

**TRANSFER OF KNOWLEDGE AND TECHNOLOGIES AS A  
PRECONDITION TO CHOOSING THE RIGHT COURSE TOWARDS  
AN ADVANCED SOCIETY**

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**ABSTRACT**

*Investment infrastructure forms part of entrepreneurial infrastructure that is relating to the framework of institutions of development and support and SME support mechanisms. Creating a framework for sustainable development and an advanced society is a must for countries in transition. With wide-ranging scientific research, consensus on regional development and embracement of a coherent concept of the eco-social market model this objective is attainable. The eco-social market model rests on the following pillars: ecology, society and market economy.*

*This paper outlines the results of preliminary research of the efficiency of the way research institutions are organized with a view to achieving faster and more efficient knowledge and technology transfer in the SME production facilities. The system of research organizations from a planned economy (institutes and faculties, either independent or affiliated to big companies) and the forming of institutions (zones, technological parks, business centers) from a regional innovation system were compared.*

**Key words:** infrastructure, SME, sustainable development.

**1. INTRODUCTION**

In the course of transition effort should be made to devise and achieve a coherent concept of the eco-social market model for sustainable development and an advanced society. The answer should be sought in a new product, new technology, but first and foremost, in a new philosophy of economic activity.

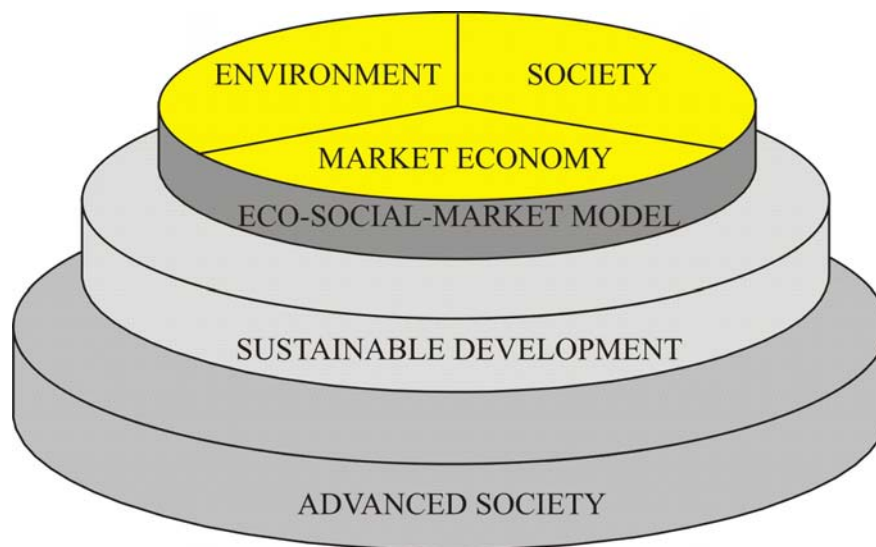
The main goal is to create a framework for sustainable economic development and an advanced society. Placed so high, this goal can be achieved only with wide-ranging institutional infrastructure building, knowledge and technology transfer, consensus on regional development and embracement of a coherent concept of the eco-social market model.

It is unquestionable that the modern trends of economic development and market economic conditions call for greater and more efficient linkages between scientific-research work and SMEs well as the establishment of a system structure with the aim of achieving faster and more efficient knowledge and technology transfer in the SME production programs.

This paper presents several research results which illustrate how to organize research, the way research affects education, economy, i.e. life. In addition, the paper compares two ways of staffing (in institutes, technological parks, business areas, incubators, business innovation centers, etc.) with the aim to support SMEs in knowledge and technology transfer.

## 2. ECO-SOCIAL MARKET MODEL, SUSTAINABLE DEVELOPMENT AND ADVANCED SOCIETY

The eco-social market model rests on the following pillars: ecology, society and market economy. The goal is to achieve strong competitiveness, social justice and partnership and judicious use of natural sciences. Sustainable development is the form of human deliberation and activity that enables and ensures long-term development of economic activity and society as well as peaceful coexistence with appropriate use of inherited reserves. An advanced society is the form of organization of coexistence on the planet Earth in which the human species places the meaning of its existence exclusively at the service of creating new values, i.e. benefits for all users of resources on the planet. In view of that, the overall human activity takes place within the following seven fundamental processes or areas: society-human potential; system of values; change of system; information and communication, system-environment relation; system organization; eco-social market economy.



Picture 1. Integrated concept of advanced society

## 3. INSTITUTIONAL INFRASTRUCTURE AT THE SERVICE OF KNOWLEDGE AND TECHNOLOGY TRANSFER

To instigate development (solving strategic tasks, project implementation, starting production, etc), in addition to other things, the following elements are required: idea, implementing staff, idea-friendly environment and resources.

The enhancement of economic environment country-wide can be achieved by means of an integrated regional approach. In well-organized regions a small economy will find a way to EU accession funds. The structure of the regional innovation system can be diverse and it depends on a great number of elements. The choice and the making of the structure of the regional innovation system depend on the agreement achieved around objectives: among managers, ecologists and the level of technical knowledge.

The structure of the regional innovation system is made up of completely new entities (knowledge and technology transfer agencies, R&D centers, business centers, technological parks, technical-information centers for which idea stands for capital and information stands for product. Achieving the scientific-research role and giving support to SMEs as the most vital part of the economy, they directly affect social development. Through networking, successful companies rise above the regional limits by creating “clusters” and are thus directly transforming a small economy into a “big” one.

## 4. EFFICIENCY ASSESSMENT OF EXPERT STAFF RECRUITMENT IN THE ENTITIES OF THE INNOVATION SYSTEM

There are a great number of ways of organizing research development and knowledge transfer as well as expert staff recruitment and it is useful to make the best possible selection. To raise the level of production/services it is necessary to introduce specialized and automatized technological equipment,

to use the results of developmental and applied research and continuously work on the development of means of labour and products.

The application of the group selection method consists in collective ranking of approved factors that expert team members rank independently of one another and the mathematical processing of results.

The final result of group assessment is the quantifying indicator  $Q^+$ .

$$Q = \frac{\sum k_{si} \cdot b(i)}{\sum b(i)}$$

Below is an example of efficiency assessment of expert staff recruitment in the entities of the regional innovation system through the application of the group selection method.\*

No.	Name of parameter and unit of measurement %	Researcher in a research organization (I)	Researcher in two or more research organizations (II)	Parameter (mark)
1.	Use of staffing resources	100	115	P1
2.	Impact of organization on economic productivity	100	114	P2
3.	Possibility of cooperation to determine the need for knowledge transfer	98	100	P3
4.	Establishing link with the economy to apply developmental research	100	114	P4
5.	Monitoring scientific-reasearch policy	100	112	P5
6.	Possibility for researchers to engage in education	100	92	P6
7.	Resources needed to start the work	100	108	P7
8.	Possibility of market operations	100	100	P8
9.	Achieving income-based principles	100	101	P9
10.	Research handed over to the individual and not the institution	0,75	1	P10
11.	Impact of the way of organization on the staffing level in institutes/faculties	1	0,90	P11
12.	Possibilities for youth training	100	0,98	P12
13.	Keeping talented students in the region	0,8	0,95	P13
14.	Using faculty teachers for scientific-research work	0,6	0,6	P14
15.	Ensuring basic research	0,5	0,55	P15
16.	Level of interest bonding among certain entities	0,5	0,50	P16

\* Bibliography (1) lists the methodology and additional examples for assessment and the optimal choice of technological equipment.

Parameter		Direction	Numerical value		kis	b (i)	kis b (i)
Mark	Name		I	II			
.....							

which means that the way of research staff recruitment according to variant II is promising.

## 5. CONCLUSION

On the basis of the above, conclusions are as follows:

- It is necessary to establish institutions (entrepreneurial centers, technological parks, technology transfer agencies) in order to achieve scientific research and create conditions for market operations in line with the eco-social market model.
- Regional innovation system, technical and innovation centers, business associations, knowledge and technology transfer agencies should be formed on market conditions of business operations to reflect the need for SME.
- Raising awareness that we are the sole creators of our future, that SMEs are the most vital segment of the economy and that access to EU structural funds leads through regional development agencies, or programs supporting SME development.
- Building the eco-social market model would be an optimal choice for countries in transition which were for a long time part of the system of planned economy.
- Linking and merging educational and scientific-research activity should be based on strict market principles and could be achieved through adequate staff recruitment (researchers recruited by: research organization and economic entities).

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