COMPETITIVENESS MAP OF THE SETTLEMENTS IN PEST COUNTY

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ABSTRACT
Nowadays, the concepts of globalization and competitiveness increasingly come to the fore. Territorial entities are looking for the correct direction of development at all levels to answer the accelerated world economy changes by Internet and other developments. With the help of the European Union, Hungary is also looking for its place and its development opportunities in this regional competition. This study is an abbreviated version of a multi-year research. Since joining the European Union, Hungarian regions were not always able to take advantage of the opportunities provided by the EU. In our study, we are looking for the disparities within the territory of the Central Hungarian region without Budapest. What is the grade of homogeneity in Pest County? It seems to be proven that even the most developed region of Hungary has significant regional disparities in terms of competitiveness. After the global economic crisis of 2008-2009 the importance of comparative advantages and competitiveness have been increased at both national and regional levels (KÁPOSZTA - NAGY - VILLÁNYI, 2008; HORSKÁ - SMUTKA - MAITAH, 2012).

Keywords: Competitiveness, Regional inequalities/ disparities, Agglomeration area

INTRODUCTION

The competitiveness of a country is determined by its regions (RITTER, 2010). But what about the regions? How deep should we dig with the competitiveness researches? In our paper, after the competitiveness analysis of the micro regions in Pest County, we have checked the competitiveness of all the settlements in the county. We have chosen the most developed county in Hungary. But among the competitive settlements peripheral areas can be found as well. The most developed region also has lagging areas which are not necessarily located at region borders. There are internal peripherals also.

MATERIAL AND METHOD

Applied methods

Four principal components (Economy, Habitability, Comfort, Line infrastructure) were formed by 13 micro-region-level-indicators in the first part of our examination, after that two clusters were created (Competitive micro-regions, Fairly adapting micro-regions) in Pest County.
In the second part of our research 20 indicators were made from a settlement-level dataset and from each indicator sub-indexes were created. By standardization of range we attempted to determine the relative position of the indicators (GODA, 2012). The mean of the created sub-indexes were calculated without weighting to determine the settlements' competitiveness indexes. The competitiveness indexes were ranked by a new range standardization to create a new derived index. Subsequently, the settlements in Pest County were divided into four categories (Well competitive settlements, Competitive settlements,

Fairly adapting settlements, Relative peripheral settlements). The four categories were determined by their position to the mean.

Firstly, we divided the interval of the derived index at its mean (0.4), than the interval above mean was divided into two parts by its median (0,7) and the interval below mean was divided into two parts by its median (0,2) also, so we created four intervals[1].

As the third step of our study, we delineated the results in space. We looked for correlations between spatial location and certain micro-regional / settlement categories. We tried to find answers, whether can similar territorial disparities be shown in Pest County if we completely change the indicator system and we analyze the space by other criteria.

Indicator system of the micro-regional-level research

The territorial demarcation of our study is Pest County without Budapest, the data is in micro-regional level according to Table 1. The indicator system was determined according to KIS (2011).

Table 1.: Indicator system of the first part of the research

Dimension	Indicator	Data owner	Year
Economy	Taxpayers / 1000 inhabitants (capita)	KSH	2009
	Personal income tax / Taxpayers (Ft)	KSH	2009
	Number of homes built / 1000 inhabitants	KSH	2009
	Entrepreneurial activity (Number of enterprises / 1000 inhabitants)	KSH	2009
	Proportion of registered enterprises in the service sector (%)	KSH	2009
Society	Vitality index (0-14 year old population / 60-x year old population)	KSH	2009
	Domestic migration balance (average value of 2000-2009)	KSH	2009
	Unemployment rate (%)	KSH	2009
	Medical working hours / 1000 inhabitants (hours)	KSH	2009
Infrastructure	Number of retail units / 1000 inhabitants	KSH	2009
	Availability of micro-region center from Budapest (minutes)	Own calculation	2009
	Number of homes / 1000 inhabitants	KSH	2009
	Proportion of homes connected to public drinking water network (%)	KSH	2009

Source: Authors' own editing based on KIS (2011)

Indicator system of the settlement-level research

The territorial demarcation of the second part of the study is similar to the first phase except that the basic data and indicator system were collected on settlement-level. The second indicator system was designed based on GODA 2012 and re-thought.

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[1] 0-0.2; 0.21-0.4; 0.41-0.7; 0.71-1

Table 2.: Indicator system of the second part of the research

Pillar	Dimension	Indicator	Data owner	Year
Environment	Political	Number of households involved in selective waste collection / Number of households involved in regular waste collection	KSH	2010/2010
	Economic	Recycled local solid waste (recycling, composting and energy recovery, total) / Total local solid waste transported	KSH	2010/2010
	Social	Number of households involved in regular waste collection / Homes total	KSH	2010/2010
	Technological	Secondary utility gap (Number of homes connected to public sewer systems / Number of homes connected to public drinking water network)	KSH	2010/2010
Infrastructure	Political	Fastest way to a highway junction (km)	GeoX Kft.	2010
	Economic	Number of miscellaneous food stores	KSH	2010
	Social	Number of registered unemployed Vocational School, High School, Polytechnics graduates/ Permanent population	KSH	2010/2010
	Technological	Average travel time of direct bus lines to micro-region center	Cdata Kft.	2009
Local Economy	Political	Business tax / Permanent population	TÁKISZ	2009/2009
	Economic	Number of registered enterprises / Permanent population	KSH	2010/2010
	Social	Number of petrol stations / Territory of the settlement	KSH	2010/2010
	Technological	Number of internet subscriptions / Homes total	GKIeNET	2010/2010
Social activity	Political	Number of registered nonprofit organizations (year-end) / Permanent population	KSH	2010/2010
	Economic	Number of day cares (municipal, industrial, private etc.) / 0-14 year old population	KSH	2009/2009
	Social	Migration balance	KSH	2010
	Technological	Number of direct buses per day to micro-region center	KSH	2009
Tourism – extern connections	Political	Tourist tax (building, stay, total)	KÖH	2010
	Economic	Total number of places in commercial hotel accommodation	KSH	2010
	Social	Number of playgrounds, sport fields, rest areas / Permanent population	KSH	2009/2009
	Technological	Number of restaurants, bars / Permanent population	KSH	2010/2010

Source: Authors' own editing 2013 based on GODA (2012)

RESULTS

Results of the micro-regional research

Based on the micro-regional research, it can be stated that 10[2] out of 16 micro-regions belong to the Competitive micro-regions. The CMRs ring around Budapest. The only exception is the Gyáli micro-region. All the micro-regions located on the right bank of the Danube belong to the more competitive category. On the left bank of the Danube[3] the so-called Fairly adapting micro-regions are located. Figure 1 shows that by the increase of the

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[2] Gödöllői, Monori, Ráckevei, Váci, Budaörsi, Dunakeszi, Pilisvörösvári, Szentendrei, Veresegyházi, Érdi micro-regions

[3] Aszódi, Ceglédi, Dabasi, Nagykátai, Szobi, Gyáli micro-regions

distance from Budapest an outer suburban ring is being formed. Due to poor geographical and border location the Szobi micro-region is in a disadvantaged situation.
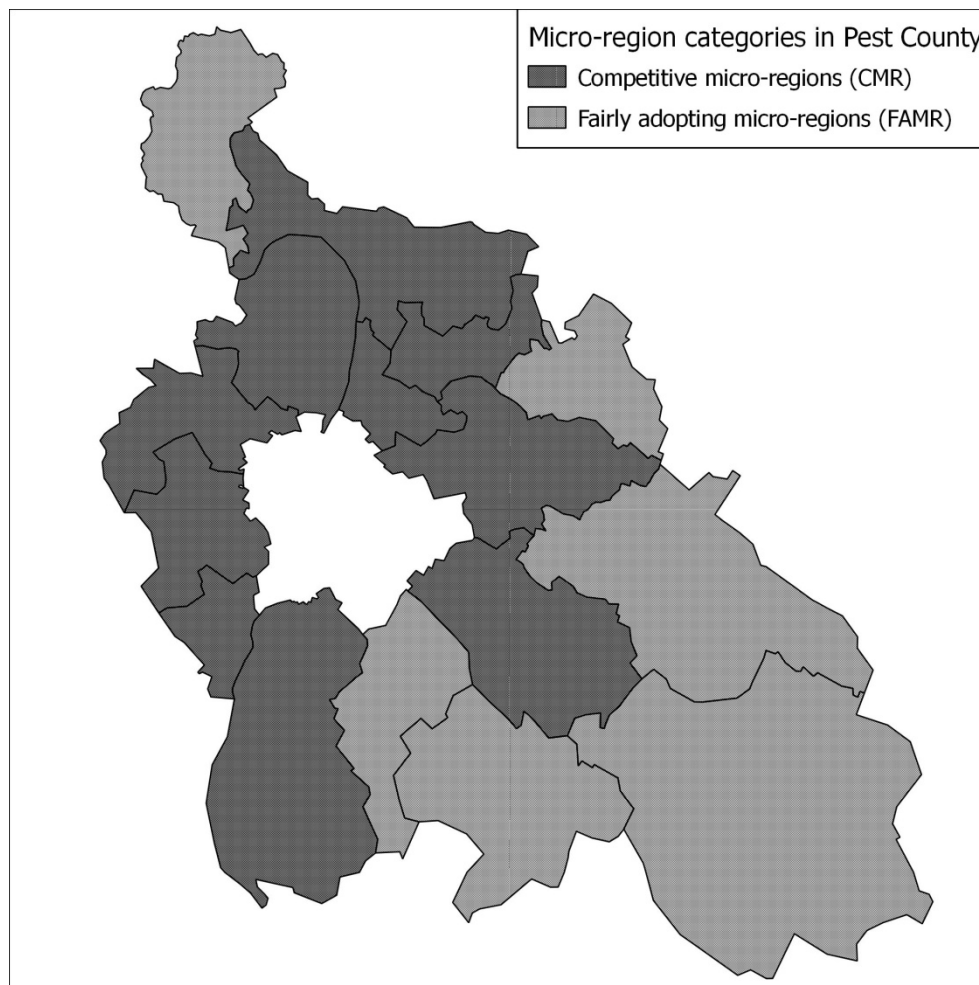

Figure 1.: Micro region cathegories in Pest county
Source: Authors' own calculation and editing 2013 based on KIS (2011)

Results of the settlement-level research

In Pest County, 5^4 out of 187 settlements belong to the Well Competitive Settlements (WCS), 89^5 belong to the Competitive Settlement (CS), 80^6 belong to the Fairly Adopting Settlements (FAS) and 13^7 belong to the Relative Peripheral Settlements(RPS).

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[4] Budaörs, Diósd, Galgahévíz, Remeteszőlős, Százhalombatta

[5] Acsa, Albertirsa, Áporka, Aszód, Bag, Biatorbágy, Budajenő, Budakalász, Budakeszi, Bugyi, Cegléd, Ceglédbercel, Csobánka, Csomád, Csömör, Csörög, Csővár, Dabas, Délegyháza, Domony, Dunaharaszti, Dunakeszi, Dunavarsány, Érd, Erdőkertes, Fót, Galgagyörk, Gomba, Göd, Gödöllő, Gyál, Halásztelek, Herceghalom, Hévízgyörk, Iklad, Isaszeg, Kakucs, Kartal, Kismaros, Leányfalu, Lórév, Majosháza, Mogyoród, Monor, Nagykovácsi, Nagytarcsa, Nyársapát, Őrbottyán, Páty, Pécel, Penc, Perbál, Péteri, Pilis, Pilisborosjenő, Piliscsaba, Pilisjászfalu, Pilisszentiván, Pilisvörösvár, Ráckeve, Rád, Solymár, Sülysáp, Szada, Szentendre, Szentlőrinckáta, Szigethalom, Szigetszentmiklós, Szigetújfalu, Sződ, Sződliget, Taksony, Tárnok, Telki, Tinnye, Tököl, Törökbálint, Tura, Üröm, Vác, Vácegres, Váckisújfalu, Vecsés, Veresegyház, Verőce, Verseg, Visegrád, Zsámbék, Zsámbok

[6] Abony, Alsónémedi, Apaj, Bénye, Csemő, Csévharaszt, Dánszentmiklós, Dány, Dömsöd, Dunabogdány, Ecser, Farmos, Felsőpakony, Galgamácsa, Gyömrő, Hernád, Inárcs, Ipolydamásd, Ipolytölgyes, Káva, Kerepes, Kiskunlacháza, Kisnémedi, Kisoroszi, Kistarcsa, Kocsér, Kóka, Kosd, Kőröstetétlen, Letkés, Maglód, Makád, Márianosztra, Mende, Mikebuda, Monorierdő, Nagykáta, Nagykőrös, Nagymaros, Nyáregyháza, Ócsa, Örkény, Pánd, Pilisszántó, Pilisszentkereszt, Pilisszentlászló, Pócsmegyer, Pomáz, Pusztavacs, Pusztazámor, Püspökhatvan, Sóskút, Szigetbecse, Szigetcsép, Szigetmonostor, Szigetszentmárton, Szob, Szokolya, Táborfalva, Tahitótfalu, Tápióbicske, Tápióság, Tápiószecső, Tápiószele, Tápiószőlős, Tatárszentgyörgy, Tök, Törtel, Újhartyán, Újlengyel, Újszilvás, Úri, Üllő, Vácduka, Váchartyán, Vácrátót, Vácszentlászló, Valkó, Vasad, Zebegény

Even though the settlement-level research was carried out with different indicator system, its results show very similar picture to the micro-regional results. Significantly different values can be observed only at the Aszódi micro-region.

Figure 2 shows that similarly to the micro-regional research, mostly WCS and CS settlements ring around Budapest. The settlements bordering South-Budapest are not part of the competitive territories just like in the micro-regional research. Galgahévíz which belongs to the WCS category has very extreme values. One reason for this may be the existence of the eco-village in Galgahévíz. All the other WCS settlements are located on the left bank of the Danube.
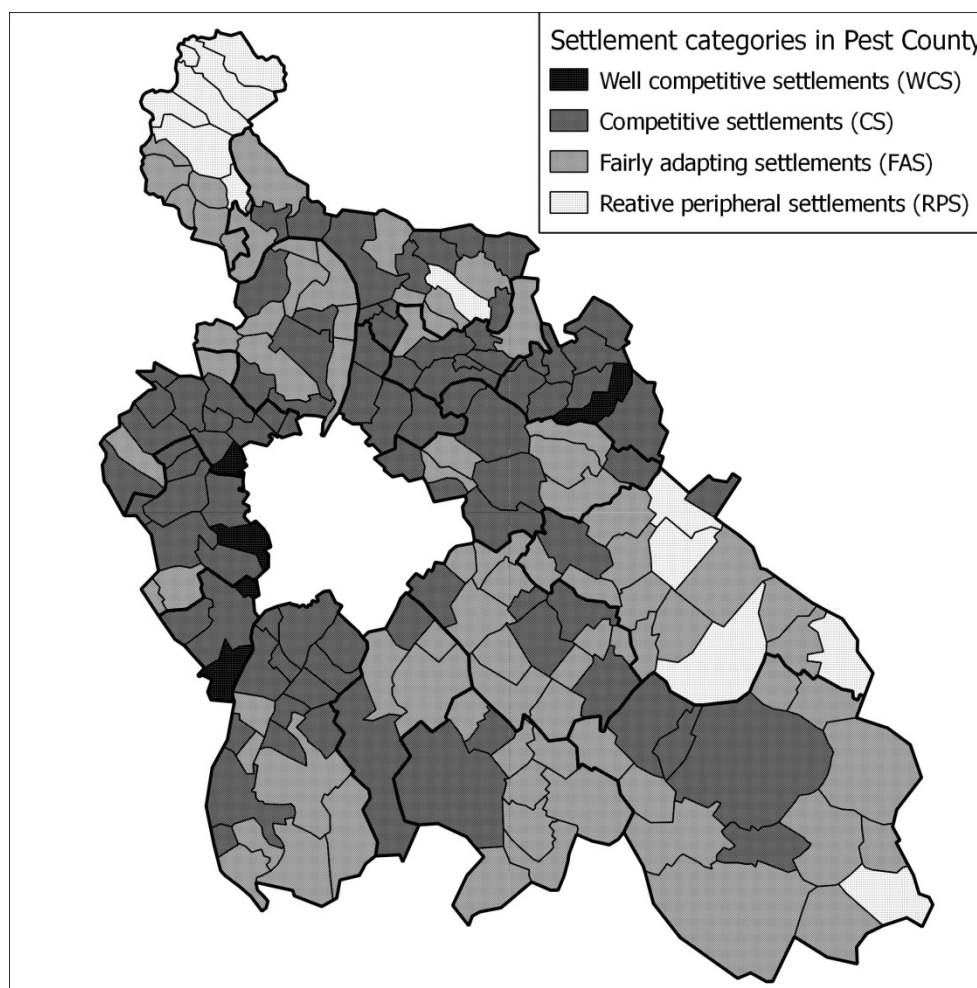

Figure 2.: Settelments cathegories in Pest county
Source: Authors' own calculation and edition (2013)

Even though CS category Szentlőrinckáta is located in a peripheral area of Pest County, yet it has relatively good values. This is due to good infrastructural location and the favorable environmental dimension within Pest County. A grouping of 8 settlements[8] at Southeast Pest can be observed. This area may gain its competitiveness from the Budapest-Kecskemét commuter rail system. On this line agglomeration had a positive impact on the settlements.

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[7] Bernecebaráti, Jászkarajenő, Kemence, Kóspallag, Nagybörzsöny, Perőcsény, Püspökszilágy, Szentmártonkáta, Tápiógyörgye, Tápiószentmárton, Tésa, Tóalmás, Vámosmikola

[8] Cegléd, Nyársapát, Ceglédbercel, Albertirsa, Pilis, Monor, Gomba, Péteri

Geographical conditions affect the competitiveness of several settlement groups adversely. One such settlement group[9] is located on the Szentendre Island. Although these settlements are relatively close to Budapest and their neighboring settlements are in CS category, due to the isolation of the Danube, these settlements act as internal periphery. The reason for this is clearly the poor infrastructure availability. Another similar settlement group[10] which is negatively affected by natural geographical conditions is located in the Pilis.

We need to define two groups of settlements in RPS category. The first group[11] is in the Börzsöny. These settlements are located in a single block. The Slovakian-Hungarian border and the Börzsöny Mountains made these settlements peripheral. All of these settlements belong to the Szobi mico-region. The second group[12] of the RPS category is scattered on the left bank of the Danube and their incidence is increasing moving away from Budapest.

CONCLUSIONS

In summary, our study demonstrated that regional inequalities can be found even in Pest County. We cannot consider the most developed county of Hungary as homogeneous. Both of our researches have proven that by increasing the distance from Budapest, the competitiveness of the settlements decreases, and by examining on settlement-level relative peripheral areas can be delineated. The competitiveness of a settlement is determined not only by the gravitation zone of a city but geographical conditions can limit the development of the settlements also.

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[9] Kisoroszi, Tahitótfalu, Pócsmegyer, Szigetmonostor

[10] Pomáz, Pilisszántó, Pilisszentkereszt, Pilisszentlászló, Dunabogdány

[11] Bernecebarát, Kemence, Kóspallag, Nagybörzsöny, Perőcsény, Tésa, Vámosmikola

[12] Jászkarajenő, Püspökszilágy, Szentmártonkáta, Tápiógyörgye, Tápiószentmárton, Tóalmás