THESES OF THE PHD DISSERTATION

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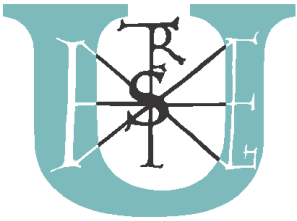

SZENT ISTVÁN UNIVERSITY

RURAL AREAS IN THE SETTLEMENT NETWOK

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1. BACKGROUND

Urban-rural relations are more and more in the spotlight next to the growing significance of rural regions due to the ongoing urbanization processes. In spite of the constant efforts to reach spatial cohesion, we can witness a growing difference between urban and rural regions. The majority of the Hungarian settlement system can be considered as rural, so rural development is highly important in Hungary. The classification of urban and rural communities varies country by country. All the countries try to elaborate a classification system suitable for their conditions. Its driver is often to ensure the fullest possible mobilization of rural development support. The classification of rural areas has high social and economic significance but it is also necessary to elaborate a scientific approach. As the question, which settlement can be considered urban or rural can not be simply an issue of support.

For defining rural areas the higher environmental quality, higher rate of open spaces, dominance of agriculture and forestry, possibility of a quiet life is often a prerequisite, which became questionable for today because of the fact that the share of agriculture in the GDP and employment declined radically. Among all the possible questions, I focused on the settlement network in the texture of urban and rural regions and green infrastructure. In my research I tried to get a wide overview about the present state of rural areas in Hungary, focusing on green spaces in the entire administrative area of settlements.

The urban-rural relations are under a constant change. So several theories were evolved about the ideal network of relations even in case of the Hungarian settlement system. Several aspects, partially the landscape characteristics influence the relations of

settlements. So even such cooperations were evolved through time, which were fostered by certain landscape conditions. The issues of urban relations and the landscape are also important in the field of regional and rural policy.

The place-based development emphasized in regional planning is raising also the need for the landscape level approach in rural development. The rural development concepts reveal sometimes controversial ideas in the field of urban-rural relations and landscape.

The green infrastructure which is a basic element of landscape structure through its ecosystem services is important in rural development. The availability, quality of green infrastructure (as a life support system) is a basic criteria in the classification of settlements.

The innovation in my research is the common understanding of urban-rural dichotomy and green infrastructure on landscape scale which is an entirely new approach in rural research.

1. 1. Objectives

In my PhD research I would like to make the changing and diverse rural areas' development more effective by a deeper understanding and description of the urban rural relations. I wanted to prove that fostering landscape level cooperations which take care of ecosystem services provided by green infrastructure would mean a step forward in spatial cohesion based on harmonious urban-rural partnerships from the point of view of relations between settlement network and green infrastructure.

In my research, I set up the following objectives:

1. To explore the effects of national rural development concepts and programs on the landscape and urban-rural relations, furthermore define the terminology and the changes of the related program elements.
2. To explore the historical evolution of theories on urban-rural relations especially considering the Hungarian settlement network.
3. To explore the history of urban-rural relations in the study areas.
4. To define the landscape level cooperations and to reveal the real cooperations in order to prove that these cooperations can function as local level rural development planning.
5. To explore the relation of green infrastructure and rural development and to analyze the availability of green infrastructure on national level.
6. To carry out analysis on local (study areas) and national level for justifying “myths” about urban-rural partnership.
7. To justify the results of national level assessment with local analysis.

2. MATERIALS AND METHODS

I carried out my research using written resources, maps databases and field visit.

I have dealt with spatial planning systems, collected best practices of landscape based settlement network as background of my research. I analyzed the national level rural development programs and local strategies pertaining to the study areas.

According to my language skills I used Hungarian, English and German sources. I applied statistical data of The Hungarian Statistical Office (KSH), National Information Database of Spatial Planning (TEIR) and EUROSTAT. My maps were elaborated based on websites of KSH, Ecosystem base map of Hungary, Lechner Tudásközpont and National Széchényi Library.

I explored several theoretical approaches considering spatial level, content and timeframe. I carried out researches on national and regional level (three study areas) applying the scale of rural development and programming. My research focused on urban-rural relations and settlement network considering settlement hierarchy, landscape character, population number and agglomerations. As the timeframe, I analyzed the historical aspects of inter - municipal relations.

3. RESULTS

Following my objectives I explored the effects of the national and local (study areas) rural development strategies on landscape and urban-rural relations, I collected, defined the changes the related terminology and program elements. I explored and summarized the evolution of theories dealing with urban-rural relations especially considering the Hungarian settlement network.

3.1. Theses and scientific results

1. I found that **landscape and relating concepts** come up with a narrow sometimes overlapping meaning in the rural development concepts which cause misunderstanding. It is **necessary** to elaborate a **common terminology** for rural development policy especially the place based planning approach. I found that the **terminology evolved in landscape architecture could provide an appropriate framework for unifying the terms in rural development**.
2. **I clarified the concept of landscape level cooperation and elaborated a term** for it as follows**:**
   a. *Landscape level cooperation: is a network of local inhabitants, non-governmental organizations, entrepreneurs, public authorities based on common values and development goals in the frames of common landscape conditions and relations between the actors. The spatial boundaries of the cooperation is defined by landscape conditions, identity and the area, which is necessary for realization of the*

objectives. So the boundaries are flexible, and can change in time and space.

3. The development potential of **remote rural areas** – without any development pole – is based on **landscape resources as endogenous sources**. These are regions where the tools of regional policy cannot applied as these cannot connect to development poles, agglomerations, which reveals the differences between rural and regional development.

   I stated that **landscape level cooperations offer an effective framework for development of remote rural areas especially on local level, mobilizing landscape resources as endogenous resources where ecosystem services provided by green infrastructure dominate**.
4. I stated that the availability of green infrastructure is an appropriate criteria in defining urban and rural areas, with the following findings:
   a. **The degree of green infrastructure supply is more defined by position in the settlement network and relations than landscape character.**
   b. The degree of green infrastructure supply is much lower in villages (all in inner and outer areas in the administrative borders) of agglomeration zones than the national average. **Agglomeration zones, settlement groups** are specific built up areas which **need specific green infrastructure management compared to other settlements**.
   c. **In rural areas the degree of green infrastructure supply is dominated by the outer unbuilt areas.**
   d. Considering green infrastructure supply **arable land has a great potential for green infrastructure development.**

e. **The cities are supplied with green infrastructure per person on the inner, built up areas better than villages**, probably due to the larger amount of public green spaces.

5. I have the following findings related to types of rural regions:
   a. The regions of former agro-market towns, or middle size cities and specialized villages with their surrounding keeping their rural character, **as transition regions I named as "mezővárosias vidéki térség" (rural regions with towns)**.
   b. **The administrative borders (district, county) often do not reflect the functional relations between communities,** and the regions with administrative borders do not have a real center. Those cities, which do not have real central function, can be considered as **part of the rural** regions (unless they belong to an agglomeration zone)**.**
   c. The **degree of green infrastructure supply and by that wide range of ecosystem services provide a new axis** between urban and rural regions serving as a base for their development.
6. I found that **landscape planning can serve as a framework for green infrastructure planning and so it can provide a base for rural development planning and programming as well.** As landscape planning, green infrastructure planning provide a common platform for harmonizing economic, social and ecological interests. To harmonize these three aspects is the main objective of all kind of place-based planning as rural development planning as well.

7. I compared the general objectives, functions and service areas of green infrastructure planning and rural development and the possible connections between them. **I found that green infrastructure planning can improve in many ways the life quality of rural population. I added two more functions two green infrastructure:**
   a. **fostering spatial cohesion, and**
   b. **marking landscape identity, spatial relations.**
8. Considering the myths related to urban-rural relations I found the following:
   a. **The renaissance of rural regions can be proved just partially,** based on population growth of certain settlements. Other indicators as outmigration, differences in income, commuting, show a different picture than flourishing rural regions.
   b. **Considering the respect of rural regions there is really a difference between rural and urban population, but it comes from different choices as well**.
   c. **Poverty is not an urban phenomenon, poor people can be found in urban and rural regions as well.** There is a real difference in the average income level with lower level for rural areas, but the growing number of poor people is more common issue for cities.
   d. Agriculture has a lower significance in GDP and employment, which caused the radical change of employment structure of rural regions. For now, **rural regions are very diverse, and in certain areas of cities can agriculture dominate**.

Additionally I highlighted that theories about cities and its agglomeration zone **consider** that the **villages around a city provide it with food,** is not true in our globalized world. The recently founded local markets intend to reestablish this relations revealing the lack of this former urban-rural relations.

4. CONCLUSIONS AND SUGGESTIONS

In the frames of my researches I have several such founding's which do not answer directly my objectives so I haven't created theses from them but can contribute to implementing my results in rural development practice. Several further questions were raised during the research. In this section I list these issues for further consideration for researchers, practitioners from the field of rural development.

1. In the frames of the literature review I found that all the terms about rural regions vary according to the objective of the definition. The rural definitions follow the different conditions of countries, regions providing base for the support system. So these definitions are not scientific definitions but rather a system of quantifiable criteria to award the grants. It was not my objective to elaborate the definition of rural areas, but my findings can help to create a scientific definition. These aspects are the follows:
    a. Rural areas are changing continuously also the range of the possible activities is becoming more diverse. Agriculture cannot be considered as the most

dominant activity in rural regions any more not even in Hungary.

b. The town and the surrounding rural areas do not depend on each other any more (especially from the point of view of food supply) in the globalized world, but generally the interdependence of town and rural areas remained.
c. The planning scale supposed to be the micro-regional level at least, where the administrative borders bear no significance in spite of settlement scale. The municipal administrative borders can be dissolved as well.
d. The towns without real central function are part of the rural regions (unless they belong to an agglomeration zone).
e. Urban–rural dichotomy becomes center–periphery dichotomy, which belongs into the sphere of regional development. Areas falling out from the core areas have to be considered as rural area regardless their population number or density.
f. The availability of green infrastructure and ecosystem cervices provide a new development axis between urban and rural areas.
g. Cities have a higher rate of green infrastructure in the built up areas than villages, which can be considered as a criteria of urbanity.
h. Efforts for reaching spatial autonomy can serve to strengthen the spatial scale necessary for rural planning.
i. The criteria should be linked more to a qualitative aspects for a common application in different regions which is the base of scientific comparison analysis.

2. Integrating green infrastructure and ecosystem services would be necessary in rural planning not just into the objectives but also into programming and monitoring process as well. It would be important to elaborate actions and support criteria for the maintenance and development of green infrastructure and strengthening urban-rural relations. For a more effective support system, it would be necessary to maintain a continuous monitoring activity, and for its aspects and indicators, further research needed.
3. The active and conscious development of green infrastructure and its ecosystem services can form a new axis between urban and rural regions. According to the level of availability of green infrastructure, we can probably distinguish consumer, maintenance and supply areas based on the extent of use of ecosystem services generated in certain areas. In an ideal case, the planning regions should be defined to reach a balanced consumption and provision level.
4. Green infrastructure development in the built up areas of cities doesn't make them a rural community and vice versa the loss of green infrastructure in rural settlements doesn't make them urban.
5. Among the analyzed landscape level cooperations there are some created just for one reason but also some which are part of a wider, long term cooperation. In both groups there are cooperations with high and low settlement number. As rural development contain a wide range of activities, the population of settlements in total should reach a certain economical limit, necessary for maintaining a certain level of basic services. The lowest level can be 2000 inhabitant number which is also a limit

in the Hungarian public administration, below which the sustainability is uncertain. Considering the upper limit, the suggestion of Meggyesi with a 5-8 thousand population, the minimum population number for an autonomous rural region could be between 2000 and 8000.

6. The majority of the Hungarian towns due to their size are unable to connect even indirectly to the European urban network, with the exception of Budapest and the agglomeration zone the entire country can be considered peripheral or rural. But we have to highlight the fact that our cities can not function as regional centers as middle size cities are considered those which have a population number above 250 000 in Europe. So those cities which have real central function (mostly above 50000 inh. mostly the FUA-s) in the Hungarian settlement network have a crucial role in population retention capacity.
7. The functional urban areas are in constant change, their definition would be necessary at least once in a programming period. The researches of the Hungarian Statistical Office show that if we define the real functional urban areas, these cannot cover the entire territory of the country without overlapping and gaps. Because of their continuous change these FUA-s could serve as frame for planning but not as administrative unites. The areas left out can have an independent development route with the potential of working in networks. The proper development of the green infrastructure network connection could be built up between FUA-s and rural regions.
8. Green infrastructure is one of the most crucial elements of infrastructure as it provides the ecological base for our life and framework for wide range of activities.

9. The multifunctional character of green infrastructure could make it an effective tool in the multidisciplinary spatial and rural development planning on all scale of programming.
10. Considering landscape as a whole, complex structure offers the possibility to plan supplementary infrastructural systems (grey and green) in one system.
11. In those cities where the size and location of built up areas do not make possible the availability of green infrastructure and its services the development of inner green infrastructure network is priority. However, in the local level green infrastructure the dominant parts are the outskirts where the infrastructure elements do not end at the administrative borders. So the cooperation between communities is inevitable.
12. Considering different types of ecosystem services we have to assess different green spaces with the result of different availability maps. In the frames of rural development planning all types of services of green infrastructure should be considered so we need to understand the term of green infrastructure in the widest possible scope. We can specify the availability if we can choose the criteria appropriate for the actions of green infrastructure development. There are qualitative and quantitative developments as well, or focusing on core areas, ecological corridors and buffer zones, and of course a lot of other possibility based on which kind of services we want to strengthen.

Finally, I would like to form a vision for the development planning of Hungarian rural regions. The matching objectives of green infrastructure planning and rural development, green

infrastructure becomes an appropriate tool for rural development planning. Besides the definition of green infrastructure areas per person, there will be other proper indicators on regional level considering not just the quantity but also the quality and possible services of green infrastructure. In the Hungarian settlement network reevaluated concept of city and middle size town will be a guideline for rurality as well, and reconsidering the criteria of 10000 inhabitant number, rural regions will integrate all those town as well which are not strong enough for launching agglomeration process. In remote rural region such planning regions will be defined where the place based planning approach will be realized through landscape level cooperation. Green infrastructure planning and use of its services will be realized in one single system. The sustainable, self-conscious management with ecosystem services parallel with autonomy aspirations will ensure the well-being of the human society and natural environment.

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