

**University of West Hungary  
Faculty of Economics**

**THE RELATIONS BETWEEN TERRITORIAL CAPITAL AND RE-  
GIONAL AND URBAN DEVELOPMENT: THE CASE OF HUNGARIAN  
MEDIUM-SIZED CITIES**

Doctoral (PhD) Thesis

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**Sopron  
2013**

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## 1. Objectives of the research

The research focused on studying the theoretical and empirical aspects of territorial capital and analysing regional and urban development based on the concept. On the one hand the author concentrated on the description of the territorial capital theory; on the other hand he tried to establish a model to apply the concept and to make empirical investigations concerning the territorial capital of Hungarian medium-sized cities.

The main argument for the choice of subject can be verified by some scientific considerations; e.g. the fact that we hardly have any information as to why the concept of territorial capital has become relevant in recent years. Another significant question is how the term ‘territorial capital’ contributes to the development of theories in economics, regional economics and regional science. The author formulated other questions, too:

- Is there a common understanding of territorial capital?
- Which drivers and elements of territorial capital can be distinguished?
- Can the elements of territorial capital be summed up in a model?
- Does territorial capital fit the criteria of capital?
- How can the term territorial capital be distinguished from expressions in use in regional economics and regional science?
- Are the components of territorial capital appropriate for statistical analyses?
- What kind of functions does territorial capital have in the development of regions and settlements?

The author tried to establish empirical investigations focussing on Hungarian medium-sized cities, which raised further significant questions:

- How can medium-sized cities be characterised by territorial capital?
- Which conclusions can be drawn from the multivariate analyses for the Hungarian territorial structure?
- Is there a connection between the results of the investigation in question and the conclusions of other empirical research related to the medium-sized cities?

In the PhD-dissertation the author argued for both a conceptual framework and empirical methods related to the topic. He dealt with a research field that is in its early stages regarding the theoretical and empirical issues both abroad and in Hungary.

## **2. Content and methods of research**

The PhD dissertation covers six chapters excluding the introduction and the summary, but the essay can be divided into two main parts based on the theoretical and empirical chapters. The author carried out secondary and primary research. The analyses of the dissertation are built upon economic basics, but the PhD dissertation is interdisciplinary owing to the research topic.

The author synthesised the main economic and sociological approaches to ‘capital’ in Chapter 2 and presented the classical and modern concepts of ‘capital’. The author explored some definitions of territorial capital and highlighted the lack of precision in the explanations.

The author described the preconditions of territorial capital in Chapter 3. It is verifiable that the appearance of territorial capital is determined by several conditions, e.g. criticism of the cohesion policy of the European Union; certain considerations of endogenous growth and path-dependency; changing concepts of ‘sustainability’; and resurgence of supply-oriented approaches.

Chapter 4 summed up certain other possible explanations and models of territorial capital. The author paid particular attention to synthesise the statements of international publications, to make a discussion based on the new scientific results and to refer to some Hungarian publications related to the topic.

The author presented his own model based on the elements of territorial capital. The creation of the model was built upon several types of capital (economic, natural, cultural, structural, relational, social, and symbolic). On the one hand the components of territorial capital could be classified according to tangible-intangible features, on the other hand according to individual and collective criterion. Besides the classification the author described each type of capital briefly.

Other aims of the work were to explore whether territorial capital fits the criteria of capital and to make an attempt to explain common and different characteristics of territorial capital and other expressions in use in regional economics and local economic development (e.g. location factors, economies of scale, proximity, convergence and development).

The author reviewed some publications related to the measurement of territorial capital, too. It is verifiable that Italian researchers paid more attention to statistical analysis of territorial capital in recent years. The author concentrated on the applied methods, indicators and concluding remarks with special regard to the territorial structure.

Other goals of the secondary research were to clear up the functions of territorial capital in territorial development, draw parallels between the traditional and territorial capital-based approaches of territorial development and present the complex model of regional and urban development based on territorial capital. The uniqueness of the complex model may be found in the manner in which each field of territorial development connects with the elements of territorial capital.

The first part of Chapter 6 described some previous empirical results in connection with Hungarian-medium cities and prepared for the discussion of concluding remarks related to the territorial structure. The primary research was built on quantitative methods. According to the scientific literature territorial capital is a complex phenomenon, so the quantitative measurement of components and dimensions must be based on multivariate statistical methods. In the PhD dissertation a case study was presented, too; the author analysed the group of 52 Hungarian medium-sized cities.

Data sources were available in the National Development and Planning Information System. Out of 87 indicators 71 indicators were appropriate for the multivariate statistical analyses (factor analysis, cluster analysis, correlations). The sample of the primary research included the group of 319 small- and medium-sized cities in order to fulfil the requirements of the factor analyses, but the relevant analyses were carried out among the medium-sized cities. During the data processing the software package SPSS 20.0 was applied.

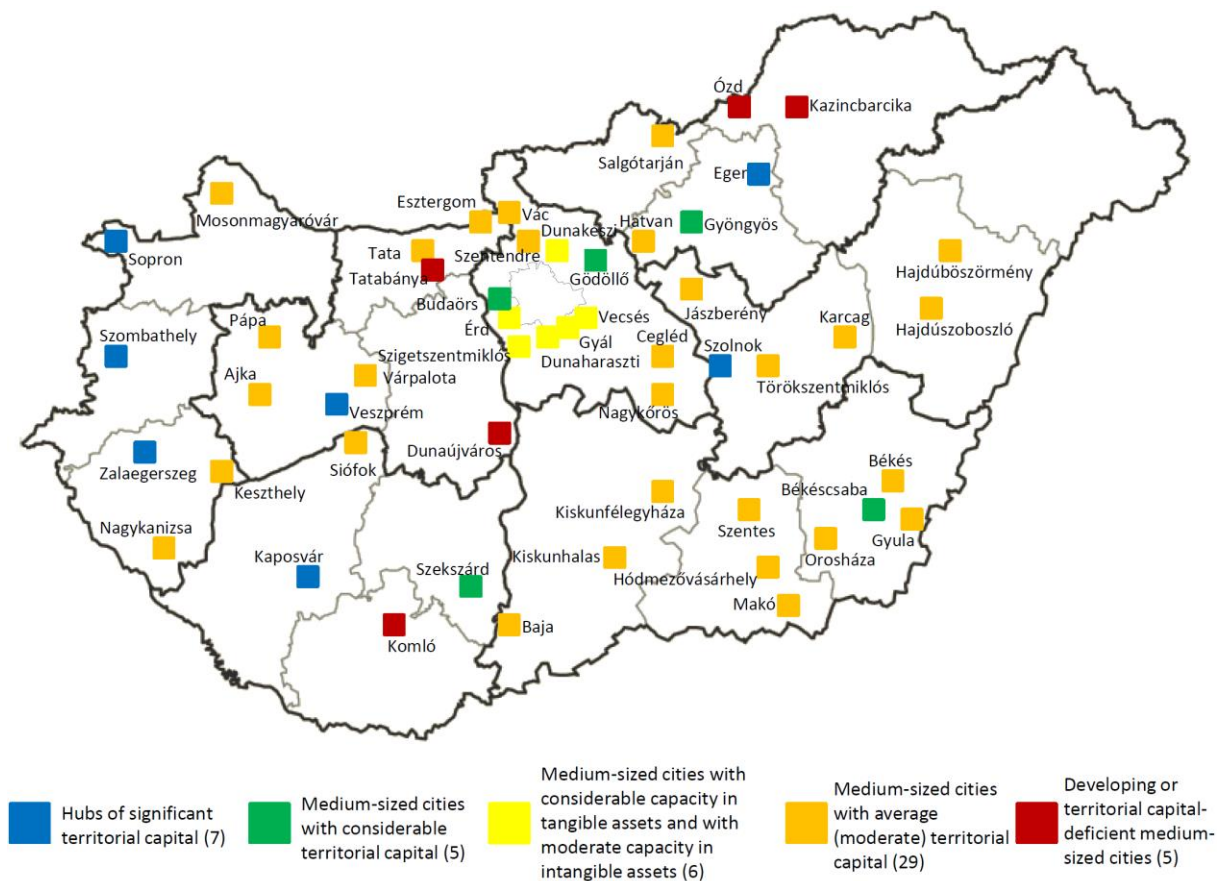
The author presented two factor analyses in the dissertation; thirteen factors were formed in the case of tangible components and nine factors were shaped for intangible elements. Based on the output of factor analyses the author managed to form six complex dimensions:

1. Financial conditions of firms and income of inhabitants;
2. Natural and built environment;
3. Services and supply;
4. Human resources and community culture;
5. Condition of society, social features;
6. Attractiveness.

Applying the results of the factor analyses the author ranked the Hungarian medium-sized cities in each dimension and analysed the connection between tangible and intangible factors. By creating certain groups using cluster formation the author managed to widen and deepen the multivariate analyses. The author presented two cluster analyses; four clusters were formed for tangible and two clusters for intangible components.

Finally, the author tried to identify the main types of Hungarian medium-sized cities based on the tangible and intangible elements of territorial capital (Figure 1):

1. Hubs of significant territorial capital (7);
2. Medium-sized cities with considerable territorial capital (5);
3. Medium-sized cities with considerable capacity in tangible assets and with moderate capacity in intangible assets (6);
4. Medium-sized cities with average (moderate) territorial capital (29);
5. Developing or territorial capital-deficient medium-sized cities (5).



**Figure 1: Types of Hungarian medium-sized cities based on territorial capital**

Source: the author's calculations.

### 3. Results of the research

#### 3.1. New scientific results

1. The author made attempts to explore some preconditions in relation to the evolution of territorial capital; these conditions have not previously been defined within Hungary or abroad. The regular reforms of the regional policy of the European Union, the adoptions of postmodern theories of regional economics and the resurgence of supply-oriented approaches allow scientists to get acquainted with the concept of territorial capital.
2. After having presented the latest and most cited model of territorial capital the author tried to develop his own model and he made efforts to demonstrate that the components of territorial capital defined by *Roberto Camagni* could be systemized according

to classical and modern types of capital. This approach could shed new light on the elements of territorial development compared to the previous models. Each type of capital could be regarded as elements of regional and urban development and these components can also be connected with different fields of development policies.

3. Using theoretical foundations the author highlighted that territorial capital is not similar to expressions such as location factors and economies of scale; the components and advantages of territorial capital are larger than in the case of location factors and economies of scale. However, territorial capital has many relations with proximity, conditional convergence and development. The proximity theory is an important base for the concept of territorial capital. The differences in development paths are determinative both for the concept of territorial capital and for the perception of conditional convergence. Finally, the context and elements of development and territorial capital also have common features.
  
4. By involving many indicators and factors in the case study the author tried to demonstrate the chances of territorial capital measurement. The systemization of the elements and indicators of territorial capital is different from the approaches and models published so far. The author managed to identify many components of territorial capital and was also able to point at some characteristics in territorial structure. It is verifiable that there is no significant relation between the tangible and intangible assets of the medium-sized cities, so the connection of tangible and intangible assets is negligible. Through hierarchical clustering the author was able to define and characterise the groups of cities properly. The results confirmed some conclusions of previous empirical analyses from different fields published in connection with medium-sized cities; e.g. research related to agglomeration economies, spatial dynamics and territorial competitiveness. However, the author has managed to draw some new conclusions from the primary results, too.



### 3.2. Theses of the research

T1. The concept of territorial capital provides an appropriate theoretical framework to study processes of regional economics in details. The concept has significant connections with territorial and regional development and the theory systemises the elements of territorial development on a larger scale. The concept of endogenous growth, some evolutionary approaches and the statements of polarisation theory allow the author to confirm the thesis. It also means that the concept is similar to certain approaches that presume intensifying differences in regional development, so the concept may not be appropriate for eliminating territorial inequalities.

The author described the new theoretical approaches according to Camagni's basic work on territorial capital and he tried to present other concepts so as to verify that territorial capital is determined by many specific elements of territorial development. Besides the description of traditional assets of development the author highlighted some new components that must be taken into account in the 21st century; these factors were prioritized both by Camagni and in the author's concept.

T2. Territorial capital is a set of tangible and intangible capital; their extent and composition are different in each region, therefore territorial capital is determined by the structure and characteristics of territories and locations. Territorial capital can be regarded neither as tangible nor as intangible capital. Tangible and intangible capital should be summed up in the context of territorial capital; the term refers to the territorial presence and connectedness of capital types.

T3. There is no significant correlation between the tangible and intangible assets of territorial capital in the case of Hungarian medium-sized cities. It is verifiable that the position of cities, based on the results of each dimension created at the two factor analyses, is not the same. However, the numeric correlation did not confirm the relation between the tangible and intangible assets.

T4. The primary research confirmed that there are great differences between the extents of territorial capital in the case of Hungarian medium-sized cities. Towns in the west regions of Hungary have better performance than towns in the east regions of Hungary. Based on the

combined grouping of medium-sized cities the author pointed out that hubs with significant territorial capital are located in Western Transdanubia and in the agglomeration of Budapest, but towns like Békéscsaba, Eger and Szolnok have considerable level of territorial capital, too. In contrast, many towns of Transdanubia have average or moderate level of territorial capital. The towns in the Great Plain show unfavourable results in many dimensions, but the performance of the former socialist towns is the most disadvantageous.

#### **4. Conclusions and proposals**

In the author's opinion the theoretical overview and the exploration of the concept of territorial capital, the empirical analyses related to the topic and the interpretation of regional and urban development based on the concept could be regarded as a relevant scientific problem.

The author concluded that further scientific research is of great importance in the near future in connection with territorial capital. The PhD-dissertation could contribute to offer some new scientific methods to study territorial development, too. The author tried to give some guidelines as to how territorial capital could contribute to develop theories in economics, regional economics and regional science. Based on the statements and results new perspectives and innovative techniques can be recommended for regional and urban development, e.g. in Hungary.

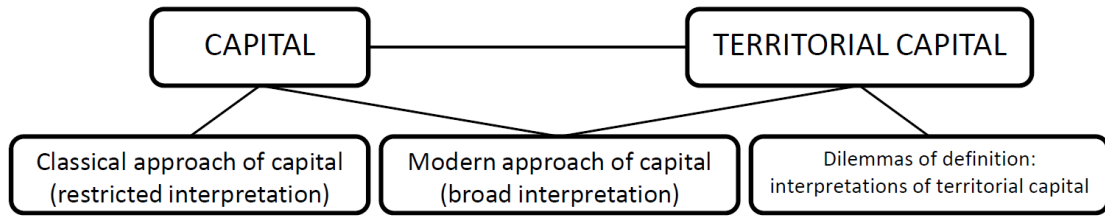
The repeat, the extension and the deepening of the research are reasonable to get a better picture of the positions of each town in the near future. The analysis may be widened in case studies, e.g. fieldworks or site visits; the researches enable us to understand the individuality of places, communities and organisations.

The approach of territorial capital can widen the visions of territorial development policies, too, providing new techniques and methods for strengthening territorial cooperation. The fact that the theory of territorial capital is in connection with spatial planning should not be ignored. Spatial planning formulates territorial political attitudes and territorial development methods. The concept of territorial capital is in relation to local economic development; it strengthens the binding of inhabitants, firms and communities to each other and to the space where they live and exist. The intensification of a unique image of place is important.

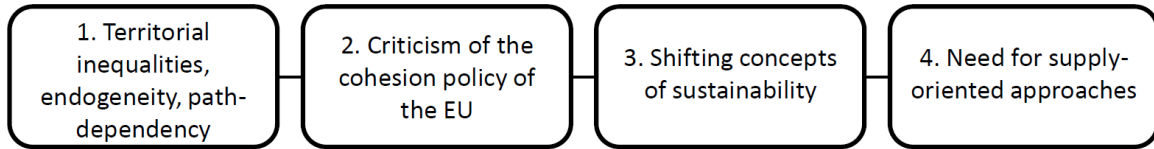
Consideration and analyses of the PhD dissertation are bound to the challenges of European and Hungarian economic development policy, so policy-makers may rely on the concept of territorial capital in the future both in the EU and in Hungary. The concept of territorial capital can be an important starting point to develop different territorial levels, e.g. for settlements or for nodal regions.

1. CONCEPTUALISATION, BASIC RESEARCH

Extension of the meaning of capital: from classical capital categories to territorial capital (Chapter 2)



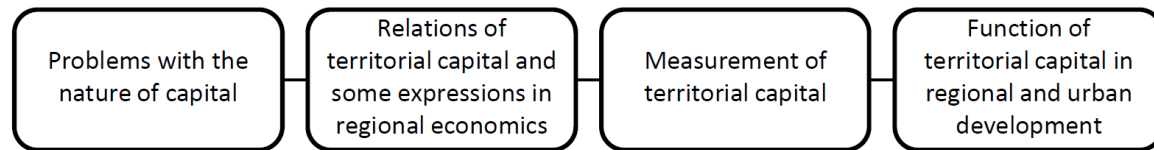
Background of territorial capital (Chapter 3)



Attempts at territorial capital conceptualisation and modelling (Chapter 4)



Other theoretical contributions of territorial capital (Chapter 5)



2. METHODS AND RESULTS

Territorial capital of Hungarian medium-sized cities (Chapter 6)

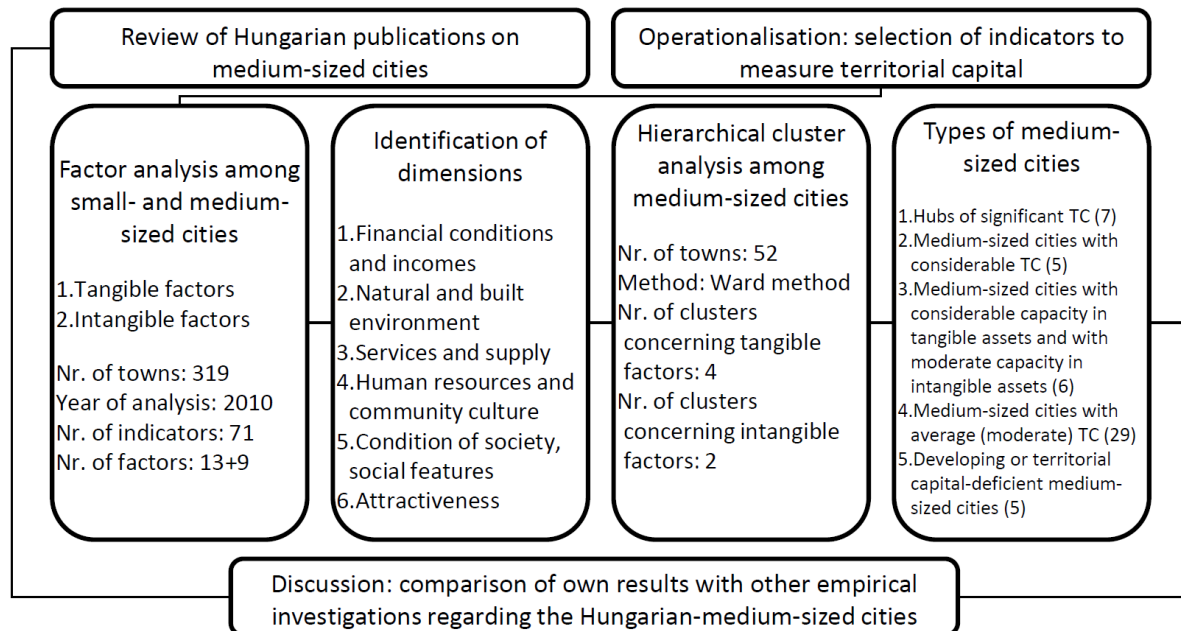


Figure 2: Structure of the PhD research

Source: the author's elaboration.

## 5. Select Bibliography

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The full list of publications and citations can be found online in the Depository of Hungarian Scientific Writings: <https://vm.mtmt.hu//search/slist.php?lang=0&AuthorID=10027764>.



