the proportion of registered job seekers from the permanent population of working age, we used the reverse formula, that is, we subtracted the normalized base indicator from the highest value of the base indicator and divided it by the range.

Step 2: Calculate group indicators: the average value of the basic indicators within a group gives the value of the group indicator of that group based on the following formula:

$$fa_i = \frac{1}{n} \sum_{j=1}^n fa_{i,j,norm}$$

fa_i = group indicator

$fa_{i,j,norm}$: normalized base indicator

n : number of indicators in a group

Step 3: Calculation of a complex indicator: the average value of the four group indicators gives the value of the developmental complex indicator based on the following formula:

$$fi = \frac{1}{m} \sum_{i=1}^m fa_i$$

fa_i : group indicator

fi : complex indicator

m : number of group indicators

Results

Social and demographic indicators

In terms of social and demographic indicators, we analysed the change in population between 2014 and 2019. *Figure 3* shows that the results show a negative trend, with all but one town in the Kistelek district experiencing a decrease in population over the period.

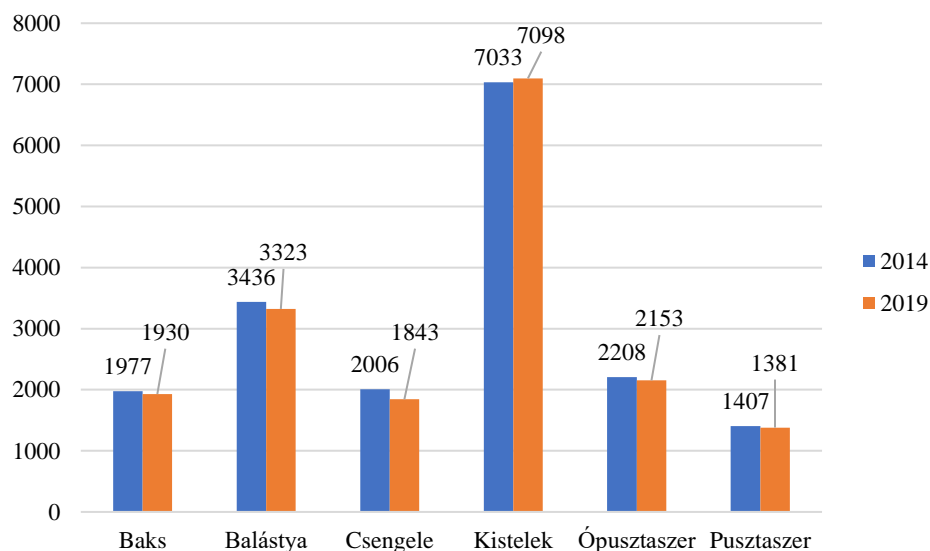


Figure 3. Permanent population change 2014; 2019 (person)

Source: TEIR (2022) data based on own editing

The natural increase/decline shows a more favorable picture in 2019 compared to 2014 for all settlements with the exception of Ópusztaszer. Looking at the 2014 data, the most outstanding values regarding natural weight loss were observed in the case of Baks and Pusztaszer. With the exception of Kistelek and Ópusztaszer, the migration balance was less favorable in 2019 compared to 2014. In the case of Baks, the migration balance shows the most unfavourable picture in the examined period. On the other hand, Kistelek, the only town in the district, produced the most favourable data, as the migration balance increased by 20,300 people.

The unfavorable development of the population in the Kistelek district is due to the natural decline in all settlements, as well as the negative migration balance, of which Kistelek and Ópusztaszer were the exceptions in 2019. Kistelek is the only town in the district, which may be more attractive for settlement than the surrounding towns due to the availability of wider services. In the case of smaller settlements, however, immigration may also take place in the hope of cheaper living opportunities, which further strengthens poverty in the given settlement. The emigration from the Kistelek district can be attributed to the migration of young people to more economically developed regions of the country or abroad.

The situation of Roma segregation

Poverty, disengagement and drifting away from society are not only Hungarian or European characteristics, but have also become prominent social problems globally (Ferge, 2000; Szoboszlai, 2004). The combination of disadvantageous situations leads to permanent exclusions, such as poverty, unhealthy living conditions, low living standards, limited mobility, and long-term unemployment. At the same time, all of these can result in relegation to the periphery of society (Szoboszlai, 2004).

In relation to permanent social exclusion, it is important to mention the Máriatelep segregated village of Baks in the Kistelek district with a population of approximately 2,000 people, where a Roma ethnic minority of about 430 people lives (Hős, 2015). There are 141 apartments here, which is 17% of the settlement's housing stock. Examining the infrastructure of the settlement, the comfort level of the apartments is low. More than 60% of the people living in the settlement do not have regular income and nearly 50% have only primary education, or even none at all. Roma people typically participate in the local public works program (Járási Esélyegyenlőségi Program, 2015).

Complex development indicator for social and demographic indicators

In the case of the group average calculated on the basis of the complex development indicator for the indicators of the social and demographic situation, in 2019 Kistelek took first place, thus improving by one place compared to 2014 (*Table 2*). The winner of 2014, Csengele, lost two places in 2019, which is due to the migration balance, which changed significantly from a positive to a negative direction during the examined period. In the case of Ópusztaszer and Pusztaszer, the aging index is very high, while in Baks, the annual average number of those receiving regular child protection benefits per thousand inhabitants is outstanding, which is mostly due to the segregated Máriatelep, where about 430 Roma ethnic minorities live.

Table 2. Group average calculated on the basis of CDI for indicators of social and demographic status and order of settlements, 2014; 2019

Order	Area	2014 (CDI)	Order	Area	2019 (CDI)
1.	Csengele	64.93	1.	Kistelek	69.06
2.	Kistelek	57.25	2.	Balástya	58.73
3.	Balástya	45.49	3.	Csengele	47.58
4.	Pusztaszer	38.99	4.	Pusztaszer	46.36
5.	Ópusztaszer	38.18	5.	Baks	32.59
6.	Baks	26.69	6.	Ópusztaszer	32.22

Source: own editing

Housing and living conditions indicators

Among the housing and living conditions indicators, three indicators were available for the settlements of the Kistelek district. The first such indicator is the proportion of apartments built in the year in question within the housing stock at the end of the year, which shows a very unfavorable picture in the examined periods. In 2019, in the case of four settlements, the value of the indicator was zero, and in the case of the other two settlements, it did not reach 1%. The other investigated indicator is the number of cars per 1000 inhabitants and the change in the proportion of taxpayers (*Figure 4*).

In 2019, the rate of taxpayers per 100 permanent residents was the highest in Kistelek, the only town in the district, while the lowest was in Baks. The more favourable income conditions in small estates are due to the increasingly favourable employment and decreasing unemployment (Kistelek Város Településfejlesztési Konceptiójának és Integrált Településfejlesztési Stratégiájának Megalapozó Vizsgálata, 2016). The lower proportion of taxpayers in Baks is due to the significant number of Roma people living in the Mária settlement, where the level of education is very low and they typically participate in the local public work program.

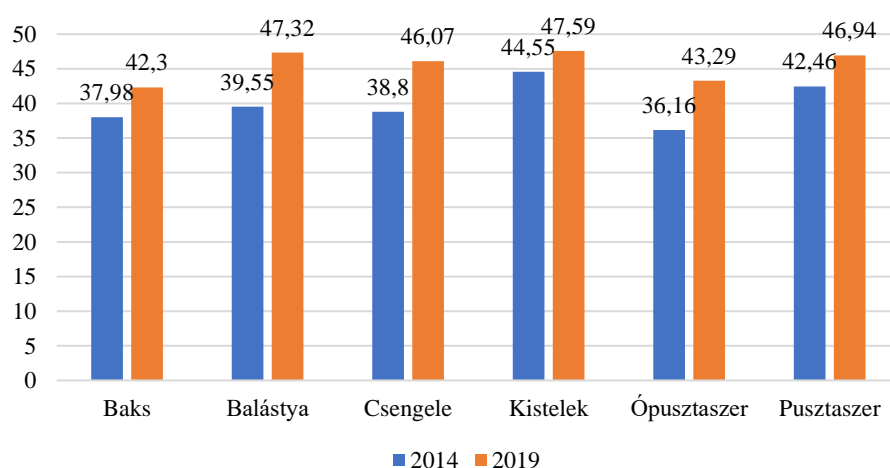


Figure 4. Change in the proportion of taxpayers (%), 2014; 2019 (Number of people with income forming part of a personal income tax fund per hundred permanent residents)

Source: TEIR (2022) data based on own editing

As a result of the group average calculated on the basis of the complex development index for housing and living conditions, Balástya performed best among the settlements of Kistelek district in 2019 (Table 3). The second place is occupied by Kistelek. Both municipalities keep their current position to the proportion of taxpayers. Kistelek has not improved its position in 2019 compared to 2014 but Pusztaszer has advanced one place in the municipal ranking due to a significant drop in its tax rate. The centre of the district stands out from other settlements, and the situation of the second largest settlement, Balástya, also shows an extremely favorable picture in 2019.

Table 3. Group average calculated on the basis of CDI for housing and living conditions indicators and order of settlements, 2014; 2019

Order	Area	2014 (CDI)	Order	Area	2019 (CDI)
1.	Pusztaszer	81.05	1.	Balástya	96.34
2.	Balástya	66.55	2.	Kistelek	61.81
3.	Kistelek	61.34	3.	Pusztaszer	57.12
4.	Csengele	54.08	4.	Csengele	57.09
5.	Baks	7.23	5.	Ópusztaszer	12.77
6.	Ópusztaszer	4.17	6.	Baks	0.00

Source: own editing

Local economy and labour market indicators

We examined four of the local economic and labour market indicators, which are as follows: registered jobseekers as a percentage of the working-age population, the proportion of the registered jobseekers for more than one year among all registered jobseekers, the proportion of job seekers who graduated from primary school among all registered jobseekers, as well as all the registered economic organizations per thousand inhabitants.

We examined all registered economic organizations by settlement in 2014 and 2019. With the exception of Baks, a decrease can be observed in 2019 compared to 2014 for all settlements (Figure 5). The favourable development of the registered economic organizations in Baks is due to the business-friendly and business-supporting settlement management. Overall, the decline in entrepreneurship in the region may point to social problems and poverty.

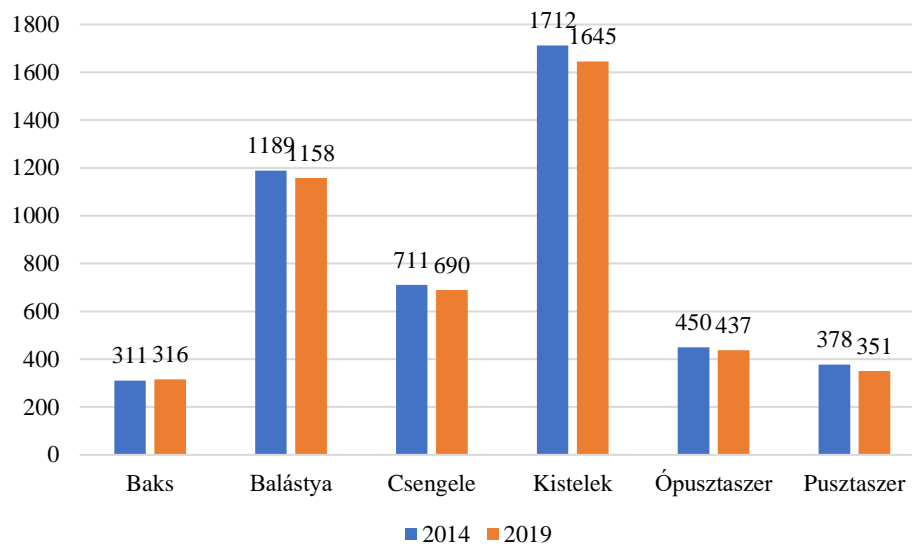


Figure 5. Change of registered business organizations (pcs.), 2014; 2019

Source: KSH (2022) data based on own editing

In the district of Kistelek, the majority of businesses are active in trade and industry, but there is also a significant number of agricultural service providers, catering and transport entrepreneurs (Járási Esélyegyenlőségi Program, 2015). However, it is important to note that Kistelek and its surroundings are currently an area with a lack of industry, where the main profile of the industry is the traditional cable and machine parts production, the food and mill industry, the construction industry, and the handicraft industry. In October 2005, the Municipality of Kistelek adopted the Town Planning Plan, in which the management designated the Kistelek and its Area Industrial Park in the southwest area of Kistelek, at the junction of the M5 highway, in an area of 33 hectares. In December 2005, the area won the title of Kistelek és Térsége "Industrial Park" through a tender, the development of which brought partial results, however, the investments largely remained at the level of promises (Kistelek Város Településfejlesztési Konceptiójának és Integrált Településfejlesztési Stratégiájának Megalapozó Vizsgálata, 2016).

In terms of transport, the M5 motorway passes through the district. However, the construction of a higher-order road network does not bring a higher level of development to all regions. Among these areas is the district of Kistelek, where the established highway network did not favour the businesses since the traffic of highway 5 crossing Balástya and Kistelek was diverted to the the M5 motorway, so some of the businesses along the highway 5 were slowly destroyed (Egri és Kőszegi, 2020).

Agriculture

One of the defining sectors of the Kistelek district is agriculture. The natural features of the district favour agricultural production. Traditionally, field cultivation and fruit and vegetable cultivation dominate. In total, 75% of the land is used for agriculture. However, the typical agricultural activity is different on soils of different quality and consistency. The sandy and semi-solid soil of Balástya, Kistelek, and Ópusztaszer is excellent for growing vegetables with foil. Csengele and Pusztaszer have a high proportion of lawn areas, while Baks's compacted soil allows mainly arable cultivation (Járási Esélyegyenlőségi Program, 2015).

Next, based on the database of the Central Statistical Office, we examined the registered businesses within the economic organizations related to agriculture, power management and fishing in the settlements of the district (Figure 6). In the case of all settlements, it can be said that the number of registered businesses in the mentioned sector decreased in 2019 compared to 2014. Agriculture is characterized by a significant increase in input costs, as well as a stagnation and decrease in sales prices. The increasingly extreme weather conditions make farming even more difficult, as a result of which some of the families in the region gave up farming and started working in other sectors.

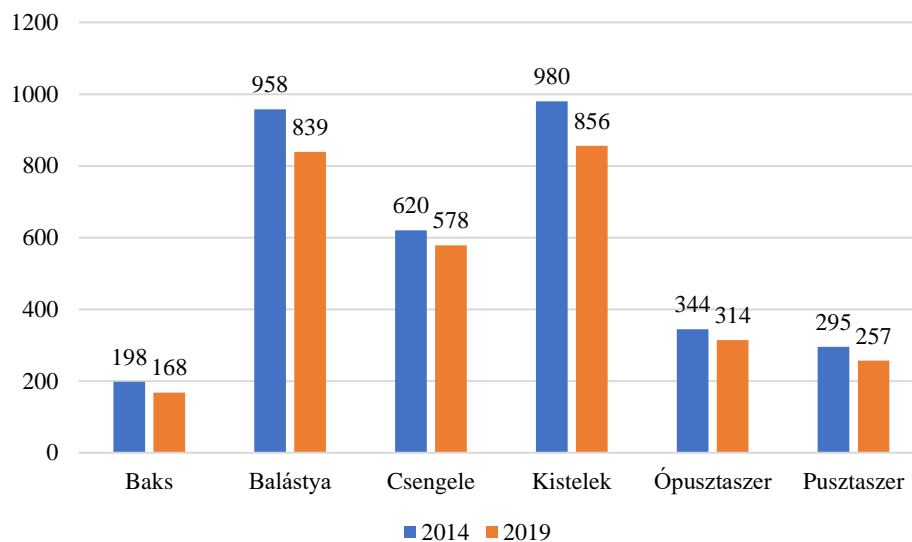


Figure 6. Change in registered business organizations (TEÁOR08= AGRICULTURE, FORESTRY, FISHERIES) (PCS.),2014; 2019

Source: KSH (2022) data based on own editing

Tourism

The district of Kistelek also has an outstanding tourism and cultural history centre from a national point of view: the Ópusztaszer National Historical Memorial Park. Within the district, tourism is basically concentrated here, but the region also has significant tourism potential in several other areas. The plain landscape is rich in natural values, folk traditions and built cultural heritage. However, the Kistelek district lacks complex tourism products based on domestic and international attractions, and there is no unified marketing activity covering the entire region (A Kisteleki kistérség integrált területfejlesztési, vidékfejlesztési és környezetgazdálkodási programja, 2006).

Within the registered economic organizations, I examined businesses operating in the field of accommodation services and hospitality in 2014 and 2019 (Table 4). In the case of Baks, in 2019 the number of businesses registered in the field of accommodation services and hospitality decreased to zero, while in Csengele it was zero in both years examined. It is important to note that none of the settlements has an attraction of outstanding importance. Kistelek has the largest number of enterprises in the examined sector in the region. In the case of Pusztaszer, the number of entrepreneurs operating in the field of accommodation services and catering has increased, which is due to the settlement's rich natural features, which are increasingly attractive to those participating in ecotourism and active tourism. The number of entrepreneurs operating in the field of accommodation services and catering can be considered very low, taking into account the man-made and natural values of the region.

Table 4. Change of registered business entities (TEÁOR08= ACCOMMODATION, CATERING) (PCS.), 2014; 2019

	Baks	Balástya	Csengele	Kistelek	Ópusztaszer	Pusztaszer
2014	6	10	0	32	8	0
2019	0	11	0	33	8	5

Source: KSH (2022) data based on own editing

According to the group average calculated on the basis of the complex development indicator for the indicators of the local economy and labor market, Balástya performed outstandingly in both 2014 and 2019 (Table 5). In the case of Balástya, the labor market indicators developed favourably, and the number of registered economic organizations per thousand inhabitants is very high. In 2019, the position of both Balástya and Csengele have worsened compared to 2014. The district center, Kistelek is found in third place in both years examined, but improved in 2019 compared to 2014. Ópusztaszer is fourth in the ranking, while Baks and Pusztaszer took last place. In 2019, Pusztaszer significantly improved its indicators of the local economy and labor market. In this settlement, the number of registered job seekers decreased significantly compared to the population of working age, as well as the proportion of job seekers registered for more than one year out of all registered job seekers, i.e. the labor market indicators developed favorably in Pusztaszer during the analyzed period. Baks slipped back to last place in 2019, thanks to the labor market indicators. More than 60% of the people living in the Máriatelepi segregate of the Baks municipality do not have a regular income and typically participate in the local public work program.

Table 5. Group average calculated on the basis of CDI for indicators of local economy and labour market and order of municipalities, 2014; 2019

Order	Area	2014 (CDI)	Order	Area	2019 (CDI)
1.	Balástya	98.94	1.	Balástya	86.47
2.	Csengele	72.59	2.	Csengele	63.38
3.	Kistelek	55.20	3.	Kistelek	57.75
4.	Ópusztaszer	53.07	4.	Ópusztaszer	52.77
5.	Baks	46.65	5.	Pusztaszer	46.54
6.	Pusztaszer	33.46	6.	Baks	40.37

Source: own editing

Infrastructure and environmental indicators

The competitiveness of the district's economy, its environmental condition and the living conditions of the people living here are significantly determined by the region's infrastructural system. Considering the transport and geographical features of the district, the Budapest-Szeged railway line and the M5 motorway pass through here. The Tisza River also flows within the boundaries of the district, in which the ferry runs regularly between Baks and Mindszent (Járási Esélyegyenlőségi Program, 2015).

In relation to the infrastructure and environment, we examined the public utilities, the number of internet subscriptions per thousand inhabitants, the proportion of homes connected to the

public drinking water network, the number of households consuming piped gas as a percentage of the housing stock and the proportion of homes connected to the cable television network.

Looking at the indicators of the infrastructure and environment, the proportion of apartments connected to the public sewer network as a percentage of the apartments connected to the piped drinking water network calls attention to a serious problem. Namely, in the case of Csengele and Pusztaszer this value is zero, that is, public sewerage has not been solved in these villages. Regarding the indicator, the situation of Baks is ambivalent, since while in 2014 not a single apartment was connected to the public sewer network, in 2019 the proportion of apartments with drinking water network reached 76.2%. In the case of Csengele, the proportion of apartments connected to the cable television network is only zero, both in 2014 and 2019.

The ranking of the municipalities in 2014 and 2019 in terms of the group average calculated on the basis of the complex development indicator for infrastructure and environmental indicators is shown in Table 6. With the exception of Balástya and Csengele, all settlements improved in 2019 compared to the situation in 2014. The improvement in the situation of the settlements is due to the increase in the proportion of apartments connected to the public sewer network, the number of internet subscriptions, and the proportion of apartments connected to the cable television network. Csengele is far behind the other settlements in terms of infrastructure and environment. Pusztaszer, Balástya, Ópusztaszer and Csengele owe their separation from Baks and Kistelek, which are in first place, with their significant farms, where their infrastructure and environmental indicators (proportion of apartments connected to public utilities, drinking water supply network, the number of households consuming piped gas, and the proportion of apartments connected to the cable television network) are very unfavorable.

Table 6. Group average calculated on the basis of CDI for infrastructure and environmental indicators and order of municipalities, 2014; 2019

Order	Area	2014 (CDI)	Order	Area	2019 (CDI)
1.	Kistelek	79.85	1.	Kistelek	96.23
2.	Baks	47.21	2.	Baks	69.30
3.	Pusztaszer	39.93	3.	Pusztaszer	42.84
4.	Balástya	39.55	4.	Balástya	38.35
5.	Ópusztaszer	14.61	5.	Ópusztaszer	30.80
6.	Csengele	5.18	6.	Csengele	3.40

Source: own editing

The results of the complex development test for the four groups of indicators

After analyzing the four indicator groups of the complex development indicator and their sub-indicators, we set up an order for 2014 and 2019 among the settlements of the Kistelek district (Table 7). In both years, Kistelek, the district's only town-ranked settlement, finished in the first place, and Ópusztaszer in last place. Based on the complex development indicator, Kistelek, the only city with a central role in the Kistelek district, stands out. Within the district, the centre-periphery relationship is revealed.

Table 7. CDI on economic and social indicators and the order of settlements, 2014; 2019

Order	Area	2014 (CDI)	Order	Area	2019 (CDI)
1.	Kistelek	63.41	1.	Kistelek	71.22
2.	Balástya	62.63	2.	Balástya	69.97
3.	Csengele	49.20	3.	Pusztaszer	48.21
4.	Pusztaszer	48.36	4.	Csengele	42.88
5.	Baks	31.95	5.	Baks	35.57
6.	Ópusztaszer	27.50	6.	Ópusztaszer	32.14

Source: own editing

Overall, it can be said that the average of the complex development indicator improved in 2019 compared to 2014. With the exception of Csengele, all settlements were able to improve the examined indicators or were able to maintain their previous situation. Kistelek was able to improve for all indicator groups during the period under review. Balástya also improved for all indicator groups, with the exception of infrastructure and environmental indicators. In the case of Baks, the unfavorable evolution of the housing and living conditions indicators are due to the Máriatelep segregate located in the village, where, examining the infrastructure of the settlement, it can be said that the comfort level of the apartments is very low. Except for the housing and living conditions indicators, there was a decline in all indicator groups in Csengele during the examined period.

Conclusions and proposals

The most important conclusions of the study were summarized in the form of a SWOT analysis (Table 8). We have collected the strengths, weaknesses, opportunities and dangers, the coordination of which has no effect on the given area, it can only react and adapt to them.

Table 8. Economic and social SWOT analysis of Kistelek District

Strengths	Weaknesses
<ul style="list-style-type: none"> • advantageous location, good transport geography (proximity to the M5 motorway) • favourable environmental status (proximity to the Tisza River) • favourable agro-ecological conditions • the existence of ecosystem services • man-made rich values • rich natural environment • the area is rich in thermal water 	<ul style="list-style-type: none"> • metropolitan city, distance to the labour market (the only town in the district is Kistelek) • lack of an industrial park, an entrepreneurial zone • lack of local tourism background • lack of cooperation (agriculture, tourism) • districts with lack of services: Kistelek • lack of utility infrastructure • brain drain
Opportunities	Threats
<ul style="list-style-type: none"> • optimal use of ecosystem services • development of new forms of tourism • strengthening of agriculture in the region, for example by switching to organic production 	<ul style="list-style-type: none"> • climate change, extreme weather, inland water and drought • social immigration • disproportionate distribution of development resources and aid

<ul style="list-style-type: none"> • production for the local market • development of cooperation (in agriculture, tourism) • strengthening the industrial park and entrepreneurial zone in Kistelek • social inclusion (Roma and non-Roma communities) • strengthening the cultural economy 	<ul style="list-style-type: none"> • accelerating peripheral of homestead areas • presence of ethnic segregation in the area
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Source: own editing

Development and transformation of agriculture

Agriculture is one of the dominant sectors in the Kistelek district, and it is increasingly marginalised in the region. Agriculture is favoured by the long agricultural history of the area and the existence of favourable agro-ecological conditions. Strengthening the agriculture of the region can be achieved, for example, by transitioning to an organic economy, the production of organic products, and by striving for local processing and consumption. Environmental stress caused by climate change and extreme weather conditions can be reduced with more diverse, polycultural local food production (Káposzta, 2015). Favouring the local processing and sale of food contributes to the revitalization of the local economy by creating jobs and keeping incomes local. We consider local cooperation in agriculture to be important. It would be important to form farming circles and to create an irrigation community to deal with the problems of drought and internal water. In the future, we recommend prioritizing the further utilization of thermal water in agriculture.

Development of sustainable rural tourism

Rural tourism basically includes several forms of tourism and we do not mean only basic accommodation and services. Rural tourism is a complex concept that ensures village and farm hospitality, the preservation of the traditional rural environment, the continued existence of agriculture, folk culture, folk architecture and crafts in the given area. All of these contribute to increasing the population retention power of the countryside (Káposzta, 2015). The district of Kistelek is rich in both natural and man-made values, which create opportunities for the development of many forms of tourism. The rich natural values favour the development of ecotourism and active tourism, while the historical monuments and folk traditions make it possible to strengthen cultural tourism. Proper utilization of thermal water would enable the development of medical tourism in the region. The development of tourism requires the establishment of the appropriate background infrastructure, i.e. the existence of an appropriate quantity and quality of accommodation and hospitality units. In the future, we consider it important to develop joint marketing activities in the region in relation to tourism.

Cultural economy

Rural development based on endogenous foundations, based on the exploitation of local resources, emphasizes localization. Endogenous development and its associated localization can be interpreted as a response to global trends and external influences. The cultural economy itself, as a

concept, carries the basic assumption that culture is one of the foundations of local socio-economic development, since rural areas are able to transform and reshape their economy through their cultural resources. Thus, rural societies can become capable of maintaining economic control through their culture. The strengthening and development of local cultural resources contribute to the creation of socio-economic prosperity (Kis, 2014). The district of Kistelek is rich in historical and cultural elements, as well as traditions based on agriculture, making it possible to strengthen local handicraft products and related events.

Local development of micro-, small- and medium enterprises

The development of local micro, small and medium-sized enterprises is essential in terms of job creation and revitalization of the local economy (Káposzta, 2015). In connection with the cultural economy, the development of local micro-, small- and medium-sized enterprises linked to local handicraft products would be the most important in the first instance. In the future, it is important to create the appropriate infrastructure necessary to attract businesses and encourage their creation, for example, it would be essential to strengthen and develop the initiative to support the creation of an industrial park in Kistelek.

Community development

Closely linked to local economic development is local social development - strengthening communities. Community development aims to combat poverty and social exclusion and promote social inclusion. Community development is a bottom-up approach that also involves the exploration and exploitation of local natural, economic, social and cultural resources. (Béres, 2013). In the segregated Máriatelep of the Baks settlement of the Kistelek district, a Roma ethnic minority of about 430 people lives, whose social integration is essential for the settlement's future. In the settlement, the local government plays an important role in the eradication of segregation, through education and the involvement of experts. In the future, local civic organizations and spontaneous population organizations can promote community development, which is essential not only in the case of the Baks settlement. The local social organization promotes and creates the practice of self-help. Community development does not have to be limited to one settlement, since the settlements are able to cope with many tasks in cooperation that they were previously unable to do alone (Béres, 2013).

Summary

The development of the settlements of the Kistelek district was examined at two points in time (2014; 2019) using a complex development indicator based on the indicators formulated in Government Decree 105/2015 (IV. 23.). According to the Government Decree No. 290/2014 (26.XI.), the district under study is a beneficiary and a district to be developed, which is also one of the poorest districts of Csongrád-Csanád County. It is important to examine the district by settlement in order to identify the need for intervention and development in settlements with different characteristics and problems. After calculating the complex development index for economic and social indicators, the only municipality in the district with urban status, Kistelek, came first in the ranking of municipalities. Kistelek is a service-poor district centre, but nevertheless, the indicators show a good centre-periphery relationship. Taking into account the

results of the study, we have made suggestions for improvements. In the field of agriculture, we have suggested a shift to organic farming, the production of organic products and a focus on local processing and consumption. The natural and man-made assets of the district allow for the development of additional forms of tourism and the strengthening of existing forms of tourism in the area. The rich historical and cultural values of the Kistelek district and its traditions based on agriculture make it possible to focus on the cultural economy. The development of local micro-, small- and medium-sized enterprises linked to local handicraft products is essential to promote job creation and income retention in the cultural economy. Community development would be very important to combat poverty and social exclusion and to promote social inclusion in the area.

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