

**Rudolf Sivák**

## UNIVERSITY AS A FACTOR OF ECONOMIC GROWTH

**Abstract:** *The paper deals with the role played by universities in the period of the contemporary crisis. In order to understand a complex nature of universities' potential to act as factors of economic growth renewal, the author reflects how in the course of history societal expectations relating universities have been evolving. The universities' potential of dealing with the present crisis is defined in terms of six dimensions. The author states the current crisis period is a suitable time for universities to declare their offer concerning their potentials in this area. An active role of universities in the building of innovation infrastructure in regions is an essential condition for the recovery of dynamics of social and economic development in regions.*

**Keywords:** *academic revolution, factors of economic growth, higher education institution, knowledge-based economy, education and research, renewal of economic growth, university mission*

**JEL:** E 32, I 2

### Introduction

The world economy is experiencing the worst crisis since the times of the Great Depression. Neither higher education institutions are immune to the contemporary crisis. Governments respond to the crisis in various ways – by decreasing, increasing, or maintaining public funding of higher education institutions. However, it would be a serious mistake to accept the approach according to which universities are victims to the crisis and have to deal with budgetary changes by themselves. One of the starting points for searching for the ways out from the present condition should be an essential re-assessment of the importance of university education and research for economic growth and for the recovery during the crisis. The focus of the present paper is on the clarification of a frequently neglected fact that higher education institutions (HEIs) shall be viewed as active factors of economic growth rather than as passive recipients of measures within structural policies.

### **Universities and the Understanding of their Mission in the Development of Society**

The role played by universities in socio-economic development is primarily understood in the context of an attribute traditionally ascribed to them, i.e. that they are major places of production and dissemination of knowledge via research and teaching. Responding to globalisation processes universities are changing and are increasingly involved in knowledge transfer processes, which provides them with inputs needed for the support and maintaining of a high standard of competitiveness based on innovations. These processes are described as the so called “second academic revolution” (the first one started in the 19<sup>th</sup> century when the mission of universities was enriched with a new component – research).

A typical phenomenon of the second revolution is the transfer of research results into intellectual property and its commercialisation, which supports economic development. In this way universities respond to the pressure of external environment, so that apart from research and education they may fulfil also their “third mission” and contribute more actively to economic development of society. In the concept of the third mission the focus is on an active building of relationships between universities and the business sphere. These efforts are manifested in the building of various institutions on the grounds of universities as well as outside (technology parks, innovation centres, joint ventures of universities and the business sphere, and other). Designing special institutional mechanisms for the support of knowledge and technology transfer between universities and the business sphere thus contributes not only to the creation of successful innovation projects but it also promotes an active role of universities and their perception by the public in relation to the development of a given territory.

It is questionable whether these mechanisms are adequate to facilitate a full utilisation of the potential which universities have at their disposal, and which they can allocate for the support of regional development. In my opinion, our understanding of the relation between universities and the business sphere has to be re-assessed namely in the way that the emphasis shall be placed on the concept of universities as factors of economic development. This approach necessitates defining the mission of universities in a wider context than just a university framework and mainly with respect to various economic processes, especially innovation processes. This proposal for re-assessment of universities’ role in terms of a full utilisation of their knowledge and innovation potential is necessary mainly in times of crisis. In fact, unless universities are active in demonstrating their own usefulness for the recovery of economic processes’ dynamics, they will become marginal and remain no more than victims to fiscal measures of government measures.

Universities in transition economies, where there are large socio-economic changes, play a specific role. There universities are expected to play a central role in the development of society via developing human resource potential with a high standard of knowledge and skills, by making education accessible to an increasing number of applicants, and by doing research in civilisation issues, e.g. fight with

climatic changes. Apart from this, universities are responsible for creating new values in their graduates – tolerance, democracy, justice, equality, and critical citizenship.

In order to deal with these tasks, it is necessary to collaborate with government institutions, business sector and civil society. Fulfilment of expectations of society is possible only by means of partnerships, which strengthens capacities of universities, and that is why building partnerships should be part of universities' mission.

### **Crisis and Universities**

The contemporary crisis, which can hardly be compared with anything we have experienced, brings various consequences to universities. So far no one has been able to predict how long universities will have to cope with social and economic changes, which the crisis brings.

Although there are first signals of economic recovery and the resumption of activities on the financial market, decrease in unemployment, return to the level of pre-crisis employment will probably require a longer time. This means for universities they will have to deal more than ever with the issue of employment of their own graduates, namely in terms of designing the graduate profile and try to maintain the level of employment of teachers and researchers in their own institutions. For this reason, it is reasonable to clearly define on the part of universities their ability based on their autonomy and to flexibly change the profile of graduates to meet the labour market needs and develop new interdisciplinary areas of research to deal with problems brought about by the crisis.

The renewal of economic growth will be possible only on the basis of government interventions and government measures based on decreasing public finance. Cutting finance for higher education in some countries is the result of misunderstanding of the role that can be performed by universities in the renewal of economic growth. The role of universities is therefore to offer via their own human resources innovative solutions for dealing with the crisis and become active agents of innovation processes.

For universities it is very important that the existing responses to the crisis do not result in the opposition to globalisation processes, and so HEIs can further engage in their activities on a worldwide scale. The role of universities is to strengthen an international cooperation mainly in the areas linked to the research of factors that contribute to the renewal of economic growth and offer and apply this “international knowledge” in dealing with problems in their territories.

### **University Potential for Renewal of Economic Growth**

In order to understand the complex nature of the potential that universities now can offer for dealing with the present-day crisis, it is a good idea to go back in history and reflect on how in the course of history societal expectations relating universities have been evolving. This historical reflection on universities' responses to changes in society can help us not only understand the potential that the universities can offer

in dealing with the crisis, but also in defining traditional university missions in a new context.

The chief result of the first academic revolution was an active dissemination of knowledge gained on the basis of research, i.e. in the course of teaching. It was the first step towards developing universities as venues of research and education, which at the same time contributed to the building of wealth and prosperity in society. This fact has become even stronger in making university education accessible to the general public. This is how the knowledge generated by research at universities has found its way to the business environment via teaching and a raising standard of education in society, whose dynamic development is secured by innovations. An educated individual – university graduate was one of the main factors in securing the transfer of innovations from the university environment into (and exclusively there) the business sphere.

The situation has radically changed with the advent of new information and communication technologies, which have brought new methods of production and necessitated the transformation of human activities in all the spheres of society. Innovations and their fast application in practice have become a chief factor of competitiveness of businesses, regions and countries in a globalised economy.

It was the phenomenon referred to as “knowledge-based society” that caused the second academic revolution, which in turn resulted in the integration of economic development (third mission) into the mission of universities together with research and education. Universities have become institutions that are expected to fulfil an active role in economic and social development of society. A major condition for the fulfilment of this role is the knowledge generated at universities and their transfer into, society in order to increase its prosperity. In other words, university has to secure via building various knowledge transfer, mechanisms of social and economic development of the society based on innovations.

This is a process which, however, largely depends on not only academic activities, but also on other socio-economic factors related to a given region and institutions operating there. The development based on innovations is a comprehensive process involving numerous participants. The better the given territory is institutionally prepared for an active feedback in innovation offer, the stronger effect may be expected. In this sense universities are only one of the components of the regional innovation system.

What is, however, much more important and what involves a so far little articulated benefit is that on the basis of their global knowledge base universities can actively assist in creating innovation systems in society. They can also play a significant role in promoting inevitable changes in regions related to the support and development of regional innovation architecture. That is why universities have to be understood not only as reservoirs of knowledge for the support of development based on innovations, but also as significant participants in cumulating and coordinating various regional activities and sources of building institutional and partnership innovation networks in regions.

The educational context is of specific importance to the support of innovation processes; in this area it is vital to emphasise the teaching of such disciplines that promote innovative thinking and creativity. As stressed by his lecture “Restoring Prosperity in the Western World“ at the University of Economics in Bratislava by the Nobel Prize winner for economics E. Phelps (20 September 2010) in order to reach prosperity it is necessary to make use of the knowledge of managerial economics also in macroeconomy. A non-monetarist approach is preferred because a pure monetarist economy has failed. To deal with the crisis and start the dynamics the “innovative economy” is necessary – new products and ideas, looking for market niches, innovative products, and promoting these innovation initiatives. Likewise important is the recognition of these innovations in society and understanding a key role of small and medium-sized businesses in implementing innovations. It is also necessary to alter the system of work with patents that is not favourable towards innovations. The United States also experiences a decline in dynamics. Does it mean the decline in innovative ideas? The reason is to be sought in low interest rates, and these in turn influence investment. Neither the venture capital that flowed into new firms in Silicon Valley has brought anticipated results. However, we should not neglect a well-known fact from history: in the years 1930–1941 when the unemployment rate was very high a lot of new innovations appeared. It is in particular the issue of dealing with the problems of economic inclusion in relation to employment – providing chances for self-actualisation. This necessitates government investments into social inclusion. As for the support of innovations let me remind you what has been already emphasized by Schumpeter: 95% of innovations result from the working know-how rather than the result of implementing the so called “great innovations”. In the years 1975-2005 almost all the improvements in the health service sector in the USA were outcomes of small inventions rather than those of basic research.

### **What is then the potential of universities to deal with the contemporary crisis?**

Potential of universities involves a wide range of activities, and it may assume various dimensions in numerous contexts. In principle, this potential can be defined as follows:

- 1) Potential of autonomy in developing graduates (credit system of study) for the needs of the labour market and for the production of graduates with creative thinking.
- 2) Potential of accumulated knowledge from various scientific disciplines to find solutions for practice faster (Centres of Excellency).
- 3) Potential of the knowledge of experience gained from projects (including the knowledge transfer).

- 4) Potential of international experience and global bird's eye view (transfer of international experience and solutions in local context).
- 5) Networking Potential in the region for the support of innovation processes (Regional innovation centres and Innovation strategies).
- 6) Human resource potential (students, teachers, researchers, and administrators) for consultations and practice.

One of great lessons learned from the contemporary crisis that can be useful also for practice as well as for universities should be a mutual respect between universities and the world of practice and looking for mutual communication database. Alarm signals raised from the academic circles before the crisis were not decoded by practice correctly, and the question is who is to blame for that. The necessity of a continuous building and improving communication about what universities can offer to the world of practice and dealing with pressing problems of society can be documented also by current discussions related not only to economics but also other sciences, e.g. biology, genetics, ethics and the like. Developing a mutually advantageous communication between universities and practice on national as well as regional level is one of the conditions for identification and utilisation of capacities that universities offer to the world of practice [1].

#### **How can universities contribute to dealing with problems caused by the crisis?**

In the year 2009 the SR Government adopted by the Resolution No. 460 "Strategy for the renewal economic growth of the Slovak Republic including financial instruments and time dimensions of economic growth renewal" [2]. As mentioned in the Strategy in the medium-term of the renewal of economic growth the expansive fiscal policy is inefficient, therefore it is recommended to transfer apart from other things the weight of measures in particular to structural policies, which need to be implemented not only in relation to the required fiscal consolidation, but also in order to achieve a high sustainable economic growth in the future, and increase this way the resistance of the economy to similar external shocks as the one we are experiencing today. In the case of Slovakia it means the orientation to the knowledge economy, quality business environment and flexible labour market. From this aspect a thorough implementation of in particular the Programme of Modernisation "Slovakia 21" and the National Reform Programme as well as other measures mentioned in the Strategy is of vital importance.

As for HEIs, the role of HEIs in the Strategy is seen mainly in the emphasis on the strengthening of HEI quality – namely via the side of supply, increase an effective competition for existing providers and the necessity of improving administration and human resources at HEIs. Likewise emphasised is the creation of professionally oriented HEI study programmes, which will prepare graduates for the performance

of their future jobs. HEIs should be provided with a framework for a more flexible and autonomous HEI management, decreasing administrative load of teachers and research workers as well as the enlargement of collaboration between HEIs with regions and the world of practice. In order to ensure a sustainable development of higher education and facilitation of the entry into the academic environment, the problem to be discussed will relate to acquiring and maintaining quality university teachers and research workers. The next years will see the inevitable exchange of generations at HEIs, which may contribute to increasing the quality of education.

As is clear from the above as well as from other measures of the Strategy, relating to the development of science and research as well as encouraging innovations and effective production in the economy of the Slovak Republic, the role of universities and HEIs in the processes of renewal of the economic growth is viewed only as a supplementary one, while their real potential is little considered. This kind of view marginalising the role of universities is – in our opinion – the consequence of adhering to traditional views of the mission of universities and the real condition of higher education with emphasis mainly on negative aspects.

However, universities cannot expect that the way they are perceived by the society and also presented in the Strategy is going to change unless they do something about it themselves. The current situation is thus a suitable opportunity for the universities to clearly declare their offer concerning the dealing with the crisis. Of course, this may vary depending on their territorial operation and their positions in a given region. However, all universities should endeavour to:

- 1) Make themselves more visible in the region (image-building) where the role of the university is irreplaceable.
- 2) Focus on business activities and applying business methods in dealing with own problems as well as problems in practice.
- 3) Learn from good examples of cooperation between universities and practice (e.g. Triple Helix Model – University of Leuven).
- 4) Effectively utilise their autonomy in dealing with the consequences of the crisis – freedom to manage inadequately saturated processes (active participation of the Board of Directors and students can be a valuable benefit).
- 5) Review curricula is a must (mainly in economics education).
- 6) Encourage creative and critical thinking via new methods of instruction in connection to practice.
- 7) Remove inefficient internal competitiveness between scientific disciplines and look for common interdisciplinary intersections.

## Conclusion

The role of universities has been changing in the course of history. However, during the crisis expectations of the society in relation to universities are changing in terms of quality. Universities can no longer be places for the instruction and research and dissemination of their results in practice; instead they have to play a key role in the development of prosperity, generating and implementing innovations, as well as in providing solutions to global problems. A global knowledge and experience potential of universities pre-determines them to assume an active role in the building of innovation infrastructure in regions, which is an essential condition for the recovery of dynamics of regional social and economic development. This is a new dimension of understanding their third mission, at the core of which there is a stronger social responsibility of universities in relation to society. More than ever universities are required to take into consideration social needs of their environment in the course of designing and developing research and transfer of their results in practice. More than ever universities must be more responsive to requirements of society and provide scientific and technical support for the activities leading to the renewal of economic growth. At the same time, they must not neglect the need for permanent and flexible updates in the content of study so that their graduates were prepared to actively contribute to the fulfilment of labour market expectations in economically less developed regions. These things necessitate a fundamental reflection on the part of universities, as well as on that of decision-making bodies, which – while respecting new tasks of universities in the development of knowledge economy and in dealing with the contemporary crisis – can create adequate financial and material conditions to facilitate their accomplishment.

## Sources:

- [1] NOVÁ, J.: Internacionalizácia a jej vplyv na zamestnanosť absolventov vysokých škôl. (Internationalisation and its Influence on Employment of Graduates from Higher Education Institutions). Dizertačná práca. (PhD thesis). Ekonomická fakulta Univerzity Mateja Bela, 2009, pp.133-140.
- [2] Resolution of the Government of the Slovak Republic No. 460 of the year 2009. Strategy for the renewal economic growth of the Slovak Republic including financial instruments and time dimensions of economic growth renewal.