

**THE ROLE OF HIGHER EDUCATION IN REGIONAL DEVELOPMENT**  
**THE CASE STUDY OF THE UNIVERSITY OF PÉCS**

BY

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**ABSTRACT**

*Higher education institutions have economic impact on neighboring regions. The growing role of knowledge as the base of the economy has meant growing expectations of universities to function as engines for regional development. In the 21st century knowledge means the most important resource for every organization. Universities affect their surrounding territories several ways. On one hand, expenditures of the working staff, the students and the institution itself generate demand in the economy. On the other hand universities undertake the role to accumulate human capital through higher education, trainings and knowledge transfer. In line with this universities promote the dynamism of local technological development with the support of research and knowledge creation. Universities generate knowledge spillovers which are remarkably important for the host territory. However, in Eastern-Central Europe it is quite a common problem that the region in which the university operates can not absorb the generated human capital, therefore they leave.*

*University as a research centre and as the provider of social services can be evaluated as considerable. According to different analyses the investigation of the supply-side effects of the university as well as important as the demand-side effects. An example is the European Cultural Capital 2010 programme for Pécs that emphasized the third task besides the two traditional tasks of the University of Pécs (education and research) – cooperation with surrounding society. The University of Pécs plays a vital role in the successful implementation of the European Capital of Culture programme the mission of which are the followings: „The European Capital of Culture programme is designed to enable the city to rediscover its urban character, the beauty of living in a city, reclaim public spaces for the benefit of its community, make its streets and environment more liveable, regain the ability to*

*admire its historic heritage and begin transforming it in a cheerful and tame way.”*  
(Pecs2010, 2005)

*Based on Hungarian and international experience, this paper summarizes knowledge on regional effects of universities and higher education. The paper also analyses the obstacles to better cooperation between universities and surrounding society and knowledge production. This can only be implemented with social integration and the network of knowledge creators, mediators and users so that the positive effects of this programme would not be limited to the area where universities are located. After discussing theoretical issues related to educations' importance and previous studies in the field of regional higher education, one case study (the case study of the University of Pécs) is included in the study.*

## **INTRODUCTION**

The discussion on universities and their effects on region have started long ago. Over the last twenty years or so there have been quite a number of quantitative studies on what Florax (1992) calls the knowledge impact of universities. There are a variety of methods for assessment of knowledge impacts on a region. In this paper I am concerned with assessing the impact on region of the University of Pécs in relation to knowledge effects. As the paper focuses on regional impact of University of Pécs, the term 'region' should be defined. This paper deals with the region as a geographic area larger than a city, smaller than a nation, particularly with the South-Transdanubian region of Hungary.

Opinion that economical competitiveness is linked to educational competitiveness exists worldwide (Tifentals-Zvigulis, 2003). The economy of the future will rely on intellect and knowledge. Every business needs ideas, innovations, creativity and professional knowledge that can be provided by universities either performing as study centers or educating professionals in different fields.

## **METHODOLOGY**

Quantitative researches have been conducted (Varga, 1997) in this field before. In this paper I would like to emphasize the importance of the social role of universities in a

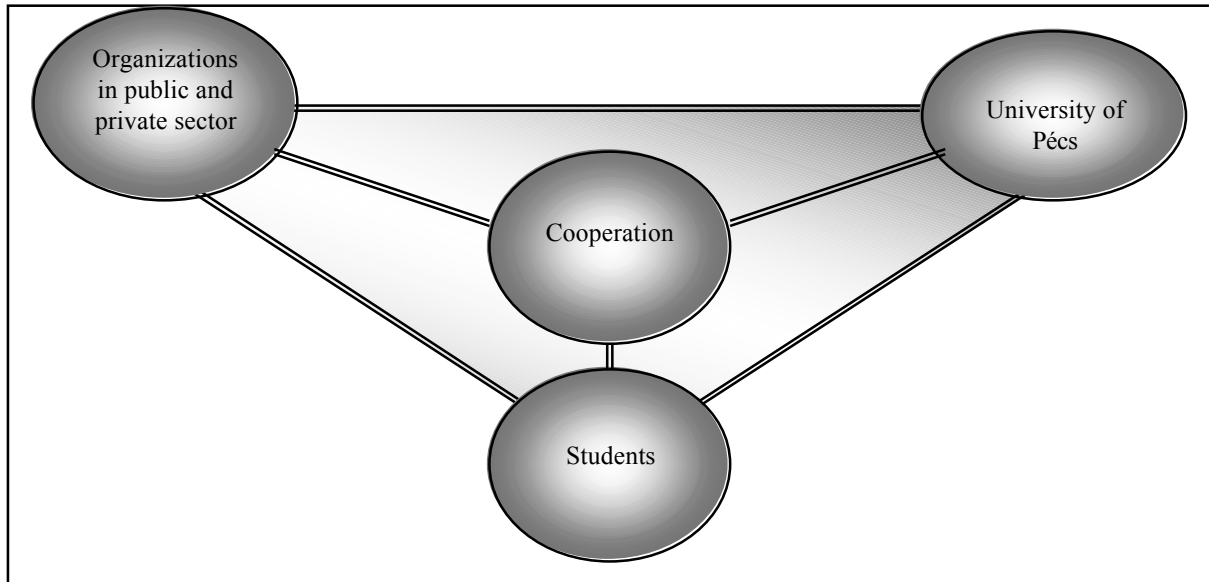
qualitative way, especially the role of University of Pécs as Pécs is going to be the European Capital of Culture in 2010.

Within the frames of this study I apply the methodology of case studies. Case studies are complex methods because they generally involve multiple sources of data, may include multiple cases within a study, and produce large amounts of data for analysis. Researchers from many disciplines use the case study method to build upon theory, to produce new theory, to dispute or challenge theory, *to explain a situation*, to provide a basis to apply solutions to situations, to explore, or to describe an object or phenomenon (Soy, 1997). The advantages of the case study method are its applicability to real-life, contemporary, human situations and its public accessibility through written reports. Case study results relate directly to the reader's everyday experience and facilitate an understanding of complex real-life situations; they are applicable to depict unique situations.

#### **COMPREHENSIVE MODELS FOR ANALYSIS**

In this chapter I will represent some models which express and emphasize the importance of cooperation between region (or regional actors) and higher education institutions. In the life of universities this cooperation was actually identified in the field of professional experience. In the original model of Farkasné Kurucz – Lóránd – Balogh (2008) which examined the possible ways of *cooperation* among the actors of the region and the University of Pécs, cooperation has meant the system of professional practices. However, if we think of the projects to be implemented within the European Capital of Culture project, wider interpretation of cooperation needs to be used. This figure refers to the fact that organizations now are not only isolated units but all of them plays some kind of role in a network. Besides generally accepted organizational resources, human capital and knowledge plays a key role. These networks are in move and reforming, however, they always have the power for cohesion creation. This means that the network of universities, other organizations in the region and students of the universities (and the knowledge each actor possesses) create added value for the whole region (for the society of the region) as well. According to Pléh (2008), a university with rational way of thinking involves external, non-interested people into its processes. For example higher education institutions should involve ex-students who have now a respectable position or experts from the private and public sector who can

contribute to the success of a project to a remarkable extent. This supports the complex networking idea of the previously mentioned authors as well.



*Source: Farkasné Kurucz – Lóránd – Balogh (2008), p. 76.*

Similar approach can be noticed analyzing the model of Goddard. Goddard (1999) states that the main contribution of a university to regional development manifested in *harmonizing processes* on regional level. The figure made by Goddard focuses on the processes which link together all of the components within the university and the region into a learning system. He emphasizes the roles of universities and the whole region as well. Within the university, the challenge is to link the teaching, research and community service roles by internal mechanisms (funding, staff development, incentives and rewards, communications etc.) which make these activities more responsive to regional needs. These linkages represent ‘value added management processes’. Within the region, the challenge for universities is to engage in many of the facets of the development process (such as skills enhancement, technological development and innovation and cultural awareness) and link them with the intra university mechanisms in a ‘university/region value added management process’. The interpretation of this is that the successful university will be a learning organization in which the whole is more than the sum of its parts and the successful region will have similar dynamics in which the university is a key player. This can be seen in the model of mutual effects between university and region represented by two virtual circles and the dynamic



*side and supply-side impacts of a university*. Demand-side impacts relate to the use of goods, services and primary resources (such as labor and capital). Supply-side impacts relate to the productions of goods and services. Examples of demand-side impacts include spending by the university on operating and capital budget items, living expenses of international conferences organized by university staff. Examples of supply-side impacts include new products or higher productivity arising from research and development undertaken by university researchers, and higher labor productivity arising from the education of students.

Felsenstein (1996) makes a distinction between *the backward and the forward linkages* that universities have with the outside local world. Backward linkages refer to the effects that spending by university staff and students and by universities themselves have on the income and employment of the metropolitan area. Forward linkages refer to the outputs of university activities such as the production and dissemination of knowledge within the local economy, the employment of graduates and partnership relations involving consultancy and research.

The terms backward and forward tend to disguise the basis on which the effects can be identified and evaluated. The backward linkages are more static in nature and are estimated from a point in time with parameters estimated from current data. This also implies that the effects are time reversible rather than cumulative and path dependent. This is also true of the human capital effects that Felsenstein lists among forward linkages. The other linkages are knowledge effects, advice and knowledge acquisition. The knowledge effects are gradual and cumulative and are nature forward linkages.

As the focus of this study is knowledge impact of universities, in the followings I describe only the types of forward linkages Felsenstein has previously identified. He identified three types of forward linkages in the form of change to the level of human capital, to the knowledge pool and to the attractiveness of the local area to households and firms. The university increases the level of human capital of the local economy but only if young graduates remain near their host university. The university may also contribute to the attractiveness of an area by creating positive externalities regarding quality of life.

This is a fact that universities play a key role in creating human capital. In a knowledge-based economy, knowledge acquisition is an important factor that determines the future of individuals and companies and the economy of an entire country. (OECD,1996). Besides technological research, *human and social sciences* are also important for local development (Mille, 2004). Humanities which mainly target languages and culture are largely an integral part of the official education system as it can play an important cultural role by organizing specific cultural events. As for the *field of history*, it stands midway between social and cultural sciences. It plays a key role in raising awareness of the local identity and the changes taking place at the local level. The impact of history can be measured in activities targeting the public (Mille, 2004).

In the followings we shall focus on the case of the University of Pécs to present the complex ways in which a university becomes integrated into a specific project and territory.

## CASE STUDY

On July 14, 2005 the General Assembly of the city unanimously adopted the application material that later turned out to be the winning application for the title of the European Capital of Culture (ECoC). The title gave Pécs a unique opportunity to transform its economic structure into a culture-based economy, saying a final good-bye to the shock and pain caused by closing down its mines. The ECoC title offers a great opportunity not only to the city but to the entire South Transdanubian region as well. (Pecs2010, 2005)

The main goal of the investment projects is to provide Pécs with an adequate number of cultural and artistic spaces with proper size that can meet European standards. They promote the utilization of the city's cultural potential and the development of creative industry and tourism. University of Pécs has a remarkable role in the implementation of these projects. With the help of the represented models, I draw some conclusions about the ECoC role of Pécs and the planned functions University of Pécs could have in it.

Key projects of ECoC Pécs 2010 are the followings:

- Pécs Conference and Concert Centre – students and lecturers of University of Pécs Faculty of Art can make performances in this building

- Zsolnay Cultural Quarter – community events for students are planned to be here, e.g. PLAN10, a sci-fi festival, PEN (a week for students studying at University of Pécs, EFOTT (National Touristic Meeting of Students of Universities or Colleges), ICWiP (International Culture Week in Pécs), etc.

- Reconstruction of Museum Street – several museums of Pécs will be reconstructed

- South Transdanubian Regional Library and Knowledge Centre

The goal of the project is to build a modern regional library and knowledge centre that can meet today's user needs, provide information and documents for the people of the region and the city at European standards and host community, cultural and leisure programs in one place as well. Its structural conditions and modern equipment will enable the new regional library and knowledge centre to serve a lot more citizens of Pécs than ever before.

The new institution will integrate the three major libraries of the city: the City Library, the County Library and the Central Library of the University of Pécs; furthermore, it will also include the libraries of the Faculty of Law and the Faculty of Economics. The Centre will have two lecture halls, each accommodating an audience of 200, which will be used by the two faculties of the University. The two halls can be turned into one large hall, so the Centre will be able to host quite large events too. The knowledge centre function will be complemented by several research rooms and internet workstations. Children will be welcome to the children's library and a playroom next to the roof garden. Community function will be represented by a lounge-forum, a bookstore, an exhibition space, a café and restaurant.

- Revival of public spaces and parks

The central component of the project called the "Revival of public spaces and parks" is to give public spaces a new community and cultural function that can facilitate growth in international and domestic tourism as an attraction and can also host several outdoor cultural events in the 2010 cultural season.

More than 70 public spaces will be revived during the preparations for the Pécs2010 European Capital of Culture programme.

## CONCLUSION

In this paper I represented several models for differentiating regional effects of universities. These models lighten different point of views (a university point of view and an outsider point of view) and can be applied in different situations. The most important models are Goddard's and Felsenstein's who identify demand-side and supply-side as well as backward linkages and forward linkages. Similarities cannot be hidden as demand-side effects almost equal to backward linkages. The only difference between supply-side effects and forward linkages is the dimension of time as the results of forward linkages can only be analyzed in the future, after the implementation of the project. Now the lack of measurability and the lack of quantitative data make these models subjective but this subjectivity makes it possible to draw conclusions from the usage of case study method. Based on the represented models and the planned role of University of Pécs in the European Cultural Capital 2010 program it can be stated that University of Pécs is going to be a key actor in the projects of this program. By analyzing the expectable experience of the University of Pécs, we have sought to understand – although partially – how a university can contribute to the cultural and economic growth of its host territory. It would appear, however, that the extent to which the University of Pécs can disseminate its knowledge locally might be, depending on the situation, determined, limited or promoted by the initial endowments of the area in which the university is established. (Mille, 2004) For Pécs being the European Capital of Culture in 2010 means a great opportunity and the city can only make the best of it if the 'city' operates together with the University of Pécs and other knowledge-based organizations located in the South-Transdanubian Region of Hungary.

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