

## **Founding Innovation Policy with the Evolutionist Approach**

*Imre HRONSZKY*

The paper consists of three essential parts. First of all it discusses the foundation of innovation policy. One basic layer of this emerges from analyzing the dynamics of complex evolution systems, the instable systems. Consequently the paper briefly looks into the special empirical characteristics of innovation as a stylized phenomenon. It compares neoclassical and evolutionist theory approaches and then examines some features of evolutionist innovation policy. The basic findings of the paper include: the consequent foundation of innovation policy has its satisfactory ontological background in the evolutionist approach originating from the dynamics of instable systems. The neoclassical approach fails to fulfill the conceptual criteria emerging from this. The evolutionist approach offers various qualitative advantages. Their integration has started in innovation policy research and certain innovation policies.

*Key words: dynamics of instable systems, evolutionist approach, evolutionist innovation policy*

## **Knowledge based Europe – Is it Attainable?**

*Ádám Novotny*

Out of the objectives and strategies defined by the European Union's Lisbon Summit that took place at the turn of the Millennium the paper highlights two major issues: questions concerning information society and research & development. It raises and highlights the following related problems: Based on the achievements over the years since announcing the strategy does the goal of completing the Lisbon objectives until 2010 seem realistic? Can the member states live up to the ideas of their ambitious leaders? Which member states and in which areas can compete with the United States and can the newly joined countries keep up the pace with the fifteen other members?

The EU's innovation indicators, annual reports just as well as the evaluations of independent experts and organizations lead to the conclusion that the EU will not catch up with the USA in terms of competitiveness in the foreseeable future, let alone exceeding it. It is exactly along knowledge dimensions that the gap is the greatest and compared to the preceding period it has also increased. However, the most competitive countries of the EU (Finland, Sweden and Denmark) do compete with the USA in various areas, while the situation of the newly joined member states

is characterized by a double lag: the fifteen member states lag behind the USA while the new members are behind these fifteen although a rearrangement has taken place in terms of ranks both within the groups and in the whole of the EU.

*Key words: Lisbon strategy, knowledge based society, competitiveness, EU, USA*

### **The Role of Technology Management Methods in Innovation Policy**

*László Várkonyi*

Knowledge society not only demands more information but also developing a different type of knowledge. Emphasis falls increasingly on the development of socially and environmentally valuable innovations since the growth of competitiveness is mostly realized through innovative products corresponding to social values. In order to realize this, it is essential to integrate strategically oriented management methods of participation-based constructive technology assessment relying on public involvement in technology development processes, especially developing ways of user involvement. Taking into consideration the complex characteristics and qualitative factors of technical risks, handling precaution, participation and risk taking jointly and developing the corresponding frameworks and set of instruments applicable in various institutional spheres seems essential including the challenges of developing and applying the integration of relevant knowledge in a reflective manner. Through his research experience gained in Denmark the author points out that the concepts of constructive technology assessment, technology foresight and prospective technology occur on various levels of the society with a multipolar value system and they are gradually imbedded in the whole of institutional spheres. The application of this knowledge in the processes of management and strategic decision-making as well as its integration in innovation policy becomes an important instrument.

*Key words: innovation, constructive technology assessment, technology management, innovation policy*

### **The European Union's Competition Policy Serving Research & Development and Innovation through Block Exemption**

*Anita Pelle*

The paper introduces a special aspect of the EU's competition policy. While competition policy, according to its general rule, prohibits all kinds of agreements and

harmonized behavior aiming at the restraint of competition, furthermore, it also prohibits any state aid not evaluated openly for all market players, in recent years the Commission and Council passed legislation showing that this strict regulative framework still allows for compromises in certain cases. This is basically ensured by block exemption systems that are introduced to the regulation of both company behavior and state aid.

Promoting research & development and innovation – among others – both occur in block exemption systems in various regulations and recommendations. These include Commission Regulation (EC) No 2659/2000 on research and development agreements and Council Regulation 994/1998 - amended by several Commission resolutions - on the introduction of block exemption in the area of state aids also in research & development. Concerning technology transfer agreements the last legislation passed by the EU's competition policy was Commission Regulation No 772/2004, and since the Lisbon Summit it has been the Commission's communication on market behavior serving shared European interests that deals with supporting innovation through the topics of creating a European Research Area and developing e-Europe.

*Key words: competition policy, supporting R&D and innovation; European Union*

### **Innovativeness: the Basis of Regional Economic Development**

*Miklós Lukovics*

Today's economic environment is characterized by increasing globalization processes, the upvaluation of non-financial resources and accelerating technological changes. In this respect the competitiveness of companies and regions increasingly depends on the ability of producing, obtaining and adapting information. Knowledge creation, dissemination and innovation gain a more dominant role among the components and factors influencing regional competitiveness. In today's information society knowledge has become the driving force of economic development.

The present paper highlights the strong interrelation of innovativeness, regional competitiveness and regional economic development. It also points out that the importance of innovation varies in regions with different development levels, therefore, such regions differing in the level of development cannot be handled with the same regional innovation and economic development strategies.

*Key words: regional innovation systems, regional competitiveness, knowledge based economic development*

## **Possible Roles for the Public Sector in Financing Small and Medium Size Enterprises**

*Szabolcs Imreh*

Innovative small and medium size enterprises play an essential role in economic development. One of the greatest problems faced by such enterprises lies in their access to financing sources. Their financing raises two major challenges; on the one hand their access to financial sources is rather difficult resulting from problems of the economy of scale associated with transaction costs, on the other hand special risks emerge from their activities. The private sector has developed various tools to combat both problems, however, my paper examines the role of the state in this area.

The paper reviews governing international practice by focusing on tendencies in the European Union. Public interventions are most characteristically made to improve the access of the sector to financing sources in three areas: direct financial aids to enterprises, ensuring indirect financing sources and offering non-financial types of assistance to facilitate access to financial sources. These three areas are examined in detail with special emphasis on introducing the practice of so-called „soft loans” popular in Europe.

*Key words: innovative small and medium size enterprises, financing, soft loans, micro-loans*

## **Citius, Altius, Fortius: Traditions and challenges in Hungarian sports**

*Gábor Jász*

The Athens Summer Olympics were one of the most significant events of 2004, where Hungarian sportsmen and women participated with as much success as in Sydney four years earlier. However, during and after the Olympics the most discussed issue was our sportsmen's doping case, which marks that visual sports have lost much of their original Coubertinian set of values and have become a social factor subordinated to economic – what is more, sometimes political – interests. Looking back on the Athens Olympics it seems obvious that the sports of our nation have been facing more and more challenges. Our country, having great traditions in sports can meet these challenges only by developing a clear strategy taking into account its strengths, weaknesses, threats and opportunities.

*Key words: Olympics, public goods, traditions, challenges*

## **Contradictions in the Concept of Knowledge on the Borderline between Economics and Psychology**

*Éva Málovics– Nikolett Mihály*

In the past few years the concept of knowledge has become a central category of management sciences. Questions often emerging related to organizational efficiency concern the types of knowledge, knowledge flow, organization-specific knowledge, etc. Knowledge is considered to be the most valuable organizational resource that guarantees competitive advantage and development for the organization. Knowledge based organization and knowledge society have become popular expressions, the factors that knowledge management deals with at the organizational level.

The various branches of today's „management science” seek different roots to ground and justify their theories. One of these attempts to find roots is the departure from the „distinction between explicit and implicit knowledge”, a theory developed by the acknowledged Hungarian scientist Mihály Polágyi. By referring to certain basic psychological experiments, Polágyi tried to justify the fact that these two types of knowledge have a clearly distinct representation in our brain. This constructed the foundation of Nonaka's knowledge conversion model, which claims that the constant interaction of tacit and explicit knowledge is the basis of knowledge creation in organizations; therefore, tacit knowledge is an essential area of knowledge management. Since this theory is relatively simple and clear it has become highly popular among managers less familiar with psychology.

Many authors in literature pointed out the lack of a well-defined concept of knowledge and the ambiguous nature of transforming tacit knowledge into explicit. Our paper intends to discuss these questions and rethink the concept of knowledge in the light of achievements in today's psychology. The first part of the paper examines whether and to what extent today's neurological results exceed Polágyi's ideas and the propositions of authors citing his work, while the second part tries to answer the question of how it is possible to transform tacit knowledge into explicit and whether tacit knowledge can constitute the object of knowledge management.

*Key words: knowledge management, knowledge, learning, tacit knowledge, implicit learning*

## **Decision on Learning**

*László Szigethy*

Education, especially higher education plays a key role in knowledge-based economy. Decisions related to education are often associated with insufficient informa-

tion. In such situation individuals are unable to make optimal decisions, therefore decisions may prove wrong later on. The paper examines these decisions from the aspect of economic psychology. This approach differs from standard micro-economic theories, in which actors usually have all the relevant information.

The paper first gives a brief overview on the role of psychological processes in decision-making and describes a social trap related to learning by using the achievements of game theory. Then investment and consumption, two aspects of learning are analyzed by introducing how psychological and social factors influence these aspects. Finally the paper examines the effect of the information asymmetry existing between employers and employees on learning motivations.

*Key words: education, decision, human capital, uncertainty*

### **Reception of Organizational Learning and Training in Foreign-owned Companies and Joint Ventures in the South Great Plain Region**

*Éva Málovics– Zoltán Nyíri– György Málovics*

Our paper makes an attempt to approach organizational learning, more precisely training programs from the side of human and organizational culture based on the analysis of five different organizations. Using a questionnaire survey and depth interviews the paper examines the circumstances of learning as well as helping and hindering factors in the given organization. We also look at how knowledge is received and utilized in the examined organizations, how organization members view knowledge sharing, whether learning occurs in the organization as value, how learning is utilized, in what way trainings are linked to work activities and improving organizational communication. Furthermore, we also examine how knowledge sharing takes place.

*Key words: organizational learning, company trainings*

### **Competences and Sense of Risk in Service Providing**

*Éva Málovics– Zoltán Veres– Nikolett Mihály– Péter Kuba*

The paper introduces the theoretical foundations of the presently ongoing research of process-like bilateral outcome risk, proposes the potential questions that may emerge throughout the research, analyses the potential outputs of the research and examines the instruments that can be applied. The review of literature dealing with

risk focuses mainly on two areas: the concept of risk and communication in a riskful situation.

The primary aim of the paper is to offer an overview on the presently ongoing research both from a theoretical and practical side. The research analyses riskful situations occurring in service providing from the aspect of the paradigm of marketing, therefore it is multidisciplinary.

*Key words: risk, competence, risk-communication, bilateral process*

### **A New Generation of Products: International trade of intellectual property and some of its economic aspects**

*Sarolta Somosi*

As a result of today's trends our traditional material goods are disappearing. They are replaced by intellectual property conquering more and more space that is almost unlimitedly convertible into non-traditional material goods. One of the first relevant questions focuses on how knowledge can be possessed and how the protection level introduced in the trade of such new form of possession and knowledge as a product influences economies with different levels of development.

The necessity of a global protection system emerging from the constantly growing role of intellectual property rights may be approached from various aspects: based on legal factors, as the scene of conflicting political interests, and also from an economic angle. The paper intends to look at the effects of the trade and protection of intellectual property rights on economies. Owing to the early stage of research only some questions relating to the conflicts of interests in this area are underlined, which hopefully offer sufficient implied aspects for further investigations.

*Key words: intellectual property, trade, WTO, TRIPs Treaty*

### **Bilateral Risk Management in Technology Transfer**

*Zoltán Veres– Norbert Buzás*

Technology transfer, or the process related to the exchange of technology as a special good has various forms of manifestation. However, these transactions varying in terms of the interests of participants, the mechanisms of implementation or the nature of economic or cultural differences to be conquered have a common feature: the success of the transfer process may be influenced by various factors of different origins, therefore its forecast is rather uncertain. The situation is further complicated by

the fact that this success can be interpreted from both sides (transferer and transferee) and the outcome risk can be linked to achieving this success. The paper examines the nature of these so-called bilateral risks and the modes of their management.

*Key words: technology transfer, sense of risk, bilateral risk, risk management*

### **Practical Questions of License Agreements**

*István Molnár*

The general questions of license agreements are defined by Act No. XXXIII of 1995 on the protection of invention by patents for which the Civil Code serves as background regulation. Considering the fact that these regulations mainly include permissive legislation, it is the task of legal practice to work up details. When signing a license agreement special emphasis must be placed on defining the content, territorial and time effect of the license and stating the rights and obligations of the licensor and licensee. It is important to underline that in our view warranty of title cannot be regarded as an objective factor in license agreements in terms of intellectual property rights, but must be linked to the concepts of good faith and due diligence. It can generally be stated that many stipulations of license agreements create or preserve a superior situation or one restrictive of competition that is prohibited both by Hungarian and community law. As far as restrictive behavior is concerned one basic form of solving this conflict is the block exemption of a defined range of restrictive behaviors via statutes. The latest Commission Regulation No 772/2004 on the application of Article 81(3) of the Treaty to categories of technology transfer agreements focuses on this.

*Key words: license agreement, licensee, licensor, know-how*

### **Profit and Patent: the first Aeroplane and the Wright Brothers' Fight for their Rights**

*Ádám Svingor*

The fate of great inventions is always interesting: both the story of their creation and how they spread. All of us might have a misty concept of the Inventor, who in some mysterious way synthesizes knowledge into an invention, something unforeseen that other people would not have been able to create. And maybe many of us would like to be like this. We would be happy to gain an insight into the process of creation and



learn what makes an invention successful and how it wins acknowledgement later on.

In our world overwhelmed with information we unconsciously long for knowledge; principles that crystallize information, guidelines that structure knowledge. However, it takes efforts to reach this goal although a relatively comfortable – and maybe exciting – way is to observe the efforts that others make: efforts with results directly or indirectly influencing our lives.

The invention that I aim to examine is the aeroplane. The story begins with the birth of the invention, or rather, even before, with the ancestors' activities. Our goal is to understand how patenting helped the financial success of the invention and observe the inventors' efforts to receive some of the emerging profit considered reasonable.

*Key words: flying, aeroplane, utilization of inventions, infringement of patents*

## **Regional Differences of Patent Applications**

*Melinda Smahó*

The paper makes an attempt to measure and compare the innovativeness of Hungarian towns based on analyzing patent applications. The aim of examining the transition period is to explore the time and regional differences apparent in patent applications and discover their reasons.

The paper reveals a strong positive correlation between research & development expenditures and the patent applications submitted two years later and points out regional differences along various dimensions. Despite restructuring that took place in favor of country towns the capital preserved its leading role in each phase of the transition while the signs of decay – in harmony with the national tendency – were apparent in the case of Budapest as well. Within the hierarchy of towns sharp differences occur: in the case of capital cities of counties there are major differences while in the country traditional university towns excel. Along the East-West dimension the eastern part of the country dominates.

*Key words: innovativeness, patent application, research & development*

## **The Role of Universities in Regional Innovation Networks**

*Zoltán Gál*

Scientific-technological development and the knowledge accumulating throughout this have become a key factor in the development of regional economies. Universities and research institutes as the knowledge centers expanding and spreading wider knowledge play an increasingly significant role in regional development. The attractiveness and competitiveness of regions greatly depends on the territorially balanced cooperation of universities and companies joining innovation. Local knowledge bases, the exploitation of innovation potential and the cooperation between universities and the economy significantly contribute to the improvement in the performance of not only companies but regions as well. Innovation may be regarded as an interactive and systematic process based on traditions that also has a defined territorial form, in which the cooperation of companies, universities and different transfer organizations takes place in the form of network.

The paper introduces the European Regional Innovation Survey (ERIS) with special emphasis on the role that universities play in innovation networks. Then, besides describing the role of universities in national and regional knowledge transfer, it is also underlined that the territorial structure of innovation was significantly influenced by the transformation of Hungary's countryside universities and the expansion of their innovation functions in the transition period. The paper introduces the findings of the surveys completed in the South Transdanubian RIS program regarding the role of universities in network building, it describes the factors hindering university-economy relations and the objectives concerning development defined in the frameworks of RIS.

*Key words: regional innovation, innovation networks, university-economy relations, regional innovation strategy*

## **Triple Helix Relations from the Aspect of Knowledge Management**

*Balázs Lengyel*

The problem of knowledge creation at universities and later on the economic utilization of knowledge elements has attracted growing attention among experts working in the field of economic development. The paper seeks an answer to the question of how the same categories can be used to describe knowledge creation and knowledge transfer among the different sectors taking place in the Triple Helix model that describes the novel relations among the spheres of university, government and economy.

Based on the terminology of tacit knowledge applied by literature in knowledge management, the paper gives a brief summary of the most important elements in the knowledge creation and transfer of dynamic companies. Then the conclusions of the models are expanded to the description of knowledge creation by universities. Using the model of knowledge transfer among companies and their partners, the paper outlines how it is possible to establish the description of knowledge transfer among the different sectors on these theoretic foundations.

*Key words: tacit knowledge, knowledge creation, knowledge transfer, triple helix relation*

### **„University Enterprises” from an Enterprise Development Perspective**

*Zoltán Bajmócy*

With the upvaluation of knowledge as a resource universities have become key players of the innovation system, therefore directly affecting the competitiveness of enterprises. This brought along the upvaluation of university-business relations and the creation of necessary regulative background by the government.

The present paper examines university-business relations from a local enterprise development perspective. By doing so it attempts to explore the market inefficiencies, innovation gaps standing in the way of knowledge flow and at the same time identify the deforming effects of the policies aiming to remedy these. The paper devotes special attention to the local nature of relations among universities, the business sphere and the government and attempts to describe the basic local conditions of their satisfying operation.

*Key words: university-business relations, local enterprise development, market inefficiencies, Bayh-Dole Act*

### **Forms of Venture Capital Participation in Early-stage Technology-oriented Enterprises**

*Andreász Kosztópulosz– Zsolt Makra*

The limited access of technology oriented early-stage enterprises to sources of capital (and loans) is well known by researchers and politicians dealing with economy. Financing these enterprises raises challenges in two aspects: due to problems in the economy of scale associated with transaction costs and the special risks emerging from innovative activities. Both challenges create obstacles for implementing „tradi-

tional” financing methods and result in the insufficient and ineffective availability and utilization of sources.

Our paper analyses the problem from the aspect of the supply side: which are the capital investors that in some way participate in the fundraising of rising enterprises in their early life cycle. After clarifying the conceptual confusion surrounding venture capital the paper briefly looks at the most important characteristics of venture and seed capital funds, the financing and development activities of business angels and the advantages and disadvantages of business to business investments of development capital. In its final section the paper points out which forms of venture capital are the most suitable for financing promising enterprises in their early life cycle.

*Key words: new technology-oriented enterprises, early life cycle, venture capital, venture capital funds, seed capital, business angels, corporate venturing*