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DEVELOPMENT TRAJECTORIES IN THE COMMON CENTRAL AND SOUTH-EASTERN EUROPEAN RESEARCH SPACE IN THE FIELD OF SPATIAL DEVELOPMENT

Main features of background situation in the field of research in spatial development

The issue of spatial development is quite broad and interdisciplinary and therefore it is the subject of research in several scientific disciplines: from natural sciences and environmental sciences through social, technical, political up to economic science. At the same time spatial development takes place within a framework of complex interactions between socio-economic, socio-ecological and socio-cultural dimensions. Access to, and intelligent use of knowledge in the field of spatial development is becoming a critical determinant of innovative potential and economic success through all the levels from local and regional up to the continental European level.

With regards to purpose and limited extent of this paper, the research in the field of spatial development will be understood in a circumscribed meaning, i.e. as interdisciplinary fundamental and applied-oriented research of cross-cutting aspects of spatial development. It will not be dealt with the focused research of the single scientific disciplines, tackling with the different components of spatial systems.

Main features of the content of research & development in the field of spatial development

Dynamics of the settlement structures development in the context of society transformation: from industrial to post-industrial information society, linked to the broad empirical research of industrial urbanisation period of the settlement development and catalysed by transformation, integration and globalisation processes, primarily in the transforming countries of central Europe, denoted a new situation for the practice of spatial development. European society is in the throes of transition towards the post-industrial society, characterised by increasing dynamism of technical innovation and the development of new technologies, shortening of product life-cycles, greater flexibility in time-structures and organisation of time, rise in the importance of the services sector, pluralisation of life styles and emerging of new forms of mobility.

This new situation, characterised by new quality of the settlement system development calls upon the decision-makers to solve new problems, which require not only new knowledge, new instruments and methods of their solution but also transformation of management systems, including legislative and institutional conditions as well as the change in background of guidance for spatial development policy.

Since the research space of the reforming states is nowadays part of European research space, it is necessary to analyse the content of research orientation also in this context. Similarly as in other fields of research also in the field of spatial development research the boundaries between fundamental and application-oriented research have been reduced, although the position of scientific prognosis has been clearly articulated. In this context it is possible to structure the research in the field of spatial development in the following way:

1. Substantial - theoretical field, focused mainly on understanding of spatial-territorial systems, their structure, functioning and the development processes within them, on management interventions, on defining the wished quality and trajectories of development, on evaluation, classification and typology of spatial-territorial systems. This field is covered by urban science as well as by other sciences, mainly geography, ecology, economy, sociology and psychology.
2. Methodological field concentrated on the issues of research and development and advancement of the methods for guiding spatial development, methods of inventory, monitoring and analysis, methods of management including planning methods.

   This field is the domain of urban and spatial-planning, economic, politological and sociological research.
3. Instrumental and institutional field linked to methodological focused on the research and development of instruments of guiding spatial development, including legislative and organisational instruments, study of options and optimisation of their application and effectivity, legal and economic science, sociology and political science.
4. Field of empirical monitoring research including the complex of inventorying and analytical - classifyying research activities, often not bound to the actual research institutions but representing with their capacities the significant part of research with linkage to the management practice and to the planning practice in particular.

The results of this analysis in the countries of central and south-eastern Europe can be summarised, according to the above mentioned divsion, in the following dots:

Substantial - theoretical field

Substantial - theoretical research focused mainly on revealing the laws and regularities of the processes and structures, determinants and mutual relations of regional development was undertaking only a small number of research in the area.

- **The completed research projects have been mostly focused on:**
  - spatial aspects of economic transformation after 1990
  - issues of sustainable development and regional disparities
  - spatial aspects of European integration
- **Strengths**
  - research addressed the pressing issues of societal practice
  - research was realised in interdisciplinary way
  - research was realised with international co-operation
- **Weaknesses**
  - scope of depth and width of research was very limited as to the content and space
  - financial and capacity limits did not allow ex-ante or ex-post empirical research
  - weak coordination in the central European space did not allow sufficient use of synergy effects

Methodological field

- Research in this field represented the focus of gravity of research
- The completed research projects have been predominantly focused on the issues of transformation process, European integration and guidance of the processes of settlement structure development towards its sustainabiltiy, with the emphasis on integrated planning.
- Strengths
  - with regard to similarity of the problems in the CEE countries, the majority of the projects have been solved at supranational level, often supported by the EC
  - relation to practice and outputs directed towards practice
  - international contexts of research projects
- Weaknesses
  - often no interest from the side of legislative and management practice at the national level on the research results
  - not sufficient coverage of the key areas for management practice
  - limited possibilities of testing in application field
  - research lagging beyond the pressure of management practice at the local and regional levels demanding professional solutions to practical problems.

Instrumental and institutional field

The focus of research was oriented on research and development of the instruments of management of spatial development, with the emphasis on application of new information technologies as well as on the instruments for safeguarding sustainable spatial development.

- **Strengths**
  - overcoming of limitations of academic environment towards the needs of planning practice
  - international links and cooperations
  - orientation of the research on European and world-wide pressing problems of using ICT
- **Weaknesses**
  - In spite of relation to the needs of planning practice in each of the states, the projects reflecting the European themes have been dominating
  - In spite of significant tasks of of legislation and management in the field of spatial development, the interest from the side of society to gain the systemic basis for solution of the problems by research and development projects stayed at the level of exchange of experience in legislation and bio-environmental, soci-economic and social or socio-cultural dimension of spatial development.

Field of empirical monitoring research

- Research represents the largest volume of research work in the field of regional development, even if it is difficult to set the border line between the research and inventory or statistics of the regional development projects
- in the past period it was connected directly mainly to the activities of regional development management
- provided mainly from the sources of public administration linked to building or updating the database of information systems on territory as well as in the practice of regional development and planning.
- Strengths
  - relatively complex spatial coverage
  - diversified financial sources

- Weaknesses
  - low degree of coordination
  - frequent incompatibility at the national and international levels
  - frequent inefficiency of the used means as a result of weak coordination
  - high rate of incompetence of performance by various realisation companies, causing low level of scientific relevance of the results.

Sources in research and development

Situation in the field of human resources in research and development of spatial development can be characterised in the following way:

- after 1990 there has been drastic reduction of the volume of human resources in research and development in the field of spatial development
- low interest on this research field meant the loss of motivation for top professionals and together with inability to finance systematic research it resulted inot gradual exodus of researchers in other sectors or degradation of demographic structure of researchers
- significant volumes of financial means for the field of research of spatial development flowed from the EU initiatives and programmes • long-term underestimation of fiancing the research in this field led not only to degradation of human potential but also to falling behind with equipment and facilities of institutes
- financial means for research and development activities in the field of spatial development from the private sources can only be supplementary sources in the field of applied research. With regards to underestimation of this field from the public sources, the input from private sources has been very important particularly in the following issues:
  - research and development activities that have been realised pracitically without external sources for basic needs and under the responsibilities of commissioners from the planning practice. In relation to availability of scientific data for spatial planning practice the companies operating in planning practice have been forced to realise the application-oriented research in the effort to secure the professional performance
  - research and development activities that have been realised from the sources of private foundations, mainly from abroad, represented a small contribution, but big in its address, to the development of science and research in spatial development
  - research activity following the optimisation of investments of private entities, represented on one side by legislatively treated fields of environmental impact assessment at the strategic and project levels and on the other hand by exploring localisation feasibility studies and others, often with limited contribution for advancement of scientific knowledge.

Fundamental research potential in the given area

It is clear, that in spite of continuously worse conditions created in recent years by the state for serious scientific research, numerous research activities of tangible asset have been realised. This fact has been drawn from comparative analysis of the realised research and the analysis of investment resources and infrastructure. This proves a high level of professional and managing potential within research and professional community in the reforming countries. Another prove for this potential is the international recognition to individual researchers and institutions of science and research represented by their broad international cooperation, international publication activities, by their coordination of international cooperation on projects realised by states of central and south east Europe.

Evaluation of fundamental research in spatial development can be expressed in the following points:

Strengths :

- availability of internationally renowned people in the area of research and science
- internationally acknowledged research institutions (workplaces) and their link up in the united EU research area
- volume of the available know how with its international pertinence
- the existence of close relations and nets of cooperation between public institutions representing main research areas of spatial research, mainly between university workplaces and other workplaces, enabling synergetic effects of cooperation
- the existence of cooperation between public institutions, private sector and NGOs in the field of research and dissemination of innovations
- interconnection of research and teaching (education).

Weaknesses:

- underestimated financial support of science and research in general, and in particular, in the field of spatial development
- dispersal of competencies (responsibility) among numerous managing subjects without clear

coordination links in the field of practical application as well as research of spatial development
- absence of clearly defined priorities and strategies in progress of science (theory) and technology within the field of spatial development
- long-term deformation of research priorities in spatial development by departmental view of state officials,
- degradation of human potential in the field of science and research by a long-term stint resulting in low attractiveness of the field for top young researchers

Opportunities:

- a cluster of subjects that are active in the field of science and research within spatial development, and integration of their capacity
- a flexible system of science and research funding within the field. The funding system should follow the long-term systematic research as well as the applied research bound to topical social practice
- employment of the existing research and science potential in the field of spatial development, and its support through further commissions
- establishment of a system of know how transfer from the field of science and research into the field of social practice within spatial development
- establishment of a system of participation of the self-governing local authorities on the research performance

Threats:

- loss of the economic competitiveness of regions and settlements as a result of decisions not based on up-to-date information in the given field
- low effectiveness of the expended resources caused excessive scatter of funds, and low coordination in the frame of European research
- the absenting social commissions weaken the links of science and research to actual problems of spatial development practice
- brain drain from European territory, and mainly central European territory
- disintegration of science and research basis and following commercialisation based on short term effect

Prognosis for the use of science and technology until the year 2015 based on further research development within the given field

Required conditions to secure research in the given field

To secure an effective research and progress in the field of spatial development, the following points will be important:

- it will be inevitable to clearly define the strategy for science and technology advance in the field of spatial development
- a system of adequate and transparent funding of science and research with clearly defined priorities and strategy, creating competitive environment for science and technology holders, will be important
- to create a flexible system of funding for science and research, following the long-term systematic research as well as applied research, social practice oriented.
- to create conditions for competitiveness of internationally acknowledged research centres and their link to a united EU research space
- to create a platform for coordination of managing subjects within the field of space development and eliminate departmental views of the pertinent authorities of state executive organs, to create advisory bodies for central state authorities helping to coordinate science and research
- through the means of coordination, stop the scatter of professional experts and ineffective fund spending as a result of research content overlaying
- to create conditions for an adequate research infrastructure, its sufficient material and technical support through social commissions for research activities to the existing research centres
- make the conditions for research more attractive to young researchers so that their further professional growth is enabled as well
- create a cluster of centres that are currently active in this field and integrate their capacity in a more flexible way
- support the authority of the internationally renowned top researchers and thus help them to transfer the know how to management of spatial development
- create a system of effective use of the existing know how and transfer of the acquired research know how into social practice of spatial development management
- to create a system of participation of the self-governing local authorities at research centres´ activities

Research priorities

In the professionally strongly differentiated research world and in the often strongly sectoral segmented and to short-term effects oriented managing administration, is the importance of interdisciplinary integrated and to the future prospects oriented research concepts and cooperation very important. (ARL 2000)

It is the spatial development that requires absolutely inevitable sectoral complexity, integrated interdisciplinary access, clear orientation to middle and long-term prospects.

Interdisciplinary spatial research is obliged to tackle with the totality of sectoral activities in research and development. As the access to knowledge is becoming a critical determinant of efficient spatial development, the accretion of information and knowledge is coming to be an important resource for the spatial development within the context of international competition and is usually defined as cultural capital.

The central point for science and research in this field are the spatial linkage to social development, analysis and prognosis of spatially relevant consequences and conditions of economic, social, cultural, technical and ecological development processes in their mutual connections. The spatial linkage to social development is meant at the level of substantial, managing, methodical and instrumental activities.

Spatial research is called upon to examine the spatial implications of sustainability and to derive strategic visions and recommendations for action.

Spatial development is the field where overlapping of different hierarchic levels, starting with local, continuing through regional, state and finishing with European levels, takes place.

When deciding for priorities, the following points should be taken into account:

- their importance for research information in Slovakia and abroad
- how relevant they are for managing practice and planning practice above all
- their innovativeness
- circumscribe the topics of research in relation to other research and science fields
- the existing Slovak capacity and the possible cooperative links in Slovakia and abroad
- funding from home as well as foreign resources • set priorities of international research activities stressing the united EU research space.

Based on the above-mentioned aspects, the following research fields can be outlined:

spatial development of knowledge oriented society

- identification and evaluation processes in society with spatial impacts on processes of spatial development - spatial manifestation of pluralization and differentiation of society, social segregation, solidarity,
- dis-urbanisation, sub-urbanisation, re-urbanisation processes and their purposeful guidance in the direction of sustainable development, migration effects and their optimisation,
- development trends and their evaluation within the context of European development of polycentric settlement system and assignments given by the EU legislation,
- conversion: methods and means of transformation of structurally weak urban areas in Slovakia.

competitiveness and potential of regions and cities, their effective evaluation by a meaningful spatial development

- globalisation and regionalization and their impact on spatial development of individual countries, regions and cities, stressing the needs for management of spatial development,
- structural EU policy and its impact on spatial development in central and south European regions and cities, stressing definition of priorities and threats of implementation,
- evaluation of the all European competitiveness of regions, and strategy for its support,
- identifying and analysing spatial resources and potentials of regions and cities in central and south-east region,
- cooperation of cities as miens of competitiveness increase within European territory

social and environmental aspects of spatial development of the knowledge oriented society

- functional use landscape and management of river basins, impact of the EU water-economy directive on spatial development in Slovakia
- spatial aspects of city crime

new time and space structures of information society

- ICT development and their spatial demonstration: new time and space structures, ITC development priority in context of harmonious spatial development in Slovakia and competitiveness of regions in Slovakia
- economic aspects of emergence of new time and space structures and competitiveness of municipalities and regions in Slovakia, formation of new polycentric hierarchical structure of public services as means for making the services more effective
- spatial development in Slovakia in context of supranational time and space structures and spatial cohesion
- land and space integrity, regional and local awareness and their importance in information society
- strategy for development of rural areas in information society within context of European development, priorities and EU structural funds
- change of the residents´ mobility modes and their spatial consequence,
- state development investments and their efficiency in context of spatial development stressing the use of the potential for constitution and spread of innovation

transformation of state and planning, philosophical, methodological and instrumental aspects of spatial development regulation

- New understanding of task for policy of spatial / landscape development, ethics and responsibility , deregulation, privatisation, and opportunities for intervention in public interest, decentralisation and integration of management,
- process oriented planning (new philosophy, methodology and planning instruments in information society) and development of e-government
  - differentiation of strategic and operative management for the landscape development
  - ICT technology development and their implementation in spatial development management
  - constitution of systems of permanent monitoring of functional landscape use
  - link of sectoral database systems and international cooperation
  - threats in management of spatial development and their minimisation
  - developing of modern method for producing analyses, forecasts and scenarios
- integrative planning (trans-sectorality in planning of spatial development, diversity of participants / actors of spatial development, mediation as a new task for a spatial / landscape planner, drawing up appraisal and balancing criteria for resolving conflicts in the spatial development planning process
- participative methods of planning and e-democracy development
  - public-private partnership as means of spatial development
  - a system of informal means of planning and its integration into the planning system of spatial development
  - means and methods of participative planning
  - studying and formulating the ethical foundations of spatial planning
- realisation oriented planning: operational spatial planning and socio-economic planning
  - policy of spatial development and its effectiveness
  - economy oriented means of planning
  - urban subjects (residential areas, micro-regions, regions,)as subjects of market competitive fight
  - balance of input and output in communal funds as means of operational spatial planning
  - environmentalisation of developmental strategies
    - means of environmental optimisation of functional use of inner land of municipalities at national, regional and local levels
    - means of intensification of inner municipal land use at national, regional and local levels.

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Translation by: Danica Brečková