

BALANCED DEVELOPMENT OF REGIONAL ECONOMIC SYSTEMS ON THE BASIS OF SMART SPECIALIZATION: EUROPEAN EXPERIENCE AND OPPORTUNITIES FOR UKRAINE

Olena Panukhnyk¹, Hryhoriy Khymych², Yana Fedotova³

¹Ternopil Ivan Puluj National Technical University, Ternopil, Ukraine, panukhnyk@gmail.com

²Ternopil Ivan Puluj National Technical University, Corporation “Science Park “Innovation-Investment Cluster of the Ternopil Region”, Ternopil, Ukraine, sciencepark.t@gmail.com

³Military Institute of Taras Shevchenko National University of Kyiv, Kyiv, Ukraine, fed.yana25@gmail.com

Abstract

In the conditions of increasing integration processes, significant changes are taking place at the regional level of administration in Ukraine. Concession of greater autonomy to the regions, delegation of appropriate authorities concerning organization of the process of socio-economic development increases the complexity of managing regional economic systems. The state has transferred the powers and considerable resources in the sphere of regional development to the regional authorities. It requires the use of modern methods of regional administration that would meet not only a new status of regional economic systems, but also the environmental conditions characterized by a high level of instability. Smart specialization is a new tool of the European Union, which can help Ukraine to build up regional capability, taking into account two important approaches: local conditions and the knowledge economy. These approaches envisage identifying the competitive advantages and assets of the region, use of its innovation and scientific potential. The key to success of launching smart specialization strategy in Ukraine is real cooperation of the local authorities, the scientific community, the civil society and business, which will help Ukraine get an access to collaboration with European subregions, to increase the number of joint projects with the EU, to attract investors and to ensure “smart” use of manpower. System reformation of functioning regional economic systems of Ukraine, in the view of significant political and legal changes that have taken place in the country in recent years, becomes an area of special strategic importance at the national, regional and local levels and requires comprehensive scientific research and substantiation. The *purpose* of the article is to consider modern strategic methods of planning and management of regional economic systems of Ukraine, which implement the function of strategic vision of their development, shape the innovation and investment attractiveness of individual territories, facilitate their conversion into economic and social benefits for the residents of the region. The *methodological* basis of the research is the fundamental principles of the theories of regional and local economic development and administration, scientific elaborations of foreign scientists and the works of national researchers, which relate to the problems of regional development management. The article uses general scientific and special methods of research, in particular, logical, statistical that of system and comparative analysis and others. The *results* of the research are the presentation of the priority directions of regional and local policy, specific strategic goals and tasks (within the framework of implementation of the regional strategy) concerning development of types of economic activity which have an innovation potential, taking into account the competitive advantages of the region (community), which contribute to the transformation of economic sectors into more efficient ones. The value of the obtained results is that the considered approaches to the use of regional smart specialization as a modern effective tool to build up the regional capacity of Ukraine, are brought to the level of methodical and practical recommendations and can be used in the context of increasing innovation and investment attractiveness of individual regional economic systems, which will enable them to be converted into economic and social benefits for the residents of these territories.

Keywords: regional economic systems, strategic planning, smart specialization, local economy of knowledge and innovation, cooperation of the government, business, science and community.

INTRODUCTION

The modern world is developing according to the principles of introduction of new technologies, urbanization and relocation of labor resources, increasing the share

of public funds available on competitive terms and reducing the share of taxes from large companies through optimization of their taxes, increasing competition between regions and communities for the resources.

In the conditions of increasing integration processes, significant changes are taking place at the regional level of administration in Ukraine. Concession of greater autonomy to the regions, delegation of appropriate powers concerning organization of the process of socio-economic development increases the complexity of managing regional economic systems. The state has transferred the powers and considerable resources in the sphere of regional development to the regional authorities. It requires the formation of regional administration methods that would meet not only a new status of regional economic systems, but also the environmental conditions characterized by a high level of instability. Therefore, the new status of regions determines the need to develop strategic management and planning methods, which realize the function of strategic vision of their development.

RESEARCH RESULTS AND DISCUSSION

According to the national normative documents, smart specialization is an approach that envisages well-reasoned definition of individual strategic goals and tasks within the framework of regional strategy of development of the economic activities which have innovation potential, taking into account the competitive advantages of the region (community), and which promote transformation of the economic sectors into more efficient ones [1; 2].

The main characteristics of smart specialization as a strategic planning approach are shown in Figure 1.

In general, there are two terms used in the scientific literature for concept: “smart specialization strategy” (abbreviated – S3) or “research and innovation strategies for smart specialization” (abbreviated – RIS3).

RIS3 in the EU are plans developed at the regional and national levels that define the priorities for the development of regions and individual territories in research and innovation spheres, as well as those sectors of the economy which may become the most promising in the future.

The purpose of RIS3 development is to concentrate funds for research and development.

The concept of RIS3 is relatively new – it originated approximately in 2008-2009. Its popularity in Europe is due to the adoption of Regulation No. 1303/2013 by the European Parliament and the EU Council, that has made the development of RIS3 to be a pre-requisite for countries which wish to obtain means for research and innovation from the EU Structural Funds.

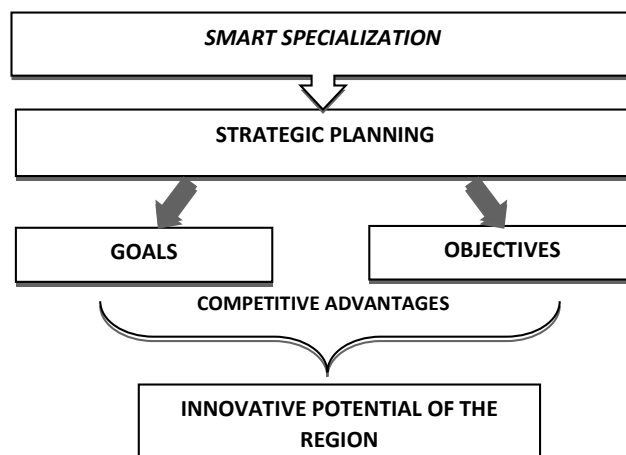


Figure 1. Smart specialization as a strategic planning approach

Source: [3]

In total, 120 smart specialization strategies have been developed at the regional and national levels in the European Union countries. These activities have attracted EUR 67 billion and created 350,000 jobs. This approach is already being implemented in more than 10 countries. As a result, for example, in Poland, 16 regional strategies, one national one, including 20 priority areas, have rapidly emerged.

In Ukraine, this approach is currently being tested only in the form of pilot projects in some selected areas.

The logic of the EU was not to copy other regions, but to determine the amount of support for the whole region, not just for a few parts of it. But instead of one specialization of the region, as it was initially foreseen by the European Commission, the regions identified much more priority areas for investment. That helped to avoid duplication.

Therefore, RIS3 is a strategic approach to innovation development in regions, aimed at avoiding duplication of competencies and fragmentation of means for their support. The main result should be to increase the innovation and investment attractiveness of individual territories that will make it possible to convert it into economic and social benefits for the inhabitants of the region.

The distinct features of these integrated economic transformation programs are that they:

- are knowledge-based;
- create competitive advantages;
- support innovation and stimulate investment;
- involve stakeholders in the implementation processes;
- are reasoned and have substantiated monitoring and evaluation systems.

Requirements for Formation of RIS3 Priorities:

- concordance with priorities of the national level and avoidance of duplication;
- development of complementary specializations;

- involvement of a wide range of participants in the process;
- interdisciplinarity (unique competences of regions must be on the verge of the branches, be superposed with new scientific spheres in which the region is the leader);
- focus on solving a number of social problems facing the region;
- use of broad boundaries not only for stimulating innovation but also for structural changes in the regional economy.

A four-dimensional partnership spiral should be formed in the process of RIS3 development, which must involve 4 parties: government, business, science and public.

Priority areas for smart specialization application are power engineering, healthcare, culture and creative industries, services, leading manufacturing systems, tourism, development of rural territories, food industry, security and others.

In addition, smart specializations can serve as tools to level the global challenges facing countries and regions, among which there can be demographic decline and urbanization, increasing competition among regions of the world, increasing role of digital technologies and shifting quality jobs in manufacturing and marketing into the digital realm, unwillingness of investors to invest in certain industries, etc.

The sources of funding RIS3 may be:

- state budget of a country;
- regional budgets;
- co-financing from local budgets;
- co-financing by private project promoters;
- EU structural funds;
- EU specific programs, for example HORIZON 2020, COSME.

It is interesting to consider the experience of Poland, which, after joining the EU, has achieved a considerable progress in applying a new approach to development planning.

First of all, it should be noted that the strategies are coordinated at the national level (NUTS1), although at the voivodship level (NUTS2) there is a direct relationship with relevant EU programs.

Like any new activity, Smart Specialization Strategies in Poland are characterized by both positive aspects and problematic areas, which are shown in Table 1.

Taking into consideration both positive and negative Polish experience, it can be prognosticated that the effectiveness of RIS3 in Ukraine will depend on a number of factors, in particular:

- introducing the selection of the most creative and promising entrepreneurs, together with whom strategic problems of the region can be later analyzed;
- the level of communication between the European Commission and regional administrations;
- use of motivational tools for entrepreneurs who are actively involved in search and identification of smart specializations;

–introduction of a constant cooperation of “business-power-science-public” and not only at the moment of strategy development;

Table 1. Positive and problematic aspects of Smart Specialization Strategy in Poland

POLAND	
Development planning based on application of Smart Specialization Strategies	
positive aspects:	problematic aspects:
<ul style="list-style-type: none"> – the government-business-science-public cooperation forms the basis of the process; – embodiment of subjects of both national and local scales into the process; – changing the approaches of entrepreneurs to the vision of the innovation component of their enterprises activities; – real impact of smart specializations on the development of regions (for example, the “Informatics and Telecommunications” direction in the Subcarpathian Voivodeship showed significant growth, having taken the 2nd place in the EU after Lisbon); – achievement of the goal of prioritizing development spheres and logical argumentation of expenditures (it is considered that many funds were used inefficiently before 2014 despite the fact that Poland received the biggest assistance from European funds compared to other countries that joined the EU after 2004); – active participation in the process of cluster representatives - the main drivers of changes in the innovation economy. 	<ul style="list-style-type: none"> – at the national level, the list of smart specializations includes almost all sectors of economy, which causes dissipation of resources and complicates the choice of development priorities; – involvement of experts at the national level on a volunteer basis, which does not facilitate their full involvement in the process; – dissatisfaction of entrepreneurs with the constraints of the European Commission, which insists on exclusive funding of only researches and innovations, leaving without support clusters which are the locomotive of smart specializations; – the public and youth are not involved in the process of small business; – imperfection of the project evaluation system (projects, similar in their essence, were funded in some regions and rejected in others); – over-focus on RIS3 has led to some deviation from advancement towards the strategic vision of regions – such support is envisaged in regional and national strategies, but it is hardly noticeable in regional programs; – the procedure for changing smart specializations and rejection of those which have not shown significant progress in the development is not fully understood; – despite the postulate tenet of support to researches and innovations, the EU gives preferences in financing standard, less-risk and less complicated ideas which are easier to be implemented and monitored.

Source: developed on the basis of [3]

–development of a mechanism for updating, modifying and introducing new spheres to RIS3;

- stimulation of cooperation of the regions similar in the structure of economy, while identifying smart specializations;
- formation of effective monitoring mechanisms at regional and national levels.

The main question for Ukraine is how to use the obtained European experience in the complicated realities of the present days, when, in most cases, smart specializations are not determined on the terms of getting funding from definite programs. The most important items are:

- to try to apply the “entrepreneurial discovery” approach in order to maximize the involvement of entrepreneurs from promising areas, including those that are partially “in the shadow”;
- to promote the creation of effective government-business-science-public communication platforms;
- to adopt the idea of prioritizing expenditures to support the development of innovations and researches;
- to provide funding the best ideas that can be included in the operational plans of new regional strategies for 2021-2027.

The Association Agreement of Ukraine with the EU envisages that by the end of 2025 Ukraine should approximate its legislation as much as possible to the EU legislation and implement the provisions of about 350 EU directives, regulations and decisions into the national legislation.

One of such changes is the introduction of smart specialization into the strategic planning system for regional development, which has already been defined by the relevant normative legal framework. The decision-making process on smart specialization in regional economic systems is shown in Figure 2.

It is considered that at least one strategic objective of the regional strategy should be defined on the basis of smart specialization and aimed at innovation development of a limited number of economic activities of the region. The selection of such priorities should take into account the world market and technological trends of innovation development and facilitate the search for those areas of economic activity that are competitive at the national and international levels [4; 5].

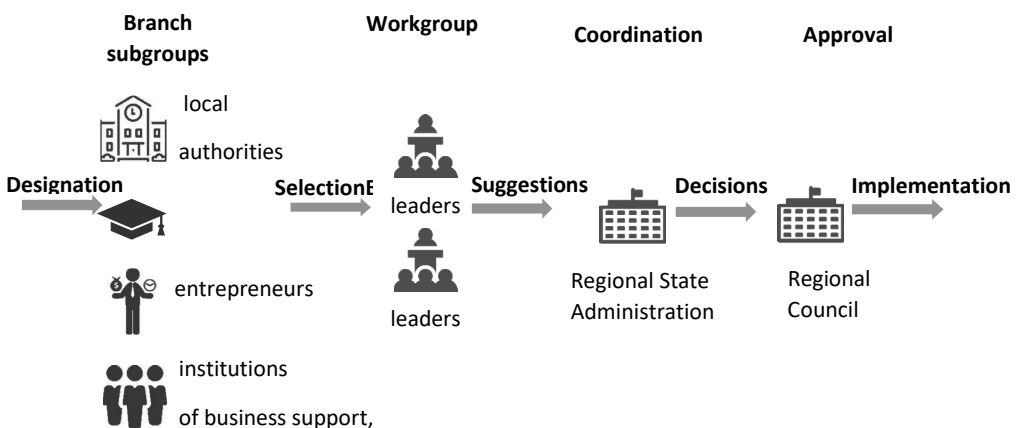


Figure 2. The decision-making process on smart specialization in regional economic systems

Source: [3]

Thus, smart specialization or smart decentralization is a new tool of regional policy for Ukraine, which envisages development of local knowledge economies and innovations, with further competition between them.

Its main peculiarity is formation of strategies from below in close collaboration and cooperation of the authorities, business, science and community which share the vision of economic, innovation and scientific potential of the region.

In our opinion, the first steps to develop regional smart specialization strategies should include: analysis of the regional context and potential for innovations; application of a reliable and inclusive administration structure; development of common vision for the future of the region; selection of a limited number of regional development priorities; creation of the appropriate policy combination, and integration of monitoring and evaluation mechanisms. Funding sources should include national and regional budgets, co-financing from local budgets, private project promoters, structural funds and EU special programs.

The project cycle of implementation of smart specialization strategies in regional economic systems is shown in Figure 3.

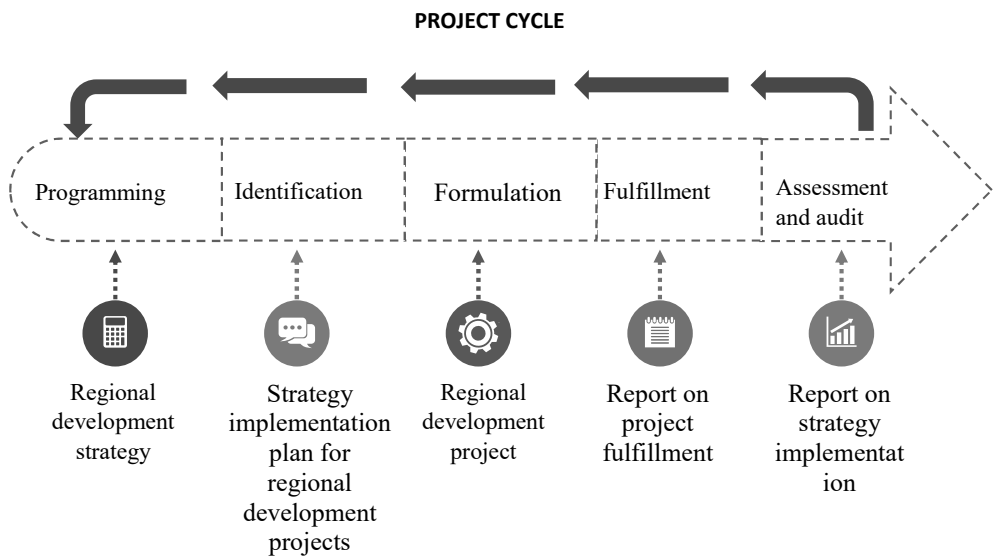


Figure 3. Project cycle of implementation of smart specialization strategies in regional economic systems

Source: [3]

It is very important to develop an administration system in regions as well as in individual communities with maximum involvement of the public in decision-making. It is not only public discussions, it is an opportunity to include topical suggestions, advice of the external expert environment in the community development strategy. After all, the key principles for building up smart specialization strategies are trust, communication and collaboration among regional stakeholders.

CONCLUSION

If Ukraine is determined to integrate economically with the EU common market and join the global added value chains, the task of implementing the idea of regional smart specialization is one of the key priorities.

REFERENCE

1. On approval of the Procedure for elaboration of regional development strategies and plans of actions for their implementation, as well as monitoring and evaluation of the effectiveness of the implementation of these regional strategies and plans of actions. Decision of the Cabinet of Ministers of Ukraine No. 932 of 11.11.2015 [Online]. – Available at: <https://zakon.rada.gov.ua/laws/show/932-2015-п>
2. On Amendments to the procedures approved by the decisions of the cabinet of ministers of Ukraine of November 11, 2015, Nos. 931 and 932. Decision of the Cabinet of Ministers of Ukraine of 14.11.2018 [Online]. – Available at: <http://ufuti.pro/strategies/339-smartspetsializatsiia-dlia-stratehii-rehionalnoho-rozvytku-v-ukraini.html>
3. Starikov Gregory (2019). Smart specialization for regional development strategies in Ukraine. Ukrainian Future Initiative Media Platform [Online]. – Available at: <http://ufuti.pro/strategies/339-smartspetsializatsiia-dlia-stratehii-rehionalnoho-rozvytku-v-ukraini.html>
4. EUROPE 2020. A strategy for smart, sustainable and inclusive growth [Online]. – Available at: https://ec.europa.eu/eip/ageing/library/europe-2020-strategy-smart-sustainableand-inclusive-growth_en
5. Entrepreneurial discovery process (EDP) cycle: Smart Specialisation Platform. [Online]. – Available at: <http://s3platform.jrc.ec.europa.eu/entrepreneurial-discoveryprocess-cycle>
6. Foray D. (2015). Smart specialisation: opportunities and challenges for regional innovation policy. Abingdon: Routledge [Online]. – Available at: <https://www.routledge.com/SmartSpecialisation-Opportunities-and-Challenges-for-RegionalInnovation/Foray/p/book/9781138776722>