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*MARIANN VERESNÉ SOMOSI, GYÖRGY KOCZISZKY***SOCIAL INNOVATION MEASUREMENT MODEL AND OVERVIEW OF A POTENTIAL REGIONAL SOCIAL INNOVATION DEVELOPMENT PROGRAM**

The relevant international literature pays significant attention on the analysis of territorial (regional) innovation potential, and the requirements of innovation transfer for more than three decades. According to the researches there are significant territorial differences also in this dimension; in the peripheral regions the opportunity of catch up (convergence) can be found in social innovation. It is an important issue, what kind of efficiency has social innovation in the peripheries, while the centres can be characterised by high level natural science and service (for example: bank) innovation.

The innovation is an important influencing factor which determines the development of centre-periphery relations. According to several empirical analyses, the economic output of the settlements and regions with outstanding innovation potential is significantly higher also in the converging countries, than this of the territories with the lack of innovation.

In the case of the peripheral regions the social innovation can be a good solution for enhancing the economic performance of the territories. In this recent research the authors analyse the role of social innovation and its possibilities in the case of the peripheral regions, hence they think that the catch up of peripheries cannot be a reality without significant innovation absorption capacity.

Keywords: social innovation, peripheries

Відповідні міжнародні літературі приділяється значна увага на аналізі територіальних (регіональних) інноваційний потенціал, а також вимоги трансферу інновацій протягом більше трьох десятиліть. Згідно з дослідженнями, існують значні територіальні відмінності також у цьому вимірі; в периферійних регіонах, можливість наздогнати (збіжності) можна знайти в соціальних інноваціях. Це важливе питання, яка ефективність соціальних інновацій в периферії, в той час як центри характеризуються високим рівнем природознавства і послуг (наприклад, банківських) інновацій.

Інновації є важливим фактором, який визначає розвиток центр-периферійних відносин. На думку ряду емпіричного аналізу, обсяг виробництва в поселеннях і регіонах з видатними інноваційний потенціал значно вище і в сусідніх країнах, ніж на територіях з відсутністю інновацій.

У разі периферійних областях соціальних інновацій може бути гарним рішенням для підвищення економічної ефективності територій. У цьому недавньому дослідженні автори аналізують роль соціальних інновацій та її можливості в разі периферійних регіонів, таким чином, вони думають, що ти з периферії не може бути реальністю без значного інноваційного потенціалу поглинання.

Ключові слова: соціальні інновації, периферії

Соответствующие международные литературе уделяется значительное внимание на анализе территориальных (региональных) инновационный потенциал, а также требования трансфера инноваций на протяжении более трех десятилетий. Согласно исследованиям, существуют значительные территориальные различия также в этом измерении; в периферийных регионах, возможность догнать (сходимости) можно найти в социальных инновациях. Это важный вопрос, какая эффективность социальных инноваций в периферии, в то время как центры характеризуется высоким уровнем естественности и услуг (например, банковских) инноваций.

Инновации являются важным фактором, который определяет развитие центр-периферийных отношений. По мнению ряда эмпирического анализа, объем производства в поселенях и регионах с выдающимися инновационный потенциал значительно выше и в соседних странах, чем на территориях с отсутствием инноваций.

В случае периферийных областях социальных инноваций может быть хорошим решением для повышения экономической эффективности территорий. В этом недавнем исследовании авторы анализируют роль социальных инноваций и ее возможности в случае периферийных регионов, таким образом, они думают, что ты из периферии не может быть реальностью без значительного инновационного потенциала поглощения.

Ключевые слова: социальные инновации, периферий

INTRODUCTION

The national and international scholarly community is paying growing attention to the examination of the conditions and effects of innovation, as is shown by the yearly increase in the number of publications. The reason for the interest is clear: innovation has a key role among the determining factors of economic performance (output) and competitiveness (Ewers-Brenck, 1992; EC, 2001; EC, 2002). Empirical analyses have shown that there is a significant correlation between a given settlement's or region's economic and innovation potential; the more innovative territories have higher performance than the regions lacking in innovation (Camagni, 1995; Clar et al. 2001).

It is not by chance that in the last two decades the European Union has changed its innovation policy (mainly because of the decline in its world economic competitiveness). As a result of this, as well as new aims, new tools and methods have also appeared which will help to foster the "European innovation climate" (EC, 2010). But also the concept of innovation (the search for new and recent solutions) has to be interpreted more broadly than before. The European Union, in concordance with social changes, is paying greater attention to the context of social innovation.

1. SOCIAL INNOVATION – DEFINITION AND THE DIFFERENT APPROACHES

Generally can be made a statement that the social innovation is complex notion, which is permanently forming and changing. There were several attempts to define social innovation, but there is no agreed-on definition in the literature.

There are several organizations dealing with social innovation, and several which has started social innovation actions (including research centers, public institutions, private enterprises and NGOs) which all apply their own created definition for social innovation. Many among the researchers and research organizations agree that there is no precise definition for social innovation, generally because of the fact, that the word "social" is interpreted differently in the given parts of Europe and the World, there are different regional-local characteristics/ specialties related to the notion, based on the different structure of societies and the different characteristic of social topics.

In the following we will summarize some definitions and emphasize the common characteristics of them.

According the definition of Guide to Social Innovation the social innovation can be characterized by the management of new, social needs, and by the creation and implementation

of new ideas (products, services, processes/models) dealing with new social relations and cooperation. Based on the guidebook social innovation is generally:

- rather opened innovation, than closed from the aspect of knowledge sharing and ownership,
- can be characterized by multidisciplinary: e.g.: migration, recovery of city areas, social economy, micro financing, health care and adult care, corporate incubation, workplace innovation, regional development strategy, etc.,
- they target the participation of population, and the improvement of their capabilities,
- rather demand- than supply-driven,
- rather specialized than mass products, because the solutions should be adapted to the local circumstances and needs.

The OECD emphasizes the new character of answers given for social innovation. According their definition the social innovation is searching for new answers for social problems. This can be done in two separate ways: 1. defining and introducing new services which improve the life quality of individuals and communities; 2. defining and implementing new labor market integration processes: creating new work places, new forms of labor market services.

In the definition of the European Union's policy the social innovation contains the elaboration of new ideas, services and models to manage the social problems in a better way with the help of public and private sector stakeholders, including the NGOs.

Based on the RESINDEX (regional social innovation index) project the social innovation is a notion which deals with innovative solutions for the complex problems and challenges of the society. The project results suggest that the social innovation tries to fulfil the not yet fulfilled needs of the society. In this context the social innovation is a key factor in social cohesion. The social cohesion is important for the regions' competitiveness and sustainability.

According the TEPISIE project the social innovation is a conglomerate of new approaches focusing on the fulfilment of social needs. They interpret the social indicator from the aspect of tools, and not from the aspect of goals. The research defines the following requirements:

- novelty: in the context, where it appears, should be new; but it means not directly a totally new quality, it is important only that it brings some novelty for the stakeholders participating in the implementation of innovation;
- fulfilling social needs: the goal is that the innovation should have a good effect on social needs: it can help to define social needs;
- practical evaluation: the social innovation contains in every case implemented ideas;
- involving and mobilizing stakeholders: they involve the stakeholders in the creation or implementation of innovation;
- restructuring social relations: better availability of resources and power causes a debate from public values and right society;
- bottom up: compared to other innovations it has got bottom up character;

- high level uncertainty: because it was not applied before, it is hard to prognosticate, whether it is better or more efficient compared to other solutions;

- it is embedded in norms and structures: social innovation means other than the mainstream solutions; but it can be embedded depending on the context and it can be also widespread; there can appear new needs, which raises new innovation needs.

According the Stanford Business the social innovation gives new solutions for a given social problem, which is more efficient, effective and sustainable than the present solutions. The created values are basically good for the society and only after for the given individuals.

The LEED Forum of Social Innovations defines the social innovation as a notion which deals with the improvement of the individuals' and community's well-being through employment, consumption and participation. So it gives solutions for the problems of individuals and communities.

It is important to differentiate social innovation from the business innovation; hence the social innovation is creating basically not through the activity of profit-oriented organizations (Mulgan et al. 2007).

This means that the social innovation is socio-oriented in the case of its goals and tools (Hubert, 2010). According the topic it can be very complex, which is a consequence of the notion's complexity and the complexity of social problems.

According the literature can be made a statement, that there is no agreed-on definition for social innovation in the scientific literature and the policy because of the novelty of the notion. One part of the researchers emphasize the new or recent solutions for social challenges (e.g.: Ogburn, 1957 and 1964; Whyte, 1982; Zapf, 1989; Gillwald, 2000, Moulaert, 2013). Also popular item is that the basic aim of social innovation is to fulfil social needs, and create better availability of resources and capabilities (e.g.: Salamon, 2014; Harris, 2009; Albury, 2009; Gerometta, 2005; Haussermann, 2005; Moulaert, 2005; Longo, 2005; Mulgan, 2010; SI-DRIVE; OECD LEED Forum; Stanford Social Innovation Review; BEPA – Bureau of European Policy Advisers). Other category of definitions emphasize the social justice (e.g.: Salamon, 2010; Stanford Social Innovation Review) or the service of public well-being (e.g.: Harris, 2009; Albury, 2009; BEPA).

Other definitions concentrate on the changes happening in social relations (e.g.: Gerometta, 2005; Haussermann, 2005; Moulaert, 2005; Longo, 2005); and on the improvement of local-regional social communities' participation (e.g.: Nicholls, 2012; Murdock, 2012; Westley, 2008; Moulaert, 2013; OECD LEED Forum; BEPA).

2. ACTUALITY OF SOCIAL INNOVATION

In the literature generally there is an agreement in the fact that the social innovation has got increasing importance in the scientific life and the empirics in the entire world. The results of social innovation are around us also in the case when we do not analyze it (e.g.: in the form of self-helping groups, phone helplines, community gardens, etc.). The social innovation deals with the fact how the society's capacities can be improved to solve their problems.

There is also agreed, that the development of social innovation is an urgent task, because there is an increasing gap between the society's challenges and the supply of good

solutions. The new methods enforcing social innovation are in every sector relevant. The innovation could bring significant benefits in the areas where there are increasing number of challenges (e.g.: climate change, dispersion of mental problems), or in the areas where the existing models are unsuccessful (e.g.: institutional systems, decision making mechanisms, social cohesion, participation), and in the areas where the new opportunities are not yet utilized totally (e.g.: info communication technologies, open source codes).

In the past the aging of society, migration, social segregation or the sustainability were problems which determined the behavior of economic actors. Nowadays new approaches are arising from the non-profit models of public and private sector to solve social problems. There are several processes (which are weakening social cohesion) underlying social innovation from the side of the policy. These are the following:

- demography: aging and migration;
- environmental tasks: climate change, energy security;
- info communication technologies and community solutions;
- social challenges: poverty, social exclusion, child starvation, homeless task;
- health care inequalities, well-being, problems of supply side;
- ethical products and services: local production and fair trade.

Beside the former engineering and natural science dominated innovations there is an increasing need for the extension of innovative areas. There is a trend change which has got two causes. First there was a shift in the economy as a consequence of the transition from the industrial to the knowledge and service-oriented society. Second natural need of the peripheral settlements and communities is the catch up to which the local ideas and novel initiatives can significantly contribute. In the Carpathian basin this kind of innovation can contribute to the well-being and life quality of people living in the from social and economic aspect underdeveloped peripheral settlements; and in this area the significance of innovation can be found in the opportunity for improving this relatively underdeveloped situation. Social innovation can contribute to the population retention, to the strengthening of local communities, and can create such innovative initiatives which can create new workplaces and services.

3. MEASUREMENT MODEL OF THE UNIVERSITY OF MISKOLC

The University of Miskolc in his researches has tried to substitute the shortcomings in the research and analysis of social innovation in the following steps:

- defining the determining input and output factors of social innovation, and also the direct and indirect relations existing among them;
- examining the measurability of indicators;
- measuring the social innovation potential of a given settlement or region, and examining the spatial and timely comparability of results. This has got a connection to the macro social, and micro level (company or institutional level, e.g.: self-

governments) innovation, so the co-innovation is an analyzed area (Child et al. 1987; Lewin et al. 1999).

The possible input indicators are relating to the institutional system, to location factors, to human conditions and communities, and to the activity of the settlement. The given factors and applied indicators are the following:

- institutional system: number of NGOs, number of cooperating partners;
- location factors: density of enterprises, number of NGOs;
- human conditions: age structure, activity rate, educational attainment;
- activity: application activity, social activity.

They described four output indicator group in the model (economic, cultural, social, health):

- economic: number of gained applications (pc/year), size of sources (Ft/year), number of local products, number of social cooperatives, size of public employment;
- cultural: number of traditional events, number of traditional organizations;
- social: segregation, people living under segregation, number of persons in social care, unemployment rate;
- health: persons in chronic illnesses, number of addicted.

The impact factors and indicators are the following:

- social conditions: income situation, life expectancy by birth, educational attainment;
- family situation: number of singles, number of big families;
- security: number of crimes, and their evaluation;
- social infrastructure;
- living conditions: poverty index;
- environmental conditions: ecological footprint.

The potential can be computed also for the settlements level, but it was more important to make rankings, and creating clusters from the settlements and visualize results.

With the help of the model the innovation potential of regions can be defined, which helps to planning the local and regional interventions; and also the potential indices can be compared with each other which give an opportunity for benchmarking.

But the opportunity of uniformization should be examined.

4. SUMMARY OF REGIONAL DEVELOPMENT PROGRAM RELATED TO THE MODEL

The measurement method elaborated by the University of Miskolc fits together with a further development program, which has got three separate areas: 1. research; 2. education; 3. development. The goal of the below mentioned intervention structure (Figure 1) is the creation of an innovation environment in the Carpathian basin, which building on the local resources and reacting on social challenges contributes to the strengthening of social cohesion through the improving of employment and population retention. The catch up (development of regional intellectual and management capacity, decreasing social and territorial inequalities) is horizontal principle of the Carpathian basin territorial development program.

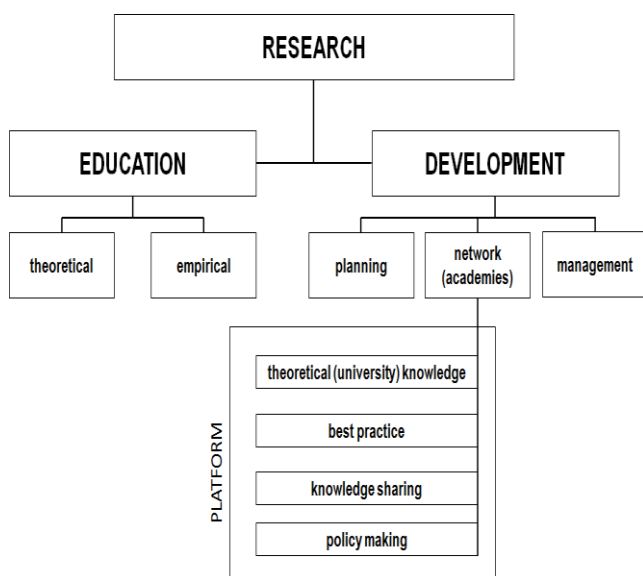


Figure 1: Intervention structure of territorial development program related to the measurement model of the University of Miskolc

Source: own compilation

The first intervention of the program is related to the research activity, scientific analysis and evaluation process. The knowledge creating through the actions of research improves the results also in the other two factors. To the education factor belong different trainings with theoretical or empirical orientation. The development factor contains the network created for territorial development (system of territorial innovation academies), and also the planning, and implementation management system. The successful planning and management requires such a partner network among the system of territorial innovation academies which integrates best practices, theoretical (university) knowledge, system of knowledge sharing, and policy making. The network functions as a network for the mentioned four elements.

4.1. Research

The first step of the territorial development program's implementation is a research focusing on social innovation. The main goal of its actions is to elaborate a research methodology and an intellectual knowledge based on theoretical and empirical analysis, which can help in the education (competence development) and in the territorial developments (needed networks, creating the intellectual capital of planning and management). The scientific coordinator and main actor will be the University which will guide the research in cooperation with other higher education and research organizations from the Carpathian basin.

The research field of the program contains the following parts:

- creation of concrete, uniform measurement model (including the development of indicators and dimensions) to understand social innovation, and to examine the innovation environment and its changes in a complex way;
- evaluation of the social innovation trainings' theoretical background;

- research of social innovation from the aspect of territorial development;
- development of social innovation's research methodology;
- guiding research exchange programs.

4.2. Education

The educational actions are building on the results of research from the above mentioned interventions. The territorial development supporting education structure can be created based on the scientific results. The goal of the intervention is to secure professionals who have the theoretical and empirical knowledge of social innovation, have the adequate competences and capabilities and can manage the territorial plans effectively. As a result of education component they can contribute to the concrete development activity. Mainly the management competences will be improving. The target group is on the one hand the social and economic actors already acting in the area and on the other hand the students of higher education, who are the future's human capital. The education factor has got two separate elements which have different aspects, but are potentially connectible: theoretical and empirical education component. The pre-requisite of education is the subject and curriculum development.

The empirical types of education can be:

- short, intensive courses (e.g.: social entrepreneurship, fundraising, spatial planning and project management);
- field trip;
- study trip;
- student projects involving the territorial higher education and corporate sphere;
- Creative Summer University;
- students' applications, innovation competitions;
- start-up accelerator programs.

The theoretical types of education can be:

- elective subjects (special courses) in the supply of higher education;
- starting independent BSc or Master course;
- post-gradual education (management education).

4.3. Development

The development actions have got three main bases: professional network, planning and management. In the program there will be created a professional network in the Carpathian basin. Its coordination points are the territorial social innovation academies, which can organize the development of innovation environment of a given area. The territorial plans are elaborated by the professionals acting in the area of academies.

5. CONCLUSION

In the case of the peripheral regions the social innovation can be a good solution for enhancing the economic performance of the territories. It is also observable in the recent planning period (2014-2020) of the European Union which pays significant attention among its priorities for supporting social innovation. In this recent research the authors analyse the role of social innovation and its possibilities in the case of the peripheral regions, hence they think that the catch up of peripheries cannot be a reality without significant innovation

absorption capacity. They also build up a model for the Carpathian basin which can contribute to the social innovation improvement. This model has got three separate parts which can enhance the development in a complex manner.

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