



Smart regions

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Smart Regions

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Valentina Ivanic PhD



EDITOR'S NOTE

Valentina Ivanic PhD, Coordinator of the Working Group of the National Convention on the European Union (NCEU) for Chapter 22: Regional Policy and Coordination of Structural Instruments

The magazine “Smart Regions” is the result of a dialogue led within Cluster 5: Resources, Agriculture, and Cohesion, within the framework of the NCEU. The European Movement in Serbia (EMinS) is responsible for Cluster 5 within the NCEU.

The first issue of the “Smart Regions” magazine is dedicated to topics covered by one of the chapters within Cluster 5, Chapter 22: Regional Policy and Coordination of Structural Instruments.

The purpose of the “Smart Regions” magazine is to serve as a platform for dialogue, based on comprehensive partnerships and cooperation between decision-makers, business representatives, members of the scientific community, and civil society focused on improving the competitiveness of regions in Serbia.

The first issue of the “Smart Regions” magazine will inform readers about the negotiation process within Chapter 22 and to create conditions for a knowledge based regional development in Serbia.

The magazine follows a scheme where each regional development policy bases on axes metaphorically titled: hardware, software, orgware, and mindware.

The **software axis** refers to the country's or region's ability to develop and implement comprehensive strategies and regional development policies, while the **orgware axis** relates to enhancing organizational and institutional capacities for the preparation, implementation, and evaluation of regional strategies and policies.

Regarding the **software axis**, the “Smart Regions” magazine highlights the activities and results of the Ministry of European Integration regarding the work on the initial draft text of the Law on the Establishment of a Cohesion Policy Management System, the Ministry of Science, Technological Development and Innovation, and activities related to the Smart Specialization Strategy for Serbia. It also covers the activities of the Office of the Minister for Balanced Regional Development regarding the Regional Growth Incentive Program for 2023.

The development of **organizational and institutional capacities** for the preparation, implementation, and improvement of strategies, both at the national and regional levels in Serbia, is achieved through cooperation with the actors in the EU accession process. Thus, Gilles Kittel from the Directorate-General for Regional and Urban Policy (DG REGIO) suggests how, once an EU Member State, Serbia can avoid “absorption shock” and use structural funds. Nikola



Bertolini from the EU Delegation to Serbia emphasizes the importance of the smart specialization strategy adopted by Serbia as an opportunity for integrated territorial development. Nikola Radovanovic from the Joint Research Centre points out how some regions of a non-EU country can start developing a smart specialization strategy. Adrian Solomon from the European Centre for Innovation and Development highlights the EIT's interest in investing in smart specialization strategies in Serbia, covering the manufacturing sector. Siniša Marčić from the Regional Cooperation Council suggests a roadmap leading from a regional innovation ecosystem in the Western Balkans to a Common Regional Market.

The question “**Regional Development and Regional Policy for whom?**” is answered by Branislav Djurdjev, who analyzes the results of the 2022 Census, and by Nenad Jevtic, whose Institute for Development and Innovation states that there are no domestic statistics on emigration from Serbia. They estimate that the annual emigration from Serbia is equivalent to a city the size of Bor, and the costs of emigration is approximately three billion euros. Professor Milica Uvalic answers the question “What industrial and economic policy measures are needed for Serbia to stimulate balanced regional development?”. Prof. Slavo Radošević explains the concept of smart specialization, stating that we are truly smart only when we all sit at the same table and acknowledge that each of us individually “know that they know nothing,” and that the topic of smart specialization is too important to be left to others.

Mindware is the axis inherent in all regional development policies and concerns the behavior of regional development actors. It relates to our mentality and behavior, as well as the way we understand the need for development in the environment in which we live. Thus, the region of Šumadija and Western Serbia demonstrates exceptional proactivity. It can attract all those who wish to engage in the development and application of artificial intelligence, thereby contributing to the planning and management of regional development based on artificial intelligence, according to Nenad Filipović, the Rector of the University of Kragujevac.

Branislav Vujović, the President of the New Frontier Group company, writes about the need for a digital mindset in order to understand “Who is driving over there?”

Nenad Popović, President of the Steering Committee of SARRA, points out that in the absence of institutional gaps at the regional level, regional development agencies are becoming increasingly important factors of integration between institutions at the national and local levels.

Lastly, Serbia is on the path to becoming a society of organic solidarity, as indicated by Nebojša Bjelotomić, Director of the Digital Serbia Initiative.

Jovana Kalenčević





NCEU:

**From a Knowledge-Based Economy to a
Knowledge-Based Society?**

Bojana Selaković, Coordinator of the National Convention on the European Union (NCEU)

“Nothing is created without people, nothing lasts without institutions.”

Jean Monnet

We are pleased to present a magazine dedicated to regional politics and regional development. The magazine is a part of the publishing activities of the NCEU.

Preparation of the magazine is part of the activities of the Working Group (WG) for Chapter 22: Regional Policy and Coordination of Structural Instruments, coordinated by the European Movement in Serbia (EMinS). This WG operates within Cluster 5: Resources, Agriculture, and Cohesion.

Accession of Serbia to the European Union (EU) is an ongoing process that emphasizes existing regional inequalities. Furthermore, the process contributes to the creation of new ones. These were the sources of inspiration for the creation of the magazine before you. Regional inequalities have been a burning issue for Serbia which gained particular importance for the long term development of the country in the context of European integration.

It has been more than ten years since Serbia obtained the status of a candidate country for membership in the EU. However, as of 2023, Serbia has not yet become a full member, while the path to membership remains long and demanding. Nevertheless, this does not stop our institutions, businesses, citizens, and us, representatives of civil society organizations, to learn from the best European examples and to implement successful practices. Regardless of the EU accession process, one of the most important legacies we should leave to future generations is a developed economy based on knowledge and Serbia's potential.

The NCEU, as the largest organized supporter of Serbia's accession to the EU, gathers more than 800 members from across the country. On average, two out of three NCEU members come from Belgrade. Even the regional representation of NCEU members shows that major centers of economic activity, such as Belgrade or Novi Sad, have an advantage over the rest of Serbia. In the coming period, we will strive to reverse this trend and reach out to more civil society organizations outside of Belgrade. The citizens tend to perceive the EU integration process as centralized and a matter of “high” bureaucracy, even though it is the local communities that should benefit the most from Serbia's membership in the EU.

By monitoring Serbia's EU accession process, advocating for sustainable solutions, and insisting on laws that

reflect European practices but also fully align with national issues and interests, we have sought to contribute to the development of the entire society. In this regard, our goal is to strengthen the presence of the NCEU at the regional and local levels, as there can be no progress on the European path without stable and functional regions.

Why smart regions?

Why smart specialization?

The lack of a defined regional development policy has resulted in Serbia falling behind in keeping up with modern concepts in regional development. The basis of regional development is the intelligence of the people living in those regions, science, and knowledge. That is why we have devoted our attention to smart specialization. Smart specialization is a level playing field where we can “practice” our future membership in the EU. At the same time, thanks to smart specialization, we can identify and support regions in Serbia to leverage their untapped potential. Serbia has a Smart Specialization Strategy for the period 2020-2027. However, for such an overarching strategy to fulfill its utmost potential, a country must have a set of regional strategies for each region. Regional strategies are the ones that influence the transformation of the regional economy, strengthen competitiveness, and stimulate innovation. In Serbia, not all regions have a dedicated regional strategy.

Therefore, as in the past, NCEU will continue to systematically and continuously support all development policies that help make the domestic economy a knowledge-based economy and ensure that the European integration process contributes to the fundamental transformation of our society.

The NCEU has institutionalized the debate on Serbia's European future among all key stakeholders. This position gives us an increasingly active role in advocating for knowledge-based regional development policies and partnerships by involving citizens in their creation.

The magazine aims to inform decision-makers, experts, businesses, civil society, and donors about the costs and benefits of Serbia's membership in the EU. Within these pages, you will find a range of articles addressing some of the following issues: how to steer Serbia's accession process to the EU toward achieving the greatest benefit for the citizens; which practices tested in the EU apply to the domestic economy; what smart specialization is and why it is one of the possibilities for revitalizing underdeveloped and devastated regions in Serbia; how institutions perceive the present and future of the domestic economy, as well as a series of other relevant questions.

A portrait of Jelica Minić PhD, a woman with short brown hair and glasses, wearing a dark blue top and pearl earrings. A decorative brooch is pinned to her top on the right side. The background is dark and out of focus.

EMinS in the Role of Fourth Helix

*Jelica Minić PhD, Coordinator of Cluster 5:
Resources, Agriculture, and Cohesion, European
Movement in Serbia (EMinS)*

The European Movement in Serbia (EMinS) is one of the oldest non-governmental organizations in Serbia, existing for thirty years. It has facilitated the establishment of numerous non-governmental organizations, such as the Association of Businesswomen, Victimology Society, Generation 21, Quality of Life Association, Transparency Serbia, National Convention on the European Union (NCEU), Coalition for the Development of Social Economy, Association of Economists Engaged in Regional Development, and others. In its early stages, EMinS assisted in the establishment of the Union of Employers of Serbia and had close cooperation with the Chamber of Commerce and Industry of Serbia. This cooperation, along with the direct support of the business community since its inception, marked the existence of shared interests in aspirations and the EU accession process.

Within the NCEU, EMinS is responsible for coordinating activities within Cluster 5: Resources, Agriculture, and Cohesion. Through years of coordination of the Working groups related to Chapter 11 - Agriculture and Rural Development, Chapter 12 - Food Safety, Veterinary and Phytosanitary Policy, Chapter 13 - Fisheries, Chapter 22 - Regional Policy and Coordination of Structural Instruments, and Chapter 33 - Financial and Budgetary Provisions (i.e. Chapters belonging to Cluster 5), EMinS has reaffirmed its strategic orientation towards local development. As a result, 14 local councils have been established throughout Serbia, whereas approximately half of them are very active.

The work within Cluster 5 is conducted interactively, with close cooperation among all coordinators, exchange of information, and mutual support. This enables the emergence of new initiatives in working methods and an innovative approach, as evidenced in the development of the concept of the magazine "Smart Regions."

The first issue of the magazine "Smart Regions" is dedicated to Chapter 22: Regional Policy and Coordination of Structural Instruments. The contributions received once again confirm that, in addition to the state administration, academic community, and business circles, the role of the civil sector in creating conditions for the development of "smart regions" based on smart specialization is highly significant. Its anticipation power and avant-garde role in certain cases accelerate the process of smart specialization and the faster integration of all necessary actors.

The significant regional disparities in Serbia and growing inequalities have become not only economic and social but also security issues that require dedicated engagement. This is evidenced by the full commitment of



EMinS to Cluster 5 and Chapter 22, as one of the most important EU policies that have so far attracted the largest Union budget funds.

Since EMinS has a highly influential Forum for International Relations and fostering good neighborly relations is one of the organization's priorities, this orientation is constantly reaffirmed through numerous projects with partners from across the Western Balkans and contributes to creating a favorable climate for cross-border cooperation.

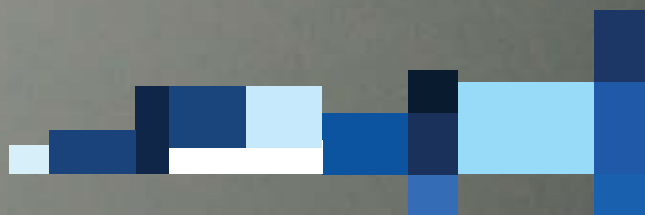
The essence is networking that bridges sectors, boundaries, partial interests, and limited capacities. When the process of identifying the main directions and actors of smart specialization at the regional, city, and village levels is encouraged and initiated, it unleashes energy within society that can significantly accelerate overcoming the development gap. Moreover, it can effectively utilize complementary drivers from the international environment, where a significant portion of domestic science, expertise, and entrepreneurial capacities are currently located. Many countries have successfully utilized this resource, and Serbia can take inspiration from the already proven success stories of the role of diaspora in building knowledge societies in their home countries.

Completing Installation



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SOFT WARE





Accelerated Work on the Law on the Establishment of a Cohesion Policy Management System

Professor Tanja Mišćević, Minister of the European Integration, Government of the Republic of Serbia

K Which activities will the Ministry of European Integration (MEI) undertake based on the recommendations given in the European Commission's Country Report on Serbia in 2022 regarding Chapter 22?

The European Commission's Report for 2022 provides us with a clear overview of the status and progress made in various areas, including preparations for the implementation of the EU's cohesion policy. We understood the recommendations and are taking steps to implement them in a timely manner.

We are working on the initial draft of the Law on the Establishment of a System for Managing the Cohesion Policy. Once the draft is finalized it will be reviewed by all members of the established working group. Following that, we will inform the broader public and experts about it. In cooperation with relevant ministries, we are preparing two multiannual operational programs—one to support the implementation of the Green Agenda and another to support the establishment of the Youth Guarantee and social inclusion. These programs should be submitted to the European Commission by mid-year. Through these documents, we will present priorities, expected outcomes, and the institutional mechanisms for their implementation, thus fulfilling another recommendation.

We are also paying significant attention to the recommendations regarding the preservation and further development of capacities and the retention policy. In cooperation with the National Academy of Public Administration and Regional development agencies (RDAs), we are conducting training programs related to IPA III and the EU's cohesion policy. Specifically, in partnership with the Ministry of Finance, we are exploring the best way to ensure the retention of key personnel. Experience from countries that have joined the EU showed that establishing a personnel retention system early on makes it easier to effectively absorb larger funds upon accession.

It is important to mention that consultations are underway to create an analytical basis for the preparation of a long-term development document—the National Development Plan—in accordance with the Law on the Planning System. This plan will serve as the foundation for an Investment Plan and the programming of development assistance received from the European Union and other development partners. In this regard, in cooperation with colleagues from the Ministry of Finance, we are working on further improving the investment planning system to identify a list of priority projects in different areas that will be financed from various sources.

How do you plan to involve stakeholders from the regional and local levels in the work of the Negotiating Team?

The negotiating structure for Cluster 5 has an established practice of involving the regional and local levels. We include representatives of the Autonomous Province of Vojvodina in the work of the negotiating groups as associate members. Similarly, prominent umbrella organizations such as the Standing Conference of Towns and Municipalities and the Serbian Association of Regional Development Agencies participate in the work of the negotiating groups.

In cooperation with relevant ministries, we are preparing two multiannual operational programs—one to support the implementation of the Green Agenda and another to support the establishment of the Youth Guarantee and social inclusion. These programs should be submitted to the European Commission by mid-year.

We have also started to develop capacity-building programs for these stakeholders in collaboration with the National Academy of Public Administration. The aim is to enhance their capacity to design and implement programs and projects that support regional and local policies with funding from the European Union, both during the pre-accession period and after acquiring member status.

In partnership with regional and local stakeholders, the Ministry of European Integration is also working to raise awareness among citizens about the benefits of the negotiation process, even before the actual membership in the EU. Citizens in all parts of the country should become aware of the opportunities for local development offered by the EU membership and what they can gain from active involvement in all related processes. Regional development agencies and local self-governments in Niš, Kragujevac, and Ruma encourage young people to identify opportunities and find their role in regional policy and EU structural instruments within a project implemented through bilateral development assistance from the Federal Republic of Germany.

The example of the Serbia-Hungary CBC program funded by IPA II showed that these funds did not impact the development of cross-border regions. How can the Ministry of European Integration (MEI) allow access to the databases on IPA I and II Cross-Border Cooperation (CBC) programs to calculate and monitor their effects on regional development, particularly in the border areas of Serbia?

Project descriptions, all annual reports on the implementation, and program evaluations are fully accessible to the public. Those are published on the websites of respective programs.

According to public opinion research we conduct, citizens notice that projects from the CBC programs bring significant benefits to the communities where implemented and improve the quality of life for hundreds of thousands of people throughout the country. However, their nature is such that they cannot significantly impact the economic development of a specific region. Why? Because of relatively limited funds, their purpose is not to bring about significant developmental changes. Their primary goal is the cooperation of civil society organizations and local governments from different countries to strengthen connections, improve cultural exchanges, and restore sports fields, hospitals, childcare facilities, gerontological centers, and tourism offerings. This form of cooperation motivates smaller organizations to meet partners from other countries operating in related fields, exchange experiences, learn from each other, and ultimately gain skills to develop and implement projects. They receive non-refundable funds for these purposes, and their own financial contribution to the projects is 15% of the total value. This type of funding often represents the only way for these organizations to meet some of their needs. Although these projects do not impact regional development significantly, we believe their value lies precisely in the benefits that smaller organizations can take advantage of, as well as in local projects that can benefit the residents of those areas.

The Hungary and Serbia CBC program support cross-border cooperation, primarily contributing to building mutual trust and initiating and deepening/widening existing connections. These projects provide a good foundation for future development, and nearly 90% of the stakeholders believe that they contribute primarily to building mutual trust across the border and expanding cross-border connections among organizations.

It is important to mention that consultations are underway to create an analytical basis for the preparation of a long-term development document—the National Development Plan—in accordance with the Law on the Planning System. This plan will serve as the foundation for an Investment Plan and the programming of development assistance received from the European Union and other development partners.

There are factors that affect the implementation and impact of the programs within Serbia-Hungary cooperation, such as the weak permeability of the border and long waiting times that hinder all types of cross-border cooperation. Therefore, legal and technical barriers stand in the way of initiating more cross-border and integrated projects and tools. Increased traffic in the last decade and restrictions related to the COVID-19 pandemic have negatively affected border crossings. On the other hand, the construction of new border crossings brought some positive changes. In addition, several significant projects funded by the CBC program between Hungary and Serbia have ensured further improvement of border crossings. There is a need for projects that reduce the negative effects of the external border to support connectivity and a more integrated border area. Within the cooperation program for the financial period 2021-2027, a strategically important project is planned to enhance the capacity of the Backi Breg-Hercegsanto border crossing, which is a continuation of a previously implemented project.

How does MEI coordinate the selection and prioritization of infrastructure projects supported by the EU and other sources of financing? How can the MEI influence the adoption of the Investment Plan of the Republic of Serbia?

The Ministry, acting as the NIPAC Technical Secretariat, has developed a system that supports the process of project selection and prioritization. The methodology for this task is one of the main elements, whereas the core of the methodology is the criteria used to assess and rank projects.



There are two main sets of criteria used for the assessment: relevance assessment criteria and maturity assessment criteria. The purpose of the relevant assessment criteria is to provide an adequate assessment and ranking of projects based on their level of significance and contribution to the implementation of defined sectoral strategies and plans. The starting point is the priorities defined in the national strategic framework and the priorities set out in documents resulting from the European integration process and strategic EU documents.

The second set of criteria aims to ensure an adequate assessment of maturity, i.e., project readiness for funding. This set plays a crucial role because the success of project implementation depends on its readiness. In this sense, conducting this assessment procedure not only allows for ranking based on the level of readiness but also identifies potential open issues, whether they relate to the previous preparation and adoption of certain planning and project documents essential for efficient project implementation. This methodological approach is based on the requirements prescribed by the relevant EU regulations in this field and serves as a preparation for what lies ahead. All infrastructure projects that have gone through this procedure and have been ranked based on these criteria become part of the Unified List of Priority Projects.

Since MEI also works on the preparation of documents defining the development goals and priorities for funding from the EU's Structural and Cohesion Funds, how does MEI influence the definition of Serbia's development goals?

When it comes to the role of the Ministry of European Integration in this process, one must consider its specificity within the public policy management system. The purpose of the Law on Planning system is to ensure consistency in the strategic and planning framework of the Republic of Serbia. However, Article 49 of the Law provides an exemption for planning and program documents created in the European integration process and the use of EU funds and development assistance. The reason is that those documents need to be in accordance with EU requirements. In line with this, Article 6 of the Law emphasizes that the development plan must consider the specificity of planning and programming EU funds. This enables us to ensure constant and timely alignment of the development plan with the requirements of the cohesion policy.

Regarding Smart specialization strategies at the NUTS 2 level, how can MEI cooperate with the Ministry of Science, Technological Development, and Innovation? Also, how can MEI contribute to creating conditions for activating the regional potentials and valorizing actors at the regional level?

We cooperate closely with colleagues from the Ministry of Science, Technological Development and Innovation in implementing the Smart Specialization Strategy by jointly directing pre-accession funds to priorities, specific objectives, and measures outlined in the Strategy. A good example is the ongoing investments in programs that develop the innovation ecosystem, such as the program for early development of innovative companies, the science-industry cooperation program, and the co-financing program for innovations. IPA funds supported the establishment of these programs. The IPA funds supported the development and improvement of the programs available to our innovative companies. It is similar to other programs of this kind, as well as significant support from IPA funds directed towards the field of science and research through the newly established Science Fund via the IPA 2019 program, amounting to 31.5 million euros. These funds have increased the Fund's capacity to support scientists and researchers and align its functioning model with similar institutions in the European Union.

When developing the Smart Specialization Strategy, Serbia relied upon the example of EU member states and according to a methodology previously agreed upon with European partners. This methodology included specific assessments conducted at the regional level, which involved analyses of socio-economic factors and identification of comparative advantages compared to the national level. In this way, the focus was on the development opportunities of regions in Serbia and local and regional actors who can contribute to smart development and better utilization of EU funds in the future.

The existence of this Strategy is a prerequisite set by the European Commission for each member state while at the same time allowing countries to decide on adopting individual strategies at the regional level or consider the interests of their regions within a comprehensive national strategy. The negotiation team within Chapter 22 will decide on the best approach until EU membership, considering the necessity of defining specific regional needs, the different actors present at the local and regional levels, and the future European funds available to Serbia.

We cooperate closely with colleagues from the Ministry of Science, Technological Development and Innovation in implementing the Smart Specialization Strategy by jointly directing pre-accession funds to priorities, specific objectives, and measures outlined in the Strategy. A good example is the ongoing investments in programs that develop the innovation ecosystem, such as the program for early development of innovative companies, the science-industry cooperation program, and the co-financing program for innovations.

What are the analytical needs of MEI that CSOs can address within the framework of the “quadruple helix” concept?

Following the completion of the screening process, the Ministry of European Integration initiated the definition of procedures to specify how negotiation groups can obtain additional expertise from partners outside the state administration system. It was crucial for us to identify external stakeholders and establish communication and collaboration channels to ensure that the analytical support provided to the negotiation process aligns with the needs. MEI established an Analytical Support Group to conduct market research, identify the best experts and consult the National Convention on the EU (NCEU). Our aim was to ensure cooperation with the top experts in specific fields, which undoubtedly exist within civil society, and to involve them in the analysis development if needed.



Smart Specialization Strategy in Serbia



Jelena Begović, Minister of Science, Technological Development and Innovation, , Government of the Republic of Serbia

Viktor Nedović, Director, Serbia Accelerating Innovation and Growth Entrepreneurship (SAIGE) Project

Jasna Mastilović, Scientific Advisor, BioSense Institute

Lazar Živković, Scientific Associate, Institute of Economic Sciences Belgrade

The concept of a knowledge-based economy, a newer growth theory model, indicates that knowledge is a crucial factor for economic growth. According to this theory, the foundations of knowledge-based socio-economic development consist of human capital, innovation, research and development, infrastructure development, and the ability of the economy to absorb and utilize new technologies. The Smart specialization strategy is vital in the transition towards a knowledge-based economy. The essence of the smart specialization strategy is to prioritize activities and resources in areas with the highest potential to contribute to knowledge-based development. By focusing investments and resources in areas where the state or region has competitive advantages, the Smart specialization process focuses on fields that have the potential to stimulate innovation, productivity, and competitiveness at the regional or national level.

In February 2020, the Government of the Republic of Serbia adopted the Smart Specialization Strategy from 2020 to 2027. The Joint Research Centre of the European Commission defined an official methodology for strategy preparation. This inclusive methodology involves a bottom-up approach, ensuring that priorities, objectives, and measures for their achievement rely on information, data, and experiences of the stakeholders such as academia, business, civil society, and the government. Through quantitative and qualitative analysis and a series of public-private dialogue workshops, the Smart specialization process in Serbia identified national priorities and defined important regional specificities, i.e., areas where each region has competitive advantages. Public-private dialogue workshops were organized throughout Serbia, including Kraljevo, Niš, Gornji Milanovac, Novi Sad, and Belgrade, with the aim of achieving equal coverage of all regions. The Smart Specialization Strategy in Serbia is an example of good practice in the Western Balkan region thanks to the implementation of all necessary steps in the preparation and implementation process.

The Smart Specialization Strategy in the Republic of Serbia has identified four vertical and two horizontal priority areas.

The vertical priorities are:

- Future Food
- Information and Communication Technologies
- Creative Industries
- Machines and Future Production Processes

The horizontal priorities which intertwine across all socio-economic development areas are:

- key new technologies and
- energy-efficient and eco-smart solutions

Unlike most EU countries (except for Croatia, Slovenia, Lithuania, Latvia, and Estonia, where the Smart specialization process is organized at the regional level), the Republic of Serbia adopted the strategy at the national level, considering and highlighting regional specificities in the final strategic document. This setup is justified considering that the implementation of the Smart Specialization Strategy in EU regions relies on significant structural funds, while in Serbia, the funding for implementing this concept is considerably lower and limited. Therefore, dividing priorities by regions would further fragment the already limited resources and diminish the effects of implemented measures. Another reason for adopting the Smart Specialization Strategy of Serbia at the national level, even though it primarily drives regional development, is that most improvements targeted by the strategy's action plan are equally important for all regions of the Republic of Serbia.

The Action Plan for implementing the Smart Specialization Strategy from 2021 to 2022 implemented numerous measures to improve key resources, infrastructure, the education system, the innovation ecosystem, and market access for innovative companies in Serbia. The most important are those related to enhancing human resources - entrepreneurs, innovators, researchers, and experts who can contribute to initiating and implementing innovative processes. Supporting the enrichment of educational programs with subjects focused on improving entrepreneurial skills or launching multidisciplinary master's programs is equally important for universities across the country. Active participation of all stakeholders, including representatives from academia, industry, civil society, and the government, is crucial for the Smart Specialization Strategy. Therefore, the practice of continuous public-private dialogue, as a measure of the action plan of this strategy, is of fundamental importance for the participation and networking of all interested parties.

In the second half of 2022, the development of a new Action Plan for 2023 to 2025 was initiated. In November 2022, accompanying public-private dialogue workshops on priority areas were organized in Belgrade, Novi Sad, and Niš. It is necessary to highlight that Serbia is actively building and establishing an efficient innovation infrastructure when considering support for regional development. An example of this support is the science and technology parks established

in Belgrade, Novi Sad, Niš, and Čačak. Additionally, in the coming years, the construction of new science and technology parks is planned to ensure the necessary resources for developing the research and innovation ecosystem throughout the country. The strategic commitment to invest in the BIO4 campus is essential for research and innovative infrastructure. BIO 4 campus will integrate and provide infrastructure and organizational support for activities in biotechnology, bioinformatics, biodiversity, and biomedicine as areas with significant development prospects closely linked to the focused priorities of the Smart Specialization Strategy.

To provide additional infrastructural support for developing local and regional innovation potential, the Government of the Republic of Serbia initiated the development of a network of regional innovation startup centers across the country. As a result of the Regional Startup Centers Establishment Program for the period from 2018 to 2020, nine regional startup innovation centers were established: in Niš (evolved into a science and technology park), Čačak, Gornji Milanovac, Stara Pazova, Kruševac, Subotica, Pirot, Zrenjanin, and Valjevo. The investment continued from 2020 to 2023, and ten new startup centers opened in Ivanjica, Kragujevac, Mali Zvornik, Priboj, Sokobanja, Svilajnac, Užice, Vrnjačka Banja, Zlatibor, and Zubin Potok. In 2023, another startup center opened in Kanjiža, and three more startup centers are under construction: Novi Pazar, Bajina Bašta, and Loznica. A support program will be implemented within the Action Plan for implementing the Smart Specialization Strategy (2023-2025) to ensure the sustainability of these institutions.

The Action Plan of the Strategy (2023-2025) foresees implementing a policy measure focused on developing optical broadband networks in rural areas of the Republic of Serbia. This measure will enhance the broadband communication infrastructure by establishing missing access points in rural settlements and connecting public institutions (mainly primary schools) and households to the broadband network by 2025. This measure will further empower regional development.

Equally important are measures aimed at improving the capacity and readiness of academic institutions, primarily research, development, and scientific institutes, to provide high-quality inputs in innovation and supporting entrepreneurship. Funding for research and innovation activities is envisaged through competitive calls of the Science Fund and the Innovation Fund, ensuring funding for cutting-edge research projects and their valorization through highly competitive startups.

It is necessary to highlight that Serbia is actively building and establishing an efficient innovation infrastructure when considering support for regional development. An example of this support is the science and technology parks established in Belgrade, Novi Sad, Niš, and Čačak. Additionally, in the coming years, the construction of new science and technology parks is planned to ensure the necessary resources for developing the research and innovation ecosystem throughout the country.

Support for the transformation of scientific research institutes, as well as new programs of the Science Fund and the Innovation Fund, will be provided through the project "SAIGE," aimed at accelerating innovation and stimulating entrepreneurial growth in Serbia, supported by a World Bank loan and non-repayable funds from the European Commission under IPA 2019. This project supports the transformation of 18 research institutes, strengthens their capacities for attracting research projects, managing intellectual property, data protection, and establishing knowledge and technology transfer processes from scientific institutions to all segments of the economy and society.

Through the implementation these and other measures aimed at strengthening the national and regional innovation ecosystem of the Republic of Serbia, conditions are being created in the long term for the substantial initiation of knowledge-based socio-economic development.



Regional Growth Incentive Program for 2023

Edin Đerlek, Minister in charge of Balanced Regional development, Government of the Republic of Serbia

How do you comment on the findings of the European Commission's Annual Report on Serbia for 2022 regarding Chapter 22, and what activities do you plan to implement based on the recommendations given in the Report?

The EC Report for 2022 provides a comprehensive overview of the implemented activities and valuable guidance on priority activities for the future, which partly fall within the scope of the newly formed Cabinet of the Ministry of Regional Development. Opening Chapter 22 and conducting relevant activities are vital for EU cohesion policy, especially for reducing socio-economic disparities within regions in Serbia. At the same time, this Chapter is crucial for programs funded by the EU and for strengthening institutional capacities for using pre-accession funds at all levels. The EC Report notes progress within the Action Plan in some of the six areas (Legislative and institutional framework, administrative capacity, Programming, Monitoring and Evaluation, and Financial management and control). The implementation of numerous measures in all these areas is still ahead. There is a noticeable trend of decreasing average progress scores since 2015, especially compared to the average scores (limited progress), which indicates that numerous activities need to be implemented in all six areas, particularly in the legislative framework, to define an effective system for multi-year programming at the national, regional, and local levels.

A Development Plan for the Republic of Serbia that would include regional development guidelines is essential. Our Cabinet took part in the Working Group responsible for drafting this plan. However, from the perspective of the competencies and scope of work of the newly formed Cabinet of the Minister in charge of Regional Development, the recommendations of the Working Group of the National Convention on the EU for 2022 concerning the necessity of building a legislative, institutional, and strategic framework for regional policy are of particular importance. In this regard, the priority in the work of my Cabinet will be establishing more

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efficient coordination of responsibilities and obligations of all actors in the process of implementing regional policy, strengthening capacity for strategic planning at the regional level, and adopting a strategic framework for the regional development policy of Serbia for the next medium-term period.

Which mechanisms can you put into practice to develop an interdepartmental cooperation system for more effective planning and implementation of development programs?

In its Performance Audit Report "The Impact of Regional Development on Demographic Trends in the Republic of Serbia," the State Audit Institution (DRI) devoted a significant part to the chronology of building the legislative and institutional framework and the institutional "migration" of regional development issues from 2009 to the present days. A particular problem is the obsolescence of some planning solutions in the 2009 Law on Regional Development due to the adoption of the 2018 Law on the Planning System, which resulted in a mismatch between the types of development documents specified in the Law on Regional Development and the development documents in the Law on the Planning System (e.g., the Law on Regional Development mentions the adoption of the National Regional Development Plan, while the Law on the Planning System refers to the adoption of the Development Plan of the Republic of Serbia).

To address the issues mentioned in the report by the State Audit Institution I will initiate regulation of the planning and institutional framework following the legal framework. The preparation process is complex and lengthy, but at the same time, it must be participatory, especially considering the current and potential endogenous and exogenous variables that influence it.

Additionally, in 2014 Serbia had the latest ranking of municipalities and cities in Serbia. Regional and local self-government development levels must be defined before allocating incentives for regional development. This task will probably call for developing a new methodology for calculating the level of regional and local self-government development and based on it, announcing a new Unified List of Regional and Local Self-Government Development for 2023. My Cabinet will take an active part in initiating this task.

From 2011 to 2020, 128 out of 145 local self-government units recorded a negative migration flow. Which measures could mitigate potential security threats arising from growing regional disparities?

Demographic devastation has a pronounced regional dimension, primarily of an economic and security nature. The entire Southeast Europe region, especially Bulgaria, Hungary, Croatia, Serbia, and Romania, face the consequences of demographic transition, including depopulation, negative natural increase, and an accelerated aging process. Over the past two decades, the total population of the Republic of Serbia has decreased by 10.8% or more than 800 thousand inhabitants. Preliminary census results from 2022 indicate an accelerated depopulation in underdeveloped, border, and rural areas. While demographic regression is in its final stages in many parts of Serbia, from a security point of view, it is concerning that extreme demographic devastation affected the entire area of underdeveloped border municipalities. Between the two most recent censuses (2011-2022), 21 municipalities lost over 20% of their population, with half of them belonging to the group of underdeveloped border municipalities. From the perspective of implementing regional policy measures, it is particularly concerning that approximately half of the municipalities in the Republic (78 municipalities) have a population of fewer than 20,000 inhabitants.

In this context, the contribution of my Cabinet, having in mind our restrictive budget for 2022, will target three areas:

1. Implementing a program aimed to stimulate regional growth, prioritizing areas facing specific issues (demographic, communal, environmental, etc.)
2. Co-Financing the development of strategic development documents at the local and regional levels, and
3. Supporting a more efficient horizontal and vertical coordination of incentive measures among numerous state institutions.

Since there is no analytical basis for development planning and monitoring the effects of incentive policies contributing to regional development in Serbia, do you plan to create conditions for establishing an analytical basis for development planning in Serbia?

One of the elements in the continuous modification of incentive measures and mechanisms of regional policy is quality and regular monitoring, as well as evaluation of the effects of regional incentive measures. In that regard, shortly after the formation of the new ministry, we visited almost all relevant actors involved in regional planning at the national and regional levels, such as the Republic Development Fund, the Development Agency of Serbia, accredited regional development agencies, several local self-governments, civil sector, and others. We are continuously mapping different regional and local development issues and assessing the state of regional competitiveness.

The dominant conclusion of all regional policy stakeholders was that there is no efficient regional policy without strategic regional and local planning and monitoring of measures. Therefore, we have already taken the first steps within the measures set in the Regional Growth Incentive Program for 2023; one relates to co-financing the development of regional development documents, whose primary goal is to strengthen the analytical capacities of accredited regional development agencies (ARRA) and local self-governments (LSGs) for strategic development planning. In addition, the Cabinet of the Minister will take steps to ensure regular analytical monitoring of regional development in the Republic of Serbia.

Will your Cabinet insist on a greater focus on regional development when developing the new Action Plan for implementing and monitoring the Smart Specialization Strategy?

Our task is to build the institutional infrastructure for managing regional development and pursue an effective regional policy. In addition to developing the overarching strategic document, the Strategy for Regional Development of the Republic of Serbia, which is a priority for the Cabinet, the development of regional Smart specialization strategies for all regions at the NUTS 2 level is of utmost importance in the process of alignment with EU cohesion policy. That would enable absorbing means from the EU's structural and investment funds.

I believe that developing regional strategic documents for smart specialization is a valuable instrument for regional policy, and I support the creation of these documents. At the same time, I would like to emphasize

that the extent to which these strategic documents could compensate for the institutional gap in regional policy in the two macro-regions (Šumadija and Western Serbia, as well as Southern and Eastern Serbia) will depend on the institutional capacities of the regions and the institutional modalities that these strategic documents would offer.

How can your ministry establish cooperation with the Ministry of Science, Technological Development, and Innovation? How could this cooperation contribute to creating conditions for the valorization of regional potentials and the activation of stakeholders at the regional level through the adoption of Smart specialization strategies at the NUTS 2 level?

The Smart Specialization Strategy in Serbia 2021-2027 includes an inventory of partial development potentials in terms of existing capacities for innovation, science, research, and development. Those primarily tackle the national level, with only minimal coverage at the NUTS 2 regional level and no analysis of S3 at the regional area level (NUTS 3 level). The valorization of overall regional potentials in the country, especially considering the multidimensionality of significant regional disparities, requires a much more diversified and comprehensive analysis of regional development potentials, primarily at the regional area level (NUTS 3 level). The essence of effective regional policy is sustainability.

Regional Smart specialization strategies provide an opportunity for underdeveloped regions. For example, our poorest region, the Southern and Eastern Serbia region, currently characterized by high poverty rates, low living standards, and above-average unemployment, has the potential to surpass the threshold of underdevelopment through the valorization of its potentials (developed agricultural sector, textile and rubber industry, the scientific research base in the field of electrical engineering and ICT sector, etc.) and targeted investment policy. Moreover, this will be one of the tasks of the future Regional Development Strategy, which is a priority within the scope of this ministry's work.

The Strategy for Regional Development of the Republic of Serbia will particularly emphasize the need for adopting regional Smart specialization strategies.

In that context, cooperation with the Ministry of Science, Technological Development, and Innovation will take place officially through participation in the Working Group at the government level, as outlined in the Smart Specialization Strategy in Serbia 2021-2027. Additionally, cooperation will be carried out through the promotion of programs and projects at the local and regional area levels (NUTS 3 level) in the field of innovation, research, and development.

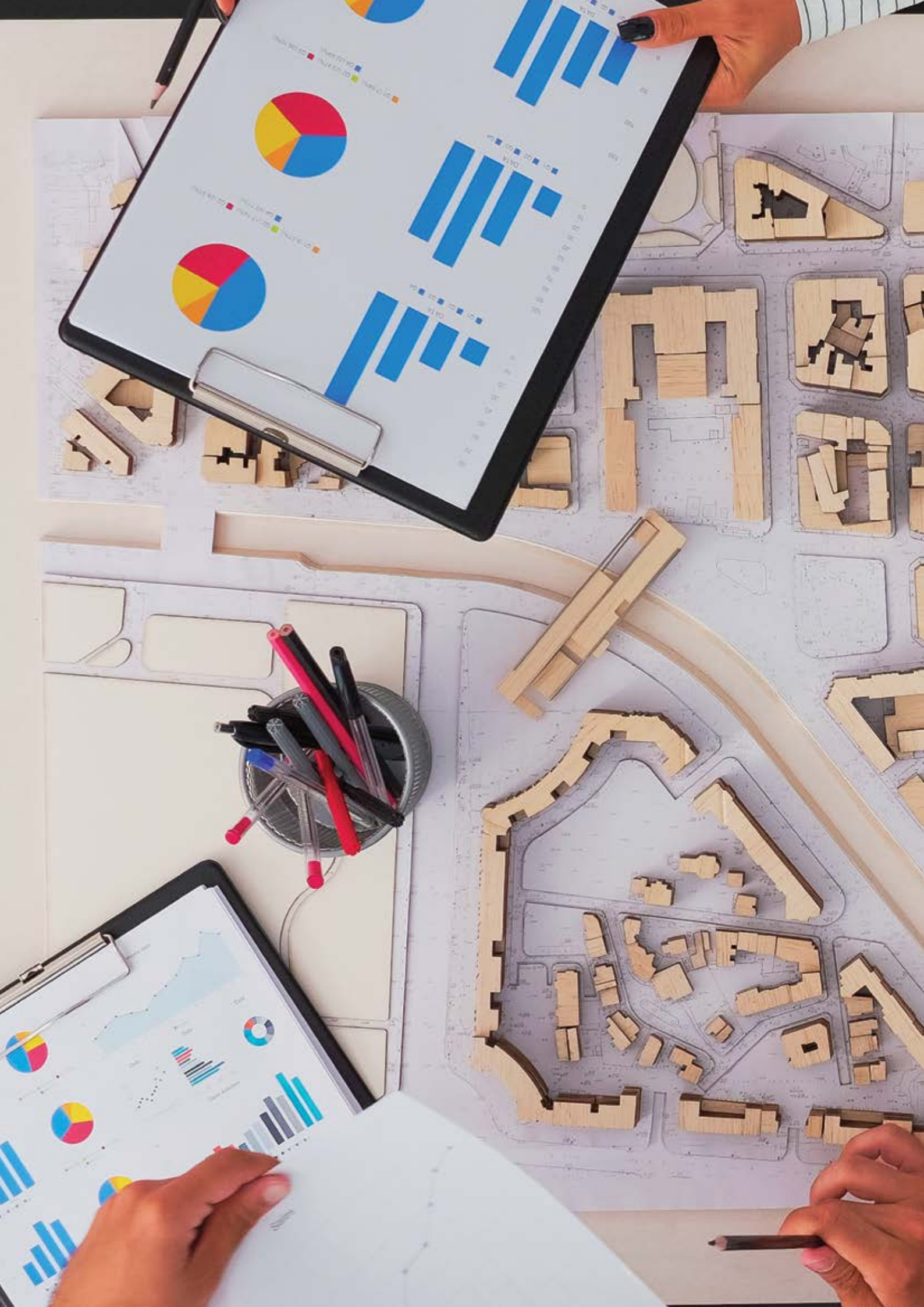
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What analytical needs of your ministry could be addressed by civil society organizations in the context of the "fourth helix"?

Regional models of the quadruple helix represent a powerful regional policy instrument, as they integrate the academic, business, institutional, social, and environmental dimensions of economic growth and development. Analysis of regional spiral connectivity (university-business-government-society) will remain a focal point for the ministry due to the synergy effects of regional projects. Through the Regional Growth Incentive Program, we will support regional projects based on the quadruple helix. I see civil society organizations (CSOs) as reliable partners. Their knowledge, experience, and expertise in regional development can be invaluable in developing policy documents. We will seriously consider all initiatives coming from CSOs. We will also invite them to all roundtable discussions and forums we organize, not only those organized by the National Convention on the European Union (NCEU) but also by all CSOs dealing with relevant aspects of regional policy. On the other hand, we expect to actively participate in events organized by the NCEU and other CSOs in the field of regional development because only through an inclusive, coordinated, and effective approach can we gradually address the accumulated problems of regional development.

ORG WARE







Serbia as a Future Member of the European Union - How to Avoid the “Absorption Shock”

Gilles Kittel, Team Leader, Directorate-General for Regional and Urban Policy (REGIO), European Commission (EC)

How does IPA III prepare candidate countries and potential candidates for the EU's regional policy and the use of structural funds?

Benefits from IPA III are there for sure, but they are not sufficient nor close to the benefits Member States are reaping.

Sectoral operational programs started in January 2023, but it will take time for the programs to be genuinely launched. Furthermore, the IPA structures need to be validated by national auditors and EU auditors before the structures become operational.

Due to geopolitical and other circumstances, the situation on the ground is changing dramatically and the EU needs to become more agile. The new approach imposed by the new cohesion policy introduces simplification as the previous one created many administrative obstacles. Moreover, with the single project pipeline, the EC tries to identify more mature projects.

In terms of policy much has changed, as we are now investing less in big infrastructural projects, and more in innovation, soft projects and skills, social inclusion, urban policy, etc. New challenges emerge which need to be reflected in the policy area. For example, due to environmental challenges in Serbia, the EU aims to upgrade the standards and invest more. Furthermore, in terms of structures, there is an important lesson we learnt from our Member States. If you want to be successful with cohesion policy, it's not just a few central structures which will help you create a necessary enabling framework for future cohesion policy. You need to have capacities on local level, functioning banking sector, and universities which establish a real cooperation with economic actors.

We can hope that IPA IV will be designed in a way to further reduce the spread between Western Balkan countries and Member States before their EU accession. The example of Croatia proved that the jump between being a candidate country and a Member State is huge. When a country enters the EU without fulfilling some key enabling conditions, there is an absorption shock, as the country does not have the capacities to absorb a significant amount of funds suddenly available. On the other hand, the EU has immobilized money which is not good for either side. That's why the countries are now developing so called road maps where we can phase this long-term effort.

Within the framework of Chapter 22 we are trying to have discussions to stimulate the authorities in Serbia to understand there is more that needs to be done. In the end it depends on the national authorities and their openness and ability to endorse necessary changes.

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How do you assess the progress of candidate countries in Chapter 22: Regional Policy and Coordination of Structural Instruments? What are the challenges and problems in this area? How do you assess Serbia's progress in Chapter 22?

Differences among the candidate countries are enormous. Serbia has achieved some progress but there is still a lot to be done as significant time-consuming structural changes remain needed. It is not enough just to train a couple of people. People need to practice new skills and understand the rationale behind it as the tasks imposed by the EU in this chapter are not a result of provisional thinking but experience. We have evidence that fulfilling those tasks helps countries to develop harmoniously. Cohesion policy is about reducing disparities between the territories and societies as it is important for the development to be equally shared among people.

This is something the EU managed to achieve in Poland for example. As a result, the distance towards the EU-27 average income level (in terms of GDP per capita) has narrowed by 24.2 p.p., of which almost 16% resulted from the implementation of the Cohesion Policy. Baltic countries are also a good example as they became among the best ones in terms of IT worldwide; Spain or Portugal developed significantly as well.

Member states and EC senior management are giving more attention to the enlargement which might result in changes in the field of Chapter 22. In this perspective, the challenge is not to target only a few sectors but as well crosscutting issues like retention of staff in the public sector, having in mind that most TA funding is allocated to human resources; much of this is allocated to operational staff salaries to retain the best people in the public sector. In cohesion policy, there is also a high requirement for transparency in the selection process, employment based on merits etc. Everything needs to be public and transparent. That is how we are creating and/or preserving space for the CSOs to challenge the government's positions and be more engaged in creating societal change.

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Accession to the European Union leads to the growth of existing and the emergence of new regional inequalities. Studies show that it takes three program periods (approximately two decades) before countries can build the institutional capacity to draw funds from IPA funds at the local and regional levels. How do you comment on this finding?

With a new wave of enlargement, the EU should respond more quickly based on learning from the past. On our side, we are also convinced that digitalization and AI will create further enormous changes. We will integrate all of those in our daily lives and work and it is a factor we need to already consider in the equation when we are implementing the current generation of cohesion policy instruments. At the same time professionals in the EU and the WB need as well to observe the rest of the world, to be forward looking and to think about the future five or ten years from now. An elevated mindset could help to make changes more quickly.

The way we observe the policy-making process has changed as well as we are working in a more integrated manner. For example, if we are considering green deal, we are looking at several policies together. Experience proved that if we do not act in an integrated way progress gets harder to achieve. That is one of the aspects which we integrated in the new cohesion policy as well. Funds provided through the new cohesion policy support more thematically integrated programs but also promote territorial approach because not all decisions can be made on a central level. More significant autonomy of the regions is also needed as much as strengthening governance on local level.

Another important aspect is the data. Our system is significantly computerized, and we collect data on the level of projects. A lot of financial data and indicators are aggregated automatically, and we can assess almost anything. This is extremely powerful, and we can ever steer the process based on objective results.

Otherwise, we would have to guess. We can react almost in real time and ensure the necessary flow of funds where needed and redirect them from where it makes no impact. In this way the decision is based on scientific, not political elements. Based on the data, level of development and employment, number of smart specialization strategies and other factors we can propose the allocation. That is a particular problem in the Balkan region as we do not have the data.

Funds provided through the new cohesion policy support more thematically integrated programs but also promote territorial approach because not all decisions can be made on a central level. More significant autonomy of the regions is also needed as much as strengthening governance on local level.

Serbia is a member of many EU macro-regional strategies (MRS) which do not have their own sources of funding, and often have weak operational structures. Can this problem be solved?

Strategies of this sort do not have their own source of funding as they seem more as a platform for cooperation instead of an investment plan. The logic of the MRS is to firstly build networks, have soft diplomacy among countries, share ideas on transnational projects etc.

For example, the current initiative under the EU Strategy for the Adriatic and Ionian region is to reactivate railway links in the Balkan, as those are not well maintained and are difficult to use. This kind of initiative requires discussion among countries and to that cause the MRS might serve to combat transnational challenges. The other purpose of this strategy is incentivizing governments to become more open to integrating different actors such as civil society and other actors. Through approaching the strategy as a platform, we can engage civil society as well to strengthen democratic processes. Its aim is to stimulate public debate on the issue and fight against the opinion that people are excluded from decision making process.

General advice for the Western Balkan region could be to closely monitor and implement as many solutions as possible coming from the EU which can bring benefits for each individual country. At the same time the countries need to look not only towards the EU but also towards their neighbors from the region as key knowledge and opportunities can be found right there.



Smart Specialisation - Crucial Part of the EU's Regional Policy

Nicola Bertolini, Head of the Cooperation of the EU Delegation in Serbia

How do you assess findings of the Country report for 2022 of the European Commission when it comes to Cluster 5, especially Negotiating Chapter 22?

The goal for Serbia, as a candidate country, is full membership to the EU. Upon becoming a Member State, Serbia will immediately start benefiting from regional policy and its structural instruments. The goal of regional policy and structural instruments is to ensure economic, social, and territorial cohesion across the Union. Regional policy strives to reduce regional disparities in the levels of development of different regions. This will entail managing EU funds that will be significantly larger than the pre-accession funds Serbia is currently managing. The cohesion policy programmes need to be identified, programmed, implemented, monitored evaluated, and audited in an inclusive way. Having that in mind, managing these programs relies upon a complex network of different actors coming from central and local government, private sector, non-profit sector, and beneficiaries. Building and maintaining such a network requires considerable administrative capacity in Serbia.

The 2022 Annual Report states that Serbia is moderately prepared in chapter 22, and notes that no progress has been made on the recommendations contained in the previous year's report. Beyond the ongoing need to adopt a legal framework for cohesion policy, changes are necessary in terms of designating the structures in charge of managing cohesion policy and pre-accession operational programmes, of ensuring that these structures have sufficient and well-trained staff, and that the structures are able to retain them.

The EU is not just observing the state of play of Serbia's alignment efforts. We are also actively supporting the efforts of the country's government to move closer to EU norms, institutions and practices. For instance, to ensure a smooth transition between the current stage and full membership, we are already providing technical assistance aiming to help prepare Serbia for managing new cohesion funds.

We are also financing new types of pre-accession interventions, called multiannual operational programmes, which will secure investments and other forms of support to the amount of EUR 340 million designated for areas such as environmental protection, energy, social inclusion, and employment. These interventions, managed by the Serbian authorities themselves, will mirror the way similar programmes are managed by Member States under regional policy, thus providing a real-life training ground for the Serbia's future participation in that policy.

We have also been financing local development programmes aiming to strengthen the ability of local and regional actors to contribute to sustainable and inclusive economic growth (this was done under the EU PRO project, which started in 2018, and is being continued under its successor, EU PRO Plus). The goal is simultaneously to introduce the EU mechanisms for integrated territorial development, conceived as a holistic place-based, multi-level, multi-sector approach, relying on the participation and fair consideration of all concerns, stakeholders, and interests. This approach deals with all relevant challenges in synergistic fashion, be they social, economic, or ecological. These local development programmes have piloted the preparation of territorial strategies and helped prepare Serbia's national model for integrated territorial development, which will form a significant part of the structure for implementing regional policies. All this helps build capacities for developing and managing programmes, thus preparing Serbia for absorbing structural funds.

However, the most important piece of the puzzle is the adoption of a national development plan which gives basis for Serbia's regional development policy. In implementing that policy, the best possible use should be made of all the existing structures, including the Regional Development Agencies (RDAs) and the local economic development offices. The adoption of a national development plan, which would be in line with relevant sectoral and territorial strategies, is also useful for programming interventions funded under the Instrument for Pre-Accession (IPA).

Is time in Serbia to establish a national platform for smart specialization, as well as to develop smart specialization strategies at the NUTS II level, as a kind of "institutional leapfrogging" strategy?

Smart specialisation is a crucial part of the EU's regional policy. The specialisation part is easy: it is focused on developing specific competitive strengths and growth potentials supported by a critical mass of activity and entrepreneurial resources. Member States and regions will select a limited number of well-identified priorities for knowledge-based investments or clusters. Smart specialisation reflects a place-based approach, building on the assets and resources available to regions and Member States (and on their specific socio-economic challenges) to identify unique opportunities for development and growth. It involves a wide range of stakeholders in an interactive entrepreneurial discovery process (EDP), in which market forces themselves discover and produce information about new activities. The government then assesses the outcomes and empowers those actors most capable of realizing this potential. The Common Provisions Regulation



on the EU funds whose delivery is shared between the EU, Member States and regions makes having a smart specialization strategy (S3) an “enabling condition” for benefiting from the European Regional Development Fund, the European Social Fund Plus, and the Cohesion Fund.

Given this, Serbia’s adoption of a Smart Specialisation Strategy for the period 2020-2027 is naturally a positive step. The strategy’s preparatory work involved many national institutions and relevant players, starting in late 2016. The working group in charge of the strategy, that can be regarded as a national platform, consisted at that time of relevant ministries, the Public Policy Secretariat, the Chamber of Commerce and Industry, the Serbian Academy of Science and Arts and the Provincial Secretariat for Economy and Tourism of Vojvodina. The Joint Research Centre (JRC) of the European Commission was involved from the start of the process and provided instrumental support. The most important part of the preparatory work was the EDP, including a regional Innovation Camp organised in Belgrade in late 2017.

Developing a permanent national platform for smart specialisation and strategies at the NUTS II level would indeed allow for a more targeted approach to development. Efforts in incorporating the Serbian S3 are already in place in two NUTS II regions - Šumadija and Western Serbia and South and Eastern Serbia through development of strategies using the EU territorial mechanisms, including the EU’s Urban Agenda.

How does the EU support to Serbia contribute to strengthening regional innovation system?

During the past ten years, the EU provided direct support to the innovation, research and development (R&D), technology transfer and start-up ecosystem in Serbia to the amount of EUR 90 million, setting in motion reforms that will significantly increase the Serbian economy’s competitiveness. This is just a fraction of the EU support to Serbia, and much more was and still is available from regional and other EU funded programmes like Horizon, COSME, the Western Balkans Enterprise Development and Innovation Facility, etc.

Only from Horizon 2020 programme, Serbia received EUR 135 million for 414 grants. Investments in scientific research, development and innovations are the best way to create a knowledge-based, green, and digital economy. These are the vital elements for not only improving the competitiveness of national economy but also for creating new, high-quality jobs. EU support to build the capacities of important national institutions like the Innovation and Science Funds, the BioSense Institute and a network of business incubators and science and technology parks has enabled the establishment of a genuinely regional innovation system. In the years to come, this support will continue through the third generation of the IPA instrument (IPA III, 2021-2027). The EU will remain a proud partner of Serbia in bringing new innovative ideas to the world market.

How do you assess the status, position, activity and results of the work of regional development agencies in Serbia?

Serbia has 16 accredited RDAs, primarily founded by local self-government units, and with significant discrepancies among them in terms of human resources, financial capacities, delivered activities and scope of work. Overall, the RDAs cover almost the entire national territory and a wide range of activities, including infrastructure development, socio-economic development, and support for the private sector. The EU financed many of RDA projects and supported the establishment of some individual RDAs.

When it comes to the implementation of the EU-funded local development programmes, the RDAs have shown interest and potential in projects related to the support to small and medium sized enterprises (SMEs). More specifically, they implement projects that contribute to the local economy's competitiveness, while recognising that the crucial elements for business growth lay in their digitalisation, marketing, resilience, greening and circular economy, internationalisation, standardisation, and usage of financial instruments.

One key issue for the RDAs is the uncertainty related to their financial sustainability, which stems from the failure of some founders to meet their obligation to pay regular fees. Consequently, RDAs are heavily reliant on donor-funded projects to meet their operational needs, but they also lack long-term planning in terms of identifying additional sources of funding.

RDAs could take a stronger role in pursuing regional development and lead the implementation of complex regional projects if they were more financial sustainable, improved their strategic planning, and developed their capacities further (including human resources).

Improving the RDAs' partnerships with other regional development actors would be another key determinant of their ability to take on a leadership role in regional development. Generally, RDAs should become key players in the introduction and implementation of integrated territorial development based on relevant EU instruments.

We strongly believe that the national and local governments should substantially strengthen the RDAs, and the RDAs themselves may also take a more proactive approach, using good practice examples from EU countries. The EU will continue to support RDAs in different ways, as our shared objective is coherent and balanced development.

The RDAs' impact could arguably be stronger if there was a strategic and legal framework for regional development in place, and a firm commitment to implement them.

The Western Balkans is in the pre-accession process, when the financial instruments of the EU and the national funds of the countries of the Western Balkans region are directed to financing the building of institutions. To what extent can it be expected for the funds to be engaged and redirected towards narrowing the existing economic gap between the region and the EU, as announced by the Economic and Investment Plan for the Western Balkans?

In October 2020, the European Commission adopted a comprehensive Economic and Investment Plan (EIP) for the Western Balkans, which aims to spur the long-term economic recovery of the region, support a green and digital transition and, crucially, foster regional integration and convergence with the European Union.

The EIP sets out a substantial investment package, mobilising up to €30 billion of funding for the region. Up to EUR 9 billion of grants from the IPA have been put aside to support EIP investments priorities on 10 Flagships in the region. The EIP can also provide

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guarantees for up to EUR 20 billion of EU investments to reduce the risks for investors and the costs of financing for private and public investments through the so-called Western Balkans Guarantee Facility.

It is the main ambition of this unprecedented financial support to help Serbia and the entire region narrow the existing economic gap with the EU Member States, in view of the EU accession. The grants from the EU are combined with loans from European and international financing institutions, which are given at very favourable conditions and in line with the highest European standards. This is very important for Serbia because it will be able to invest in modern state-of-the-art technology when building the infrastructure.

The EIP provides financial assistance for accelerating the implementation of projects in the areas of sustainable transport, clean energy, environment & climate, human capital, competitiveness and inclusive growth, and the twin green and digital transition.

In Serbia, the implementation of the Plan is well underway. The EIP started at the end of 2020. So far, we have approved EU grants for 11 EIP flagships in Serbia, up to nearly EUR 500 million, which will leverage up to EUR 1.7 billion in investments – including significant financing from European IFIs EIB, EBRD, KfW, and CEB.

During the last three years (2020 to 2022) the EU approved more than EUR 1.2 billion for Serbia, where almost 70% are for infrastructure projects and the rest is for institution building.

With these EU-funded large-scale infrastructure projects, Serbia and the EU are continuing to work together for a better and more prosperous future. New infrastructure will provide better connectivity within Serbia and with EU countries. This is of great value, not only for the economy, but also for the local communities and for the broader society: investments in infrastructure provide jobs, access to better services and improved environmental conditions.

How do you evaluate the work and role of civil society in general and the NCEU, when it comes to Serbia's EU accession process?

As underlined in the 2022 Annual Report, an empowered civil society is a crucial component of any democratic system and should be recognised and treated as such by state institutions.

During the last three years (2020 to 2022) the EU approved more than EUR 1.2 billion for Serbia, where almost 70% are for infrastructure projects and the rest is for institution building.

Having a strong civil society is an important part of the EU values. A strong civil society promotes checks and balances and helps ensure greater transparency, accountability, and inclusiveness on the part of the state and public authorities. Civil society also forms an important link between the citizens and the authorities. Through appropriate mechanisms, citizens can have a say in the very policies that affect their own lives and future. Civil society in the whole region, including Serbia, plays a crucial role in the EU accession process, a role we will continue to support. Furthermore, civil society is a crucial actor in any democratic society and plays an important role in public oversight and monitoring of government activity at all levels in order to hold it accountable.

There are numerous examples of this in Serbia, ranging from environmental to socio-economic issues as well as education and the rule of law, where we see various CSOs increasingly active in lobbying for reforms, improvements in legislation, etc. For example, the public discussions on the draft law on internal affairs demonstrate the high competence and lobbying capacities of CSOs.

It is however not enough to lobby for change. CSOs and the government of Serbia need to enter into a real policy dialogue, not only on matters related to the EU negotiations chapters, but on all important issues affecting the people in this country. We appreciate that the NCEU and the government of Serbia have strengthened their dialogue mechanism, and we also welcome the planned creation of a cooperation council for civil society.

The EU provides significant financial support to CSOs in Serbia, both under the Civil Society Facility as well as the Thematic Programme on Human Rights and Democracy. In 2022 alone, the EU funded over 20 grants with a value of over EUR 10 million in a variety of fields ranging from the protection of minorities, gender equality, and children's rights to environmental protection, social policies, etc. The EU further provides significant funding to independent media in Serbia, since freedom of expression and free access to objective sources of information are a further corner stone of any democratic society.



Development of Smart Specialization Strategies for Regions from non-EU Member States

*Nikola Radovanović, Team Leader, Joint Research Centre (JRC),
European Commission, , Spain*

How would you explain the concept of smart specialization to representatives of different stakeholders (businesses, civil society, government officials, decision-makers, academic and research community, etc.)?

Using the smart specialization approach, a region or country aims to identify priority areas for further investment based on real indicators to enhance its competitiveness. However, to determine these priority areas, consensus among the public is required, and representatives of the mentioned groups play a vital role in this process. They get the opportunity to participate in the creation of instruments and policy measures for innovation in the selected priority areas. Based on their contributions, an action plan for the strategy is developed, making them an important factor in assessing the effectiveness of the implementation activities and their outcomes.

To improve regional competitiveness within the scope of smart specialization, an institutional ecosystem needs to be built. How is regional competitiveness measured?

Since smart specialization aims to harness the potential in critical areas of a region or country, a positive impact on competitiveness is expected. However, it is crucial to understand what does it mean to “build institutional capacity” for implementation of smart specialization strategy. Creating an action plan with a detailed explanation of its effects and funding sources must be accompanied by the establishment of a structure for simultaneous implementation of smart specialization policies. In the management system of the strategy, it is essential to clearly define the responsibilities of each stakeholder regarding the sequence of activities and, particularly, the ownership of the specific instruments mandated by such an action plan.

How to establish mechanisms for governance, monitoring, and evaluation of smart specialization strategies and what does it look like in a non-EU member state?

The governance of developing and implementing the smart specialization strategy is a rigorous process that continually aims to include new relevant stakeholders, considering the complex needs of each stage of the process. Therefore, it is important to establish a robust and authoritative governance mechanism capable of responding to potential external shocks. Given the specific requirements of strategy implementation, it is recommended to establish a multi-level governance system, meaning to function on the levels of coordination, operational management, and stakeholder communication. In this regard, it should be considered to establish working groups based on priorities, whose continuous contribution will be crucial for guiding the strategy’s implementation. An example of such a mechanism can be found in a regional strategy in Portugal, which operates through

No special knowledge or skills are required to participate in the process of creating and implementing a smart specialization strategy.

On the contrary, the knowledge and skills that each representative from the academic or business community, civil society, or public institutions brings based on their own experience strengthens the strategy development process.

a hierarchy - from a coordination council, strategic advisory group, and management team to four thematic working groups organized around the region’s priorities. As for monitoring and evaluation, it is the responsibility of the management team to establish a monitoring and evaluation body based on principles of transparency, real indicators, and involving various stakeholders in the process.

How is the scoreboard and indicator system for monitoring smart specialization policies established and what does it look like?

It is crucial to establish strong collaboration with statistical agencies that collect numerous indicators important for measuring the effectiveness of smart specialization strategies. Hence, their participation in the working groups for strategy development is essential right from the beginning of the process. The creation of an indicator system is a task to be led by the monitoring and evaluation body, in collaboration with experts from the statistical agency. Adopting such a system is part of the implementation process agenda set by the governing body.

What skills and knowledge are required for smart specialization, and how can each representative of the quadruple helix model be informed about the necessary set of skills and knowledge?

No special knowledge or skills are required to participate in the process of creating and implementing a smart specialization strategy. On the contrary, the knowledge and skills that each representative from the academic or business community, civil society, or public institutions brings based on their own experience strengthens the strategy development process. It is important to emphasize the benefits of cooperation and the exchange of knowledge between stakeholders, as each representative contributes to the shared goal of enhancing regional competitiveness through smart specialization. What needs to be emphasized is the importance of communication among all members of the quadruple helix model throughout the process of defining priorities and instruments for strategy implementation to achieve the full effect of the desired dialogue.

What is the role of civil society organizations and regional development agencies in the process of entrepreneurial discovery?

Smart specialization is an approach that can be applied at both regional and national levels. When we consider the regional level, there must be a sustainable mechanism for policy development and implementation, which entails the existence of institutions that can implement the envisioned strategy activities at the regional level. In this sense, regional development agencies have the opportunity to become important partners in the implementation of a country's innovation policy.

What is your impression on the evaluation culture in the Western Balkan countries, compared with the evaluation culture in EU Member states?

Since only Montenegro and Serbia have embarked on the implementation of smart specialization strategies so far, it is premature to talk about the evaluation culture of strategy implementation itself. What the process requires, however, is that evaluation is conducted by an independent body to ensure transparency and accuracy. The results of this approach in practice are yet to be seen.

Can you provide examples of Smart Specialization Strategies at NUTS 2 level, with output, outcome, and impact indicators?

If our goal is to achieve a specific result in a priority domain, then the input indicator would be represented by investments directed towards achieving the desired change. The output indicator reflects the direct results achieved through these investments, while the outcome indicator shows the concrete contribution within the desired goal. For example, if the goal is to enhance research capacity in the IT sector, the input indicator could be investment in research and development by the business sector, the output indicator could be the number of research and development projects funded through these investments, and the outcome indicator could be the number of scientific publications or patents resulting from these activities.

How to finance the development of smart specialization strategies if you are not a member of the European Union?

Every country which embarks on the road of developing the strategy must address questions of financing programs and projects within the implementation of smart specialization strategies. At the EU level, structural funds under the cohesion policy are primarily used in this regard. On the other hand, non-EU member states strike a balance between using national financial capacities and funds from international sources. When considering international sources, it is possible

Every country which embarks on the road of developing the strategy must address questions of financing programs and projects within the implementation of smart specialization strategies. At the EU level, structural funds under the cohesion policy are primarily used in this regard. On the other hand, non-EU member states strike a balance between using national financial capacities and funds from international sources.

to explore the use of pre-accession funds from the European Union, programs of international organizations such as the World Bank, as well as alternative funding methods. Considering the importance of domestic funding sources, it is crucial to reach cross-sectoral consensus on the possibility of using domestic funds for implementing smart specialization strategies early in the strategy development process, especially before the "entrepreneurial discovery process" that gathers key stakeholders for strategy development. This opens the possibility for more efficient elaboration of the necessary resources for strategy implementation.

How can a region of a non-EU member country start to develop a smart specialization strategy?

Experience has shown that the best way is to form two working groups - an analytical group and an operational group - functioning under the coordination of a strategic body for strategy development. The tasks of the operational team primarily involve positioning the strategy within the innovation policy, gathering relevant stakeholders, managing the dialogue activities of all interested parties in the process, and other "operational" tasks. The analytical team is responsible for mapping the country's economic, innovation, and scientific potential and drawing preliminary conclusions about promising areas. Often, the tasks of these teams overlap in practice, especially where the process coordinator believes it can benefit the strategy development itself. Their collaboration is particularly important in the phase of making the final decision on the country's priorities, while highlighting the vision and instruments for implementing the strategy. The Joint Research Centre of the European Commission provides technical support to countries neighboring the EU for going forward through the process while being in direct and permanent communication with the relevant authorities of the country.



Importance of Smart Specialization Strategies for the manufacturing sector in Serbia

Adrian Solomon, Director, European Institute for Innovation and Technology (EIT Manufacturing), Serbia

Why did EIT Manufacturing open its office in Serbia? How would you explain in very simple terms what EIT Manufacturing is?

The Serbian manufacturing ecosystem is very strong in Eastern Europe. With its excellent infrastructure, the country is well-positioned across the main EU trade corridors, and this paves the way to a promising future. We see a potential for mass production and trade that would foster local economic development. On top of this, Serbia is among the strongest tech hubs in Eastern Europe. It has recently received substantial national-level support to boost the digital transformation of industry by relying on deep-tech and particularly artificial intelligence. Transitioning from a service provider country, Serbia will shift its focus to rapidly transforming its industry digitally, environmentally, and socially.

And here is where EIT Manufacturing comes into place, as a catalyst and enabler of manufacturing innovations. We experienced that Serbia lacks manufacturing ecosystem catalysts that can enable a modernized, low carbon, intelligent and optimized production system in the country. And this is exactly what EIT Manufacturing offers by bringing cutting-edge European manufacturing innovations together with the education and policy sectors. On the one hand, we want to raise awareness among manufacturing companies of all sizes about the opportunities and expertise provided by EIT Manufacturing. We aim to motivate Serbian manufacturing companies to join EIT Manufacturing-funded projects or become members of the association. In the end, our goal is to support the innovative transformation of Serbia's manufacturing industry. For this, we aim to introduce a wide range of training activities and novel cooperation mechanisms among all involved stakeholders. On the other hand, we will undertake substantial effort to align policy making and policy incentives with investments in innovative manufacturing by actively working with national authorities in Serbia. Our goal is to make the manufacturing innovation ecosystem work in a balanced co-financing manner.

And of course, we are doing all these together with the Serbian national, regional and local authorities in order to support each-other and maximize the efforts, rather than working in silos. We have already established strong support mechanisms with Serbian government representatives, and we are happy to see such an interest. This is important because we need to clearly communicate what EIT Manufacturing does in very simple, targeted, and effective ways in order to achieve our missions.

In a nutshell, as an independent institute of the EU Commission, EIT Manufacturing can help anyone tangent to the field of manufacturing (i.e., companies, startups, innovators, public sector) to access innovation grants, investment, expertise (advisory, education, policy making), access to EU partners (B2B) and tools on how to cooperate regionally and facilitate growth and development.

In more details, EIT Manufacturing can support Serbian manufacturing stakeholders on many different levels. First of all, by education. We can provide access to cutting-edge training courses, for example via Skills. move, applied university-industry cooperation mechanisms like Teaching Factories, and open innovation competitions like BoostUp! and other startup events and matchmaking with experienced EU counterparts. Our topics of expertise are tailored around: Flexible Production Systems; Low Environmental Footprint Systems & Circular Economy; Digital & Collaborative Solutions; and Human-Machine Co-Working and the smart use of automation and robots to enable great workplaces. Secondly, EIT Manufacturing can provide financial support to manufacturing stakeholders in Europe via our annual call for project proposals, various competitions and calls and many other initiatives. Thirdly, EIT Manufacturing can re-construct and boost the entire manufacturing ecosystem in Serbia by enabling high-level policy making, helping the government to align their incentives to support manufacturing companies and develop successful partnerships with quantifiable impact.

What is intelligent and sustainable production?

Intelligent and sustainable production, in simple terms, refers to manufacturing systems that use any kind of digital solutions with the end goal of saving energy and resources during the production process, of reducing environmental damage (i.e. GHG emissions, waste, etc) and of reducing the risks of injuries/exposure of humans at the workplace.

What is the EIT Regional Innovation Scheme? Countries eligible to take part in the EIT RIS (2021-2024) are EU MS, and Horizon Europe Associated Countries such as Serbia. Any entity from a RIS-eligible country or region can participate in EIT RIS activities. How?

The overarching objective of the EIT RIS is to contribute to the advancement of the innovation performance of the RIS countries and their regions by strengthening the capacity of their innovation enablers and actors and linkages among them (such as business accelerators, incubators, start-ups, scale-ups, businesses including

SMEs, agencies, educational and research institutions and their infrastructures, etc.) through the dissemination of the KTI approach, the cornerstone of the EIT intervention logic. Any entity from a RIS-eligible country can participate in RIS actions which can be in the shape of funded projects (grants) or access to trainings around the following services provided by EIT: capacity building for innovation ecosystem development, business creation, education, research and innovation, linking local innovation ecosystems to pan-European ones.

EIT RIS will aim to act as a bridge towards relevant Research and Innovation Smart Specialisation Strategies (RIS3s). How do you plan to do this in Serbia?

As EIT Manufacturing, we are particularly interested into Smart Specialization strategies that cover the manufacturing/production sector. In Serbia, we will make this bridge by:

- Working with universities (particularly technical faculties), vocational training schools, technical competence centres and any kind of education/innovation provider related to manufacturing in order to: motivate them to align their interests to the main manufacturing capacities of their regions in order to provide either solutions or skills required by regional industries. We will also support them in accessing relevant grants that will help such institutions engage in transformation processes required to reach this level.
- Working with regional development agencies of Serbia to help them better map key (emerging) manufacturing value added products and processes that require regional capacity building and support (either in terms of innovation, talent, FDI).
- Supporting relevant governmental agencies and ministries with boosting innovation actions in remote industrial ecosystems and remote regions that lag as compared to the developed ones.
- Engage companies (particularly SMEs) into our funded grants (and beyond: i.e. Horizon Europe) in order to motivate them to work with regional universities and governmental bodies towards producing solutions fit for the region's needs and capacities.

Developing a smart specialization strategy in some of the regions of Serbia would be of utmost importance. Do you plan and are you able to influence the creation of institutional capacities for the development of smart specialization strategies at the NUTS II level as well as capacities for the continuous implementation of the entrepreneurial discovery process at the regional level?

What we would like to do is to firstly show-case successful stories of such actions from other comparable EU countries in order to serve as example and inspire Serbian regions do adopt such ways. Of course, this is a lengthy process and it can be achieved only together with the support from Serbia's national authorities. We can indeed provide all the required capacity to make this happen (at least in the field of manufacturing) and we are ready to support the government and regional development agencies with any action that is required.

Do you plan and support the work of civil society organizations involved in regional development? To what extent can you influence breaking the silo mentality and contribute to civil society organizations advocating for issues such as regional development and topics such as smart specialization?

We are definitely keen to work with civil society organisations and professional organisations involved in regional development and we have already done so in previous occasions by organizing joint events, information sessions and studies. We strongly believe that professional advocacy for any innovation ecosystem development is necessary (and this includes smart specialization) and substantially changes mindsets and intentions of key stakeholders to engage. As an organization, we have a very strong communication and PR team which is capable to deliver very effective campaigns for awareness raising and education purposes and, when partnered with key organisations, our work just becomes more impactful.

What are your experiences in working with and talking to representatives of regional development agencies in Serbia?

Firstly, from an innovation perspective, company owners in Serbia are very entrepreneurial which leads to an innovation infusion into the wider ecosystem. On top of this, the manufacturing ecosystem is becoming more and more exposed to technology transfer. University spin-offs and companies are keen on developing value-added partnerships within the knowledge triangle, which is also facilitated by EIT Manufacturing. Besides



this, the strong governmental support for deep-tech and artificial intelligence capacity opens up the opportunity to incrementally transform the ecosystem and diffuse European best practices, making Serbia a true regional leader in low carbon and intelligent manufacturing and generates economic, environmental and social value. With such a context, the role of regional development agencies in Serbia becomes crucial to make sure that regional manufacturing innovation ecosystems can truly support industry's ambitions.

We had excellent experience in talking, meeting and working with representatives from the regional development agencies which only proves the interest and desire of the agencies to make this ambition possible. The agencies are run by highly qualified and ambitious staff which can definitely make their regions EU-wide engines of intelligent and sustainable manufacturing hotspots via targeted smart specialization strategies.

According to researchers, regional development problems could be largely solved through the development of smart specialization strategies at each of the NUTS II levels.

This is definitely the case indeed. Smart specialization strategies at NUTS II level might serve the best purpose especially for places that are still lagging in their innovation development process. Especially when it comes to leapfrogging, Serbia has a very good chance to fast-track its development and "skip" some intermediary stages. We are supporting the idea of smart specialization at NUTS II regions and we are happy to work with the different regional development agencies and go for multi-region smart specialization pilots.



From a Regional Innovation Ecosystem in the Western Balkans to a Common Regional Market

*Siniša Marčić, Senior Expert for Development of Human Capital,
Regional Cooperation Council – RCC*

How does the Western Balkans Innovation and Research Platform that was created by the RCC work?

The Western Balkans Innovation and Research Platform is envisaged as an operational tool for networking and information exchange with an emphasis on innovation. The Platform is one of the tools aimed at encouraging development of the regional innovation ecosystem in the Western Balkans in the context of implementing the Common Regional Market (CRM) strategic document. The opening of communication channels through the Platform seeks to avoid duplication of similar projects

and initiatives. This approach contributes to a more targeted mobilisation of already limited resources of different international organisations and partners in the region. Our meetings provided insight into the situation on the ground and certain overlapping activities to numerous partners. Some even signed cooperation agreements afterwards in order to target their activities more effectively in the region. In addition, we have launched a special website (balkaninnovation.com) that provides insight into regional initiatives.

Through the Common Regional Market Action Plan, governments from across the region have undertaken to encourage development of a regional innovation ecosystem and more profitable industries. The focus is on the automotive, metalworking and creative industries, as well as food production and the great opportunities provided by the green transition. Particular emphasis is placed on information and communication technologies (ICT), which are often defined as horizontal priorities in strategic documents in the region. However, the transition to technology intensive industries requires wise moves and significant resources. Therefore, governments and the business sector in the region should invest additional joint efforts to create a stimulating environment that will enable the economy to focus on new areas. This is particularly important given the numerous opportunities arising within the framework of the digital and green transition

What are technology transfer offices (TTO) in the Western Balkan region and how can they contribute to the transfer of technological practices?

The technology transfer offices connect scientists and businesspeople through specific knowledge commercialisation projects. Such offices provide companies with the opportunity to obtain knowledge in certain fields through cooperation with nearby universities, especially advanced knowledge based on scientific research results. This is particularly important when companies want to improve existing or place innovative products on the market. The cooperation with businesspeople provides the scientific community with the opportunity to commercialise existing knowledge, while developing scientific achievements. Such offices are not present in all our universities because there is no awareness of the importance of knowledge commercialisation. On the other hand, scientific productivity in the region lags far behind the productivity of developed countries, lacking an impetus for more dynamic cooperation. Experiences from other countries indicate that numerous business opportunities remain unused because the economy often fails to recognise scientific knowledge published in scientific journals as a source for creating new products. Individually, all of our markets are small, which is why it is important for our businesspeople to think about joining European or global value chains. This is far easier to achieve if they place innovative products on the market. However, existing technology transfer offices are generally small and insufficiently developed to enable proper transfer of knowledge from the university to the economy. Therefore, in the previous period, the RCC supported several activities aimed at their empowerment through capacity building, establishing connections with similar offices and encouraging joint regional cooperation.

The spillover effect is very difficult to accomplish in environments lacking dynamic scientific organisations. However, by raising awareness of the possibilities offered by cooperation with scientific teams, companies from different areas can establish cooperation with other universities. Such examples already exist in practice, but substantial efforts should be put to promote success stories as much as possible. The Regional Cooperation Council seeks to achieve a multiplier effect by backing the activities that will support a large number of users, such as technology transfer offices, digital innovation hubs, etc. However, it is essential to emphasise that the RCC's primary mission is to create prerequisites for regional cooperation. Significant results can only be achieved through active involvement of other partners.

How and in what way do you plan to take into account cultural prerequisites for receptiveness and transfer of technologies in the process of innovation ecosystem creation for the Western Balkans?

In short, the key obstacle to a meaningful cooperation between the scientific research and business communities lies in the high level of intergroup mistrust. This relationship mostly results from the atomisation of both business and scientific research sectors unlike in the socialist era, which was characterised by large economy and purpose-built universities and institutes. Today, the situation is reversed, and over 98 percent of all companies are small and medium-sized enterprises that are primarily focused on survival and rarely think about innovations or the introduction of new technologies. However, the COVID-19 pandemic has shown that many companies in our region are capable of a very quick transformation of business models that require creation or use of innovative solutions. In ordinary circumstances, it is necessary to create an environment conducive to experimentation, stimulate innovation culture, and encourage people to perceive failures as mere stops on the journey towards creation of companies based on advanced knowledge. One should keep in mind that creating a small innovation ecosystem is a complex and lengthy process, and promotion of a regional ecosystem is far more challenging. The performance of start-up companies from the region indicates that it can be achieved, but far greater resources should be mobilised to produce tangible results. In order to popularise the innovation culture, the RCC launched two regional initiatives for the promotion of successful examples: Butterfly Innovation & Business Forum and Butterfly Innovation Award. In cooperation with the World Economic Forum, we launched a regional Competitiveness and Innovation Accelerator, which is based

on public-private dialogue between the most important stakeholders in these fields. In addition, the Balkathon regional competition in the best innovative solutions has been organised for three years. The RCC also supports the empowerment of women entrepreneurs, including the regional award for Woman Entrepreneur of the Year. Through these initiatives and active cooperation with other organisations, we contribute to awareness raising of the importance of a regional innovation ecosystem, and especially to the promotion of specific solutions created in the Western Balkans

What are the most important findings of the first strategic plan for the development of research infrastructure in Albania, Bosnia and Herzegovina, Kosovo*, North Macedonia? What steps should be taken in order to put the research infrastructure in service of economic development of the Western Balkans?

The Regional Cooperation Council enabled mapping of research infrastructure in four economies, followed by the regional mapping of research and innovation infrastructure. A positive conclusion is that the region has the elements of infrastructure required for scientific-research work in the most represented scientific disciplines such as mathematics, engineering (electrical engineering, electronics, ICT), agriculture, medicine, biology, etc. On the other hand, the scientific infrastructure is largely outdated and modest in scale compared to the state-of-the-art infrastructure in the EU. This is why more generous funds should be provided for focused investments in the future, especially in areas that have been prioritised by the economies of the region. Innovation infrastructure develops rapidly, but it mostly offers basic services such as organisation of trainings, co-working space, networking through different events, etc. A serious step should be taken in order to create conditions for innovation culture boost in the Western Balkans, among other through contemporary innovation infrastructure, including efficient regional financial instruments. The expediency of infrastructure is directly related to its effective use, which is currently not the case. Also, policy-makers should pay far more attention to geographical diversification because existing infrastructure is generally located in capital cities and large centres.

Each of the economies in our region is small, especially in terms of competitiveness on the global market. There is a trend of consolidating territorial units in the world in order to boost competitiveness. Individual innovation ecosystems are tiny and can hardly generate any significant results, unless regional cooperation is encouraged.

What are the contours of the envisaged innovation ecosystem at the Western Balkans level, which you mentioned as one of the objectives of the RCC's work, that is, of the human capital department?

Each of the economies in our region is small, especially in terms of competitiveness on the global market. There is a trend of consolidating territorial units in the world in order to boost competitiveness. Individual innovation ecosystems are tiny and can hardly generate any significant results, unless regional cooperation is encouraged. Initially, through networking and good practice exchanges, and then gradually through joint projects and regional initiatives focused on strategic priorities in the region. For instance, these can be the production of healthy food, processing industry, tourism or information and communication technologies as a region-wide horizontal priority.

Development of a sustainable innovation ecosystem must be based on a combination of recognising the needs and opportunities from the economy on the one hand, and creating targeted policies that can support such development on the other. This is feasible through an ongoing dialogue between the economy, scientific-research community and government institutions. Gradual positive developments will contribute to the development of innovative solutions based on more technologically-advanced solutions and building of mutual trust. When businesspeople come to realise that they can find partners nearby, instead of resorting to imports of expensive technologies or consulting services, the demand for local or regional knowledge will rise. In the long run, such an approach can create a robust economic environment resistant to external shocks and a more attractive social environment that will keep young people from fleeing to wealthier countries.

* A roadmap is not a map of one, but of many roads. A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it.

A scenic landscape featuring a bright blue sky with scattered white clouds. Below the sky, there are rolling green hills and a dense forest of evergreen trees. In the foreground, a grassy field is visible, with a small, rustic wooden structure (possibly a shed or a small house) on the right side. The overall scene is bright and clear, suggesting a sunny day.

REGIONAL POLICY AND REGIONAL DEVELOPMENT **FOR WHOM?**





2022 Census: Population decline observed in all regions except in the region of Belgrade

*Dr. Branislav S. Đurđev, Professor, Department of Geography, Tourism, and Hospitality,
Faculty of Sciences, Novi Sad, MSc in Demography, Berkeley University.*



Six months since the completion of the census, the first official data have been published, indicating that Serbia has a total of half a million fewer inhabitants compared to 2011.

Today, Serbia has a population of 6,647,003 people, of which 3,231,978 are males and nearly 3,415,025 are females, as announced by the Statistical Office of the Republic of Serbia (SORS).

- 80% or 5,360,239 people, identified themselves as Serbs, which is about 600,000 fewer than in 2011, according to the latest publication by the Statistical Office of the Republic of Serbia regarding data on national self-identification in the census
- The largest communities are Hungarians with 184,442 individuals, followed by Bosniaks with 153,801 and Roma with 131,936.

- There are around 70,000 fewer Hungarians and 16,000 fewer Roma.
- Only the number of Bosniaks increased by approximately 8,500, as well as Albanians who boycotted the census in 2011.
- The number of individuals identifying as Yugoslavs, in reference to the former common state, increased by 4,000.
- Nearly half a million individuals refused to declare their national affiliation or did not provide an answer to that question, amounting to 458,211 people.
- In Vojvodina, there are 182,453 fewer inhabitants than in 2011, while in Southern and Eastern Serbia, the decline is 142,739.
- The largest population decrease was recorded in the region of Šumadija and Western Serbia, with a decline of 196,906 people.
- When it comes to municipalities, the largest decrease was observed in Črna Trava, located in south-eastern Serbia, near the border with Bulgaria, which is also the municipality with the smallest population in the entire country, with 1,066 inhabitants.

In addition to Crna Trava, the largest population declines in Serbia are observed in the municipalities of Gadžin Han and Babušnica, also located in southeastern Serbia, as well as the municipality of Rekovac in Šumadija.

Population decrease has been recorded in all regions, at a rate of approximately 10%, except in Belgrade, where the population has increased by 1.6%.

In Belgrade, there has also been an increase in the number of dwellings, by a significant 18.6 percent, surpassing the national level increase (12.26 percent) compared to the 2011 census.

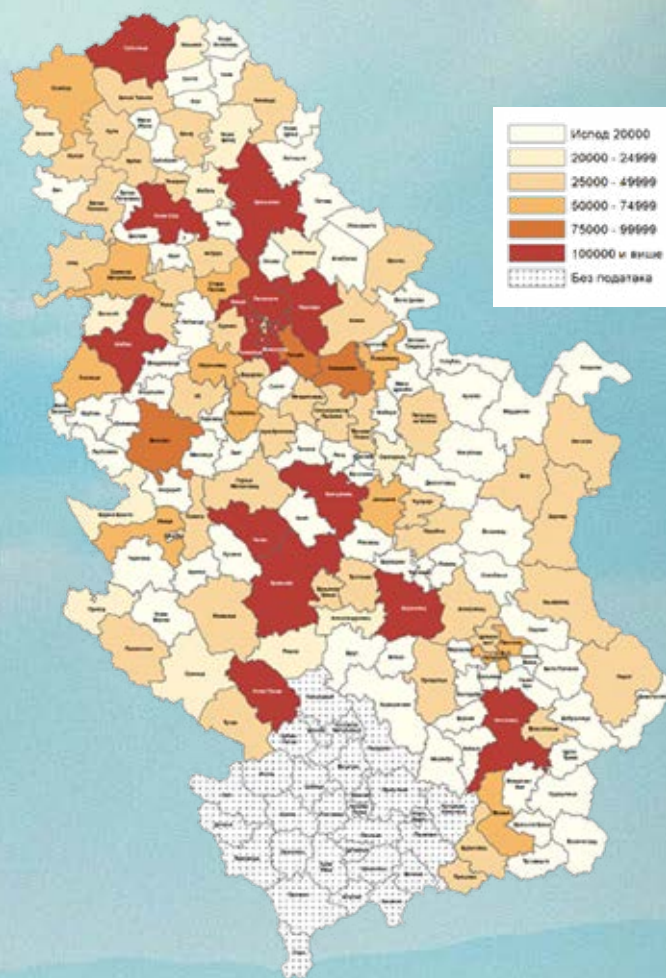
Municipalities with the highest growth in the number of dwellings are Čajetina, which includes the Zlatibor mountain, Sokobanja in the east of the country, Belgrade's Zvezdara district, and Novi Pazar.

Preliminary data indicate that Belgrade has a population of 1,681,405 people (26,123 more than in 2011). More than 100,000 inhabitants are found in 12 other cities: Novi Sad (367,121), Niš (249,816), Kragujevac (171,628), Leskovac (124,889), Subotica (124,679), Pančevo (115,910), Kruševac (114,331), Kraljevo (111,491), Novi Pazar (107,859), Zrenjanin (106,562), Čačak (106,453), and Šabac (106,066). The largest population growth occurred in the Belgrade municipalities of Zvezdara and Vračar, as well as in Novi Sad and Novi Pazar.

The region of Šumadija and Western Serbia has the highest population, with 2,031,697 people residing there.

In Serbia, there are also 2,550,854 households and 3,628,175 dwellings, according to census data. Of these, there is a 7.7 percent increase in households in Belgrade.

Apart from Belgrade, the largest increase in the number of dwellings occurred in the Western Serbia region, with a growth rate of 12.8 percent, while the southern and eastern regions saw a slight decrease of one percent - 12.7 percent.



Source: Statistical Office of the Republic of Serbia





In focus: A City the Size of Bor Yearly Emigrates from Serbia – Costs for Serbia Around Three Billion Euros

Nenad Jevtović, Director, Institute for Development and Innovation

Migration as a key factor in social movements

Migration in Serbia and the Western Balkans has accelerated as a result of economic movements influenced by relations and conditions in the largest states and economies of the European Union. With the increase in the number of emigrants and immigrants, the population profile in Serbia undergoes significant changes. Therefore, the question arises as to who will become a citizen of the European Union when the time comes. The magnitude of the consequences of emigration can be considered based on the results of the analysis “Costs of Youth Emigration” from 2019 and the methodology for calculating the annual costs and benefits resulting from the emigration of the population from Serbia. The analysis¹ has shown that, in monetary terms, Serbia annually suffers a loss of between 2.5 and 3 billion euros due to the emigration of people who have been invested in through their education, as well as because they no longer participate in the creation of Serbia’s gross domestic product. The benefits resulting from emigration have also been considered, which are reflected in the constant increase in remittance inflows sent to Serbia. The methodology developed for Serbia has been applied to other countries in the Western Balkans, leading to the finding that the region suffers annual losses of over five billion euros.

One Bor or Pirot Emigrates from Serbia Annually

An indirectly raised research question through the analysis of emigration costs is the number of emigrants from Serbia on an annual level. Namely, by cross-referencing data from international sources, it has been estimated that between 15,700 and 49,000 people emigrate from Serbia each year. Domestic sources were not considered during the research because, after comparing the number of emigrants from Serbia with the data provided by international organizations such as the OECD, it was concluded that they are completely irrelevant and incomplete. After a debate in the public and professional circles, the dilemma regarding the number of emigrants was resolved by the publication and interpretation of the first data from the Population Census conducted by the Statistical Office of the Republic of Serbia (SORS) in 2022. Representatives of SORS presented an estimate that between 25,000 and 27,000 people emigrate from Serbia annually, with the

¹ “Costs of Youth Immigration”, Institute for Development and Innovations, 2019.

The analysis has shown that, in monetary terms, Serbia annually suffers a loss of between 2.5 and 3 billion euros due to the emigration of people who have been invested in through their education, as well as because they no longer participate in the creation of Serbia’s gross domestic product.

caveat that this is a research estimate and not a data derived from the results of the 2022 Census due to the incomplete comparability of the 2022 Census with the 2011 Census. Comparability is not possible due to the methodological framework that has now been implemented for the first time, as well as other factors such as the participation of Albanians from the municipalities of Preševo, Bujanovac, and Medveđa in the 2022 Census. According to later confirmations by SORS, approximately 300,000 people net emigrated from Serbia between 2011 and 2022. However, it should be understood that the number of people who emigrated from Serbia is higher than 300,000, as net emigration is obtained when the number of emigrants is subtracted from the number of immigrants to Serbia.

High-quality migration statistics is complex to interpret

Unlike the situation where domestic emigration statistics from Serbia are almost non-existent and international statistics are not comprehensive, immigration statistics to Serbia are a significantly more regulated area. The existence of data on immigration to the Republic of Serbia is a result of international obligations that the Republic of Serbia has undertaken in the process of visa liberalization, specifically within the framework of the Visa Liberalization Roadmap set by the European Commission for Serbia in 2008. The time series of data, available to researchers, decision-makers, and the public, has been accessible since 2010, primarily thanks to the preparation and publication of the Migration Profile of the Republic of Serbia by the Commissioner for Refugees and Migration. Although more advanced than emigration statistics, immigration statistics have numerous shortcomings that prevent precise conclusions about the number, structure, and trends of immigrant contingents. One reason why immigration statistics are not straightforward to interpret stems from the regulations of the Republic of Serbia itself,

so Serbian nationals from the region who come to study at universities in Serbia remain invisible in immigration statistics until the moment they become citizens of the Republic of Serbia.

One Raska or Lebane immigrates to Serbia annually.

Through a comprehensive analysis of various migrant contingents from the Migration Profile², insights can be gained into the number of foreign nationals who have immigrated to the Republic of Serbia and contribute to its economy. The number of issued visas, as well as their structure according to various parameters, can be one of the first, but not necessarily robust indicators of immigration. In the period from 2010 to 2021, 127,596³ visas were issued in the Republic of Serbia, with a quarter of them being granted to citizens of the People's Republic of China. Immigration or settlement represents the relocation to the Republic of Serbia from another country, which lasts or is expected to last longer than 12 months. According to the previously accepted general definition, the immigrant population in Serbia doubled during the period from 2010 to 2021. On average, the immigrant population consisted of 27,000 people annually⁴, but it is noticeable that there is no constant growth, and the number of immigrants within the immigrant population is highly variable. Furthermore, considering the number of approved temporary residence permits for individuals staying in Serbia for the first time, it can be observed that the number of these individuals almost tripled from around six thousand to 17.5 thousand from 2011 to 2021. This increase is primarily a consequence of an increased number of Chinese and Turkish citizens receiving approval for temporary residence in Serbia for work purposes. Compared to 2011, there are over five thousand more Chinese in this category, while Turkish citizens first appeared in this category in 2016, and their number has been steadily increasing, reaching around four thousand in 2021. From 2010 to 2021, an average of about 21,500 people per year acquired Serbian citizenship. In total, over the course of 12 years, the number of newly admitted Serbian citizens amounted to 257,148⁵. From 2011 to 2021, the number of new Serbian citizens from Bosnia and Herzegovi-

The existence of data on immigration to the Republic of Serbia is a result of international obligations that the Republic of Serbia has undertaken in the process of visa liberalization, specifically within the framework of the Visa Liberalization Roadmap set by the European Commission for Serbia in 2008.

na was 156,423⁶, which accounts for two-thirds of the total number of granted citizenships in the analyzed 11 years. If acquiring citizenship meant that a person resides and contributes to Serbia, then through the analysis of the number of newly admitted citizens provided by the Ministry of Internal Affairs, it could largely explain the annual immigration rate. However, an immigrant is someone who resides or plans to reside in the Republic of Serbia for more than 12 months, so the conclusion is that not all those who acquire Serbian citizenship are immigrants.

Conclusion

Emigration and immigration represent complex processes that involve numerous factors that drive them, as well as processes that leave immeasurable and unpredictable consequences. In the case of Serbia, emigration and immigration movements are significant, indicating that the population contingent, i.e., people living in the Republic of Serbia, undergoes significant changes over the years. This leads to the fact that, at this moment, we cannot predict the extent to which current residents of Serbia will become citizens of the European Union when Serbia becomes part of this community.

⁶ Ibid

² See: <https://kirs.gov.rs/lat/migracije/migracioni-profil-republike-srbije>

³ Calculations prepared by the authors based on: <https://kirs.gov.rs/lat/migracije/migracioni-profil-republike-srbije>

⁴ Ibid

⁵ Ibid



Measures of Industrial and Economic Policy Needed for Balanced Regional Development in Serbia

Milica Uvalić, Professor of Economics, University of Perugia – Italy

Introduction: Why Regional Developments matters in Serbia

Regional development and regional inequalities in Serbia are relatively neglected topics despite some research conducted by experts from various disciplines and a rich statistical database. The issue of regional development deserves greater attention as regional inequalities in Serbia are among the most noticeable in Europe and have even increased in recent years. Here, we will briefly discuss the regional development policy in Serbia, present some indicators that illustrate regional inequalities, and highlight key issues in regional development.

More balanced economic development in Serbia would be significant for economic and political reasons. Economic reasons include the positive effects of faster development of Serbia, especially in less developed areas, higher employment rates, particularly among young professionals, and reduced rural-to-urban migration. Among the political reasons, it is important to mention the reduction of the concentration of political power in larger cities, greater decentralization of some state policies, more intensive citizen participation in political processes, and the improvement of public policies at the local level. Regional development is significant for the EU integration process of Serbia and its future use of EU structural funds (Rikalović et al., 2017). Once a member of the Union, Serbia will

access significant financial resources through EU regional policy, which supports the development of less developed countries and regions. In 2021, Serbia reached 44% of the EU average gross domestic product (GDP) per capita (based on purchasing power parity), while all its regions, according to the EU methodology, fall into the category of “underdeveloped regions” as they have not reached 75% of the EU average GDP per capita. To fully absorb EU funds, further reforms of the state administration will be necessary, especially at the local level, in order to strengthen administrative capacities for project preparation and implementation.

Regional Development Policy in Serbia

The regional development policy regulates the Law on Regional Development from 2009, which introduced the territorial division of Serbia based on the classification of the European Union’s Nomenclature of Territorial Units for Statistics (NUTS). This law established regional infrastructure for administrative purposes and defined the competencies of relevant institutions, such as the National Council for Regional Development and Regional Development Councils for each region in Serbia. The National Agency for Regional Development and 17 accredited Regional Development Agencies were established. The most important institutions responsible for regional development incentive programs are the Development Agency of Serbia and the Development Fund.

Figure 1: Territorial Classification of Serbia (NUTS 1, 2, 3)



NUTS 1	NUTS 2 Regions	NUTS 3 – Regions and Administrative centers (in brackets)
Northern South	Belgrade	1. Belgrade (Belgrade)
	Vojvodina	2. Western Bačka (Sombor) 3. Northern Bačka (Subotica) 4. Southern Bačka (Novi Sad) 5. Northern Banat (Kikinda) 6. Central Banat (Zrenjanin) 7. Southern Banat (Pančevo) 8. Srem (Sremska Mitrovica)
Southern Serbia	Šumadija & Western Serbia	9. Mačva (Šabac) 10. Kolubara (Valjevo) 11. Zlatibor (Užice) 12. Moravica (Čačak) 13. Šumadija (Kragujevac) 14. Pomoravlje (Jagodina) 15. Raška (Kraljevo) 16. Rasina (Kruševac)
	Southern & Eastern Serbia	17. Podunavlje (Smederevo) 18. Braničevo (Požarevac) 19. Bor (Bor) 20. Zaječar (Zaječar) 21. Nišava (Niš) 22. Toplica (Prokuplje) 23. Pirot (Pirot) 24. Jablanica (Leskovac) 25. Pčinja (Vranje)

Source: Prepared based on Golic and Joksimovic (2017) and Regulation on the Nomenclature of Statistical Territorial Units of the Republic of Serbia from 2009

The territorial division of Serbia foresees three levels of territory. The first level, NUTS 1, includes Northern Serbia and Southern Serbia. The second level, NUTS 2, the most important one for implementing regional policies, comprises four regions: 1) Belgrade, 2) Vojvodina, 3) Šumadija and Western Serbia, and 4) Southern and Eastern Serbia. The third level, NUTS 3, includes 25 districts (see Figure 1).

The previous policy of providing state subsidies for less developed regions to stimulate regional development was continued after 2009. The main criterion for receiving funds from the Development Agency of Serbia is the level of development of a particular region. However, this policy did not yield the desired results as it failed to prevent deepening disparities in developmental levels among different regions, as evident from numerous studies conducted in the last decade (Barrios et al., 2020; Drobnjaković et al., 2016; Golić Joksimović, 2017; Manić et al., 2013, 2017; Miljanović et al., 2010; Petrović et al., 2011; Stamenković and Savić, 2017; Živanović and Gatarić, 2017).

Based on the data on subsidies provided by Serbian Business Registers Agency, we analyzed the degree of correlation between the average subsidy per company and the average GDP per capita of specific regions in 2018. The regression coefficient between these two variables was extremely low (0.0086), suggesting that state subsidies to companies were often given regardless of the level of development of the regions they belong to (Uvalić and Bartlett, 2021). Most of the state subsidies in 2018 were granted to companies in Belgrade (27%), despite Belgrade being the most developed region in Serbia.

The level of Regional Inequalities in Serbia

Regional inequalities in Serbia are highly emphasized, as shown in the overview of some key indicators for four regions of Serbia (see Table 1).

Table 1: Selected indicators of several regions in Serbia (2019)

Region	GDP per capita in 2019. (Million RSD)	GDP per capita indexes EU=100 (PPP)*	Employment rates (%)	Average net earnings (without taxes and contributions)	Youth unemployment rate (NEET)**	Employment in technology-intensive and knowledge-based sectors (% of the workforce)	Employees in the Research & Development sector (% of the workforce)	Percentage of households with internet access (%)
Belgrade	1.332	67,7	64,9	74.311	11,3	7,7	1,64	89
Vojvodina	776	38.3	60,7	57.186	15,1	2,8	0,70	81
Šumadija i Western Serbia	514	26.6	59,9	51.068	16,8	1,3	0,18	74
Southern and Eastern Serbia	497	25.9	56,9	52.875	17,6	1,6	0,32	70

Source: The Statistical Office of the Republic of Serbia

* Based on Purchasing Power Parity (PPP)

** Rate of NEET (Neither in employment, education nor training) includes young people from 15 to 24 years of age, who do not have a job, nor are they in school or training.

At the NUTS 2 level, the differences in GDP per capita between the most and least developed regions in Serbia in 2019 were 1 (Belgrade) compared to 2.7 (Southern and Eastern Serbia). Although by 2019, Serbia had reached 39.5% of the EU average GDP per capita, the Belgrade region had reached as high as 67.7%, while Southern and Eastern Serbia reached only 25.9% of the EU average GDP per capita. There are significant differences in employment rates, with the Belgrade region at 65% and Southern and Eastern Serbia at 57%. Regional disparities are greater in terms of wages. Wages are one-third higher in the Belgrade region compared to Šumadija and Western Serbia. The youth unemployment rate in Belgrade is relatively low, at only

11.3% (like the EU-27 rate of 11.1%), but in the Southern and Eastern Serbia region, it is 17.6%. Regional disparities are particularly pronounced in employment in high-tech and knowledge-based sectors (1 compared to 6), especially in the Research and Development sector (1 compared to 9). From 2010 to 2019, Belgrade and Vojvodina made the largest contributions to Serbia's total GDP. During this nine-year period, GDP increased by 74% in Belgrade and 70% in Vojvodina, but only 57% in Southern and Eastern Serbia and 54% in Šumadija and Western Serbia (data from the Statistical Office of the Republic of Serbia).

International comparisons of GDP per capita in Serbia and EU countries (NUTS 2 level) show that Serbia is among the countries with the highest regional inequalities, as measured by the coefficient of variation of GDP per capita (see Chart 1). When com-

paring Serbia to EU countries in 2019, only the Czech Republic, Slovakia, and Romania had higher coefficients of variation of GDP per capita than Serbia.

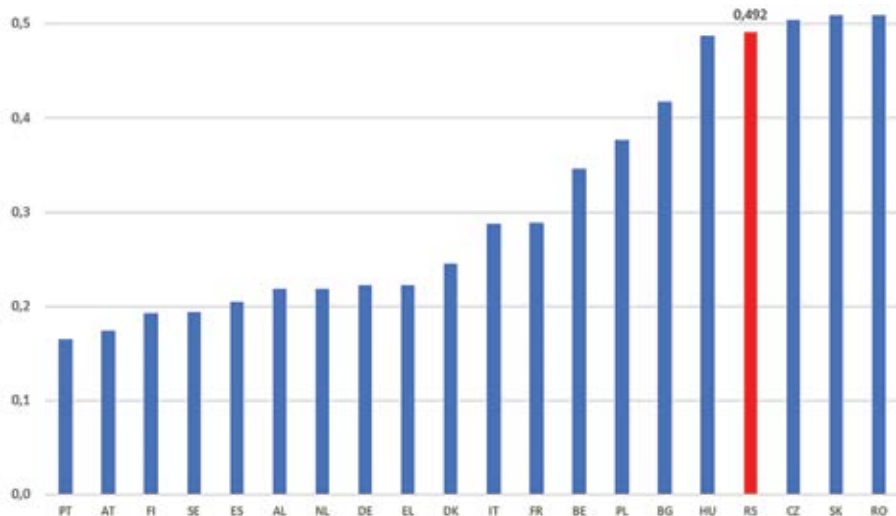


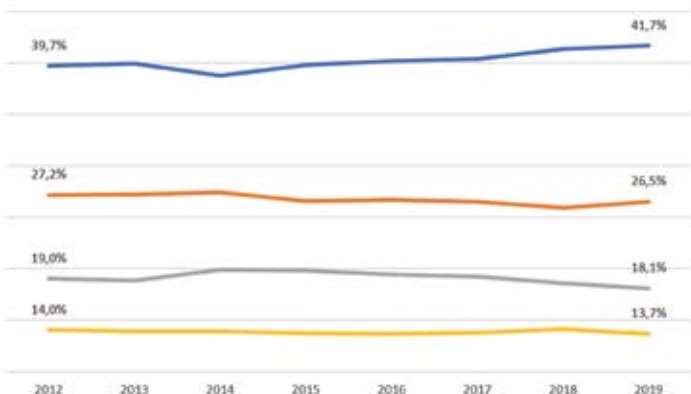
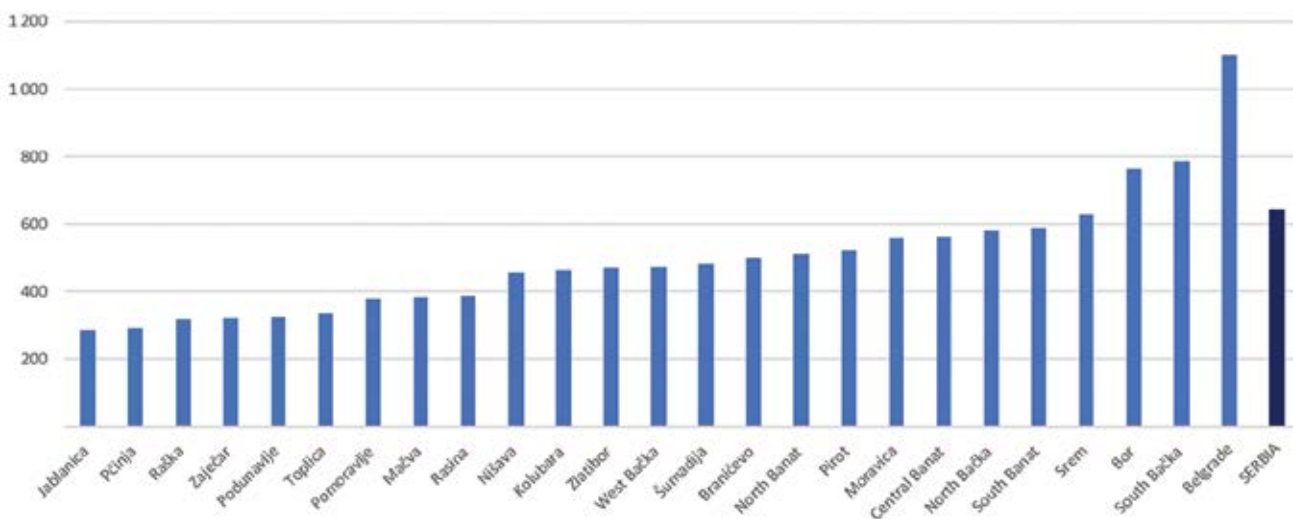
Chart 1. Coefficient of variation of GDP per capita (NUTS 2) in Serbia and EU countries (2019)

Source:
The Statistical Office of the Republic of Serbia

There are also significant differences in the level of development among various regions in Serbia (NUTS 3 level). Based on data from the Statistical Office of the Republic of Serbia, the gross value added per capita in 25 regions of Serbia ranged from 288,000 dinars (Jablanica) to 1,102,000 dinars (Belgrade) in 2019 (see Chart 2). Eurostat data for 2018 indicate similar disparities in the level of development among different regions of Serbia. GDP per capita in 2018 was the lowest in the Pčinja region (2,800 euros) and the highest in Belgrade (10,500 euros).

Chart 2. Gross value added per capita in various regions of Serbia (thousands of dinars, 2019).

Source:
Eurostat



Legend:
■ Belgrade region
■ Region of Vojvodina
■ Region of the Šumadija and Western Serbia
■ Region of southern and eastern Serbia

Chart 3. Shares of individual regions in the total GDP of Serbia (%), 2012-2019.

Source:
Eurostat

Problems of Uneven Regional Development in Serbia

Despite the territorial regionalization of Serbia based on the methodology of EU territorial division and the establishment of new institutions responsible for regional development, recent expert analyses indicate a high degree of regional inequality in Serbia and numerous problems that contributed to the deepening regional disparities.

A portion of the problems stems from ineffective regional development policies. According to some assessments, the policies in Serbia have predominantly relied on short-term selective measures without an integrated approach to regional development (Drobnjaković et al., 2016). State subsidies granted to less-developed regions could not achieve the desired effects without appropriate institutional support (Lutovac et al., 2017). The essential competencies for regional development have not been sufficiently transferred to individual regions, nor have they been provided with adequate financial resources to finance local economic development (Avlijaš and Bartlett, 2011; Golić and Joksimović, 2017; Jakopin, 2018; Manić et al., 2017). Regions in Serbia lack sufficient decision-making autonomy, while in recent years, there has been further centralization (Kmezić and Đulić, 2018). Despite the significant comparative advantages of Eastern Serbia, the Timok River Valley has experienced depopulation and increased poverty due to the transfer of new competencies to the local level without parallel provision of adequate financial resources (Guglielmetti and Avlijaš, 2013). However, some analyses have shown that many local institutions do not even use the available financial resources efficiently (Manić and Mitrović, 2021). One consequence is that many rural areas are experiencing depopulation as a result of mass emigration to cities and abroad, leading to a decrease in the working-age population and an increase in poverty (Golić and Joksimović, 2017).

Regional problems deepened as a result of the economic transition to a market-based model of the economy (Uvalić, 2010; Jakopin, 2018). Privatization, liberalization, and economic restructuring after 2001 contributed to the concentration of economic activities, primarily in Belgrade and the northern part of the country. At the same time, traditional industrial centers in Southern and Eastern Serbia, Šumadija, and Western Serbia experienced setbacks (Jakopin, 2018; Lutovac et al., 2017). Most of the foreign direct investments (FDIs) between 2000 and 2015 were directed toward the Belgrade region (Vračarević and Jovanović, 2015). However, significant investments

State measures should provide increased support for regional and local priorities in line with Serbia's Smart Specialization Strategy adopted for the period 2020-2027

have also recently been made in Šumadija and Western, Southern, and Eastern Serbia, creating new job opportunities (Arandarenko et al., 2021). Nevertheless, this has not been sufficient to significantly reduce the development gap.

An inadequate economic environment also contributed to the deepening of regional problems, as the conditions for developing local entrepreneurship in less-developed and rural areas of the country are much less favorable than in larger cities (Aničić, 2011). There are still administrative barriers to establishing new micro, small, and medium-sized enterprises despite liberalization measures (Manić et al., 2017). Insufficiently developed transport infrastructure is also a significant factor contributing to the inadequate economic development of some Serbian regions (Drobnjaković et al., 2016).

Conclusions and Recommendations

Regional development policies failed to narrow the developmental gap between less developed and more developed regions and areas in Serbia. Industrial policy in recent years heavily relied on attracting foreign direct investments (FDIs) and was a major driver of structural changes and regional resource reallocation in Serbia. After 2015, a portion of FDI has been invested in some manufacturing sectors located in less developed regions, contributing to economic development and increased employment. However, Belgrade maintained a significant advantage over other regions. The transition to a knowledge-based economy and digital connectivity led to rapid economic development primarily in Belgrade. There has been a high concentration of employment in high-tech sectors, research, and development. Industrial policy measures aimed at promoting local economic development have proven ineffective in significantly reducing regional disparities in Serbia. The model of economic development primarily based on local resources, relying on existing human and social capital and domestic entrepreneurship, has not been sufficiently established (despite numerous programs supporting micro, small, and medium-sized enterprises, innovation funding), as well as the establishment of free zones and technology parks (Bartlett et al., 2019).

To stimulate more balanced economic development in Serbia, a set of industrial and economic policy measures would be needed:

(1) Promotion of local entrepreneurship: There is a need to further incentivize entrepreneurs in less developed areas to establish new businesses, employ workers, and implement innovative solutions, leveraging the advantages of lower living costs and less polluted environments. Savić et al. (2015) propose increased promotion of local business clusters specializing in knowledge-intensive services and creative industries. Aničić et al. (2016) emphasize the importance of local networking through business associations, local organizations, and universities in Serbia. Local entrepreneurship should become the main driver of future regional development, but improving the quality of institutions at the local level will be necessary for that to happen. Empirical research on EU regions shows a strong link between the quality of state institutions and a region's capacity to adopt innovations (Rodríguez-Pose, 2013; Rodríguez-Pose & Di Cataldo, 2015).

(2) There is also a need for more intensive collaboration between domestic and foreign companies to foster greater cooperation between local small and medium-sized enterprises (SMEs) and multinational companies operating in Serbia. The Ministry of Economy and Development Agency of Serbia took measures in that direction in 2019 through the "Support Program for Companies to Enter Supply Chains of Multinational Companies," aiming to connect domestic SMEs with multinational companies through subsidies. The program should be continued to strengthen and create new networks of joint business ventures between local and foreign companies, thereby maximizing the spillover effects of FDI in Serbia.

(3) State measures should provide increased support for regional and local priorities in line with Serbia's Smart Specialization Strategy adopted for the period 2020-2027. However, efforts to promote a knowledge-based economy and smart specialization will require further improvement of broadband internet infrastructure in rural and less developed areas. Digitalization could significantly stimulate more balanced economic development by facilitating better connectivity between inland businesses and the rest of the economy, as well as with foreign companies. Further improving digital connectivity in Serbia would enable increased employment through remote work opportunities.

Ensuring increased financial resources for local self-governments would create more favorable conditions for establishing new businesses, attracting highly skilled professionals, and developing the digital economy at the local level.

(4) It is important to implement a higher degree of fiscal decentralization and autonomy for local self-governments to ensure greater decision-making independence from central government authorities. Ensuring increased financial resources for local self-governments would create more favorable conditions for establishing new businesses, attracting highly skilled professionals, and developing the digital economy at the local level.

In the future, Serbia should utilize both models of economic development – the first being predominantly based on foreign investments and the second based on local entrepreneurship. Instead of the existing industrial policy primarily focused on indiscriminately attracting foreign capital, Serbia needs a policy that stimulates the attraction of human capital to rural areas and the creation of new firms based on greater utilization of local natural resources, social capital, entrepreneurship, and other advantages such as lower living costs, labor costs, and reduced pollution. This kind of policy would create an economic environment where the benefits of economic development are more evenly distributed throughout Serbia's territory.

The contribution is based on Uvalić, M. and W. Bartlett (2021), Regional Disparities and Regional Development Policies in Serbia, Friedrich Ebert Stiftung, Belgrade.



Smart specialization A Topic of Concern for all of us?

Slavo Radošević, Professor of Industry and Innovation Studies at University College London

What does the concept of smart specialization encompass?

We can consider smart specialization as the European version of a new industrial policy. Smart specialization brings the understanding that the market alone cannot promote the structural changes the economy needs.

Smart specialization is not only based on identifying and improving areas where the market poorly functions. The focus shifts to observing the entire economy and identifying deficiencies in the system, not just the market. That is important in a reality where sectoral classification in the modern industry becomes distinctive. It is challenging to define what constitutes a sector in an industry with so many new technologies. For example, what does the automotive industry mean today when a car contains 60% electronics, software, and similar components? Therefore, the concept assumed by the old industrial policy is no longer relevant.

Smart specialization introduces a new framework for communication between the government and the economy to agree on strategic problems and solutions. In this sense, smart specialization becomes important for regional development as only through the collaborative interaction of stakeholders at all levels can “smart” solutions for regional and national development be achieved.

The danger lies in perceiving smart specialization as an additional administrative requirement coming from the EU. If approached in this way, its purpose is lost because the country will not be able to access significant funds, and as a result, no significant effects can be expected.

As the accession process gains momentum, the benefits of a smart specialization strategy become significantly greater. Some member countries have understood this based on their own examples, which should serve as lessons for others.

Can the Smart specialization strategy function as an instrument that helps regions build the institutional capacity necessary for further economic development?

In the Western Balkan countries, the regional level is not institutionally developed. The EU accession process can “force” candidate countries to strengthen regional levels, considering them as administrative, economic, and technological entities. There should be local cooperation on the regional level, and the region should have a certain degree of autonomy in innovation and development.

If funding for activities at the regional level can be secured, there is a valid reason to institutionalize the region as an administrative and economic unit. People living and working in these regions can more easily recognize the region’s potential and invest in its development. In this sense, regional development agencies would truly become the foundation of regional development. Numerous European regions, in similar situations, used this approach to leapfrog and become leaders in certain activities. I believe that some of the regions in Serbia can take advantage of this opportunity.

The success of Smart specialization depends on the intermediaries involved in the process. The intermediary must be objective and unbiased, avoiding inclination towards “stronger” sectors and industries. Serbia has developed its strategy relatively well precisely because the intermediary in the process was relatively objective. Unfortunately, due to the outbreak of the pandemic and the new cycle of uncertainty in European integration, that process has lost momentum. The only solution is to start over from scratch.

The process of entrepreneurial discovery lies at the core of Smart specialization. How can this process involve the business, scientific, and research diaspora, as they tend to invest in the regions they come from?

Entrepreneurial discovery is a process that transforms regions, and all stakeholders must be involved, from regional institutes and chambers of commerce to individuals working in small businesses who may think this process does not concern them. Everyone needs to see their interest in the Smart specialization. At the same time, the institutions remain key actors in the entire process. An institutionally organized region will benefit more from Smart specialization.

A good example is northern Portugal, with its footwear industry. In the 1970s, the main characteristics of this industry were cheap labor and weak technology. Twenty years later, the region became a global producer and exporter of footwear (95% of total production is exported). One of the main drivers of development in the region was the institute dedicated to the footwear industry. The region underwent a complete transformation, employing around 50,000

people. Such success is the result of various factors, and credit also goes to the European Commission, which encouraged the process of Smart specialization. The image of northern Portugal is entirely different today, thanks to Smart specialization.

The diaspora issue is a problem in small Eastern European countries, primarily due to organizational challenges. It is necessary to present business opportunities to entrepreneurs from the diaspora. However, it still boils down to internal regional organization. If the region itself is unorganized, external actors will not be able to make significant changes.

There are scientific and technological parks in almost every statistical region of Serbia. These are called supply-side measures, where the state provides infrastructure for which there is no demand. Is there a valid concern that such a situation leads to the phenomenon of “cathedrals in the desert”?

The same problem exists in many countries around the world. In the past, mayors used to open shopping malls, and now they open scientific and technological parks as a sign of modernization. However, that’s how you end up with “cathedrals in the desert.” An example of this is Crete in Greece. On the island of Crete, you have a European center—a sort of island within an island—that has no connection to the local environment on Crete or much relevance to the country. That center links to European research and development (R&D) in a way that does not contribute to the local and national economy.

In smart specialization, there has been an excessive focus on science and too little emphasis on innovation, productivity, quality, access to export markets, certifications required for international markets, workforce education, and more. If all of that existed, the reality would be different, and companies would seek services from scientific and technological parks. Serbia, Greece, and other countries are doing the opposite by building capacities for which there is no demand because companies do not see their purpose.

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How to change the linear innovation system to align with the smart specialization strategy and sustainable balanced regional development? Who are the actors involved, and what knowledge is required?

The linear innovation system is not just a problem in Serbia. Most middle-income countries have a structure and type of innovation in their economy that does not align with official policies. Policies in most of these countries emphasize a linear model of innovation, focusing on research and development, which alone is not sufficient for innovation.

On the other hand, there is an interactive innovation model which follows reverse logic. It starts with analyzing what a company produces that aligns with global standards and quality levels. Afterward, the company is directed toward process engineering and applied development. Only in subsequent iterations does the need for external support from an institute come into question. Serbia can be a country where the focus shifts back to production and combining multiple technologies to generate increased market value.

Furthermore, Serbia is one of the countries with a developed information technology services sector. However, what happens when they come up with something new? What happens when they need more capital? They get acquired by larger companies and leave the country without creating any value within Serbia.

Relying on Smart specialization, in which global value chains could the Western Balkans integrate?

Each individual Western Balkan country, if acting alone in the global context, will not go far. The only chance for the Western Balkan countries to position themselves and approach the global market is in unison. Smart specialization can help because there are complementarities among the countries that are not obvious but can be discovered. A dialogue at the Western Balkans regional level involving entrepreneurs, decision-makers, and other stakeholders who can contribute to discovering the comparative advantages of this part of Europe is needed. To even speak of integrating into global value chains, countries need coordination between smart specialization, industrial policy, and innovation policy.

What role does civil society play in the processes you have discussed? How seriously are the recommendations of civil society considered and accepted?

The level of accepted recommendations depends on the level of organization among civil society and how well their positions are articulated. Nowadays, the essence of civil society gets much broader. Even if someone works in science, technology, and similar fields, they can articulate their interests in various political processes through some form of association. As the concept of civil society expands, it is crucial whether politics provides political space for such groups to articulate their interests. The success of Smart specialization depends on how much political space is given to these groups to articulate their interests in various areas. Nowadays, there are hardly any social activities where groups don't feel the need to express their positions.

Many of the problems addressed in the text are not narrowly specialized. Issues that may seem sector-specific, scientific-technological, or innovation-related are too important to be left solely to people in those sectors and politicians. Therefore, broad societal engagement of all stakeholders is necessary to bring about changes for the economies of regions and entire countries.



THE BEST AMONG US







Emerging Smart Region

The region of Šumadija and Western Serbia

Nenad Filipović, Rector, University of Kragujevac

What is artificial intelligence (AI), and how can we explain to the citizens of Serbia the benefits they can derive from it? Where does Serbia stand on the global map regarding the application of AI in economic, regional, and local development planning?

Artificial intelligence (AI) is a computer program based on a specific algorithm that makes conclusions based on certain data. AI is basically a program that imitates what humans do hence the name artificial intelligence. The application of AI in everyday life, whether in urban or other environments, is still not very advanced. Currently, the most noticeable application of AI is in science, medicine, and some industrial sectors (the transportation industry, where we can mention the existence of self-driving vehicles, i.e., autonomous vehicles). Serbia is well positioned on the global map regarding the application of AI in economic, regional, and local development planning. The country has adopted a national AI development strategy, established the Institute for Artificial Intelligence, and initiated the implementation of scientific projects funded by

the Science Fund in the field of AI development and application. The University of Kragujevac has an accredited master's program in Artificial Intelligence, while similar study programs exist at the University of Belgrade and the University of Novi Sad.

Should we be afraid of artificial intelligence, and what changes in the structure of an economy does the expansion of AI bring?

We should not be afraid of AI. It is still essentially just a computer that we can turn off when we want. I believe that AI will bring many innovations to the economies of all countries, depending on the level and extent of its application in industry and the environment. Jobs that require automation are at risk of being replaced by robots or AI. However, maintaining these systems, programming them, and developing them will require the creation of new jobs and positions. To ensure that AI development is evenly and consistently spread across Serbia's territory, it is necessary to develop regions and university centers evenly.

Serbia is well positioned on the global map regarding the application of AI in economic, regional, and local development planning.

In which areas can artificial intelligence be best applied to improve the quality of life in the regions of Serbia? How can regions attract innovators?

AI application is the best in automated tasks such as production, transportation, medicine, finance, education, etc. In Serbia, AI should primarily be applied in production processes to increase efficiency. AI also finds significant applications in the energy sector for saving electrical energy. However, it is also necessary to apply AI as much as possible in healthcare, education, public administration, etc.

Artificial intelligence can also help in identifying "hard-to-reach" groups of people, such as those living in rural areas or individuals who are not registered. By using satellites, drones, image recognition, and search methods, AI can contribute to their identification and integration into social networks.

The region of Šumadija and Western Serbia can attract those who want to engage in the development and application of AI by creating new study programs at the University of Kragujevac and establishing new companies in this field. There is a project underway in Serbia to build an Innovation District in Kragujevac, which will undoubtedly contribute to developing these smart technologies. Additionally, the Data Center in Kragujevac is unique, as there is no similar institution in the broader Central and Southeastern Europe. The Data Center and the Innovation District will significantly boost the GDP in Šumadija and Western Serbia through the application of AI in various areas, such as bioinformatics, bioengineering, cybersecurity, and SmartCity, which are recognized as strategic directions for the development and use of AI in these fields.

How should an innovation ecosystem based on artificial intelligence in a region look like? When can we say that regional economic development planning is AI-driven?

An innovation ecosystem based on artificial intelligence in a region should enable, for example, the automatic provision of all municipal services in the region, automated transportation, and the use of robots for various services and tasks such as grocery procurement, cleaning, and maintenance. Regional development can be managed by implementing projects

focused on smart technologies. There are several isolated examples of AI and robot usage worldwide for providing all services or in rescue operations during fires, finding people in rubble after earthquakes, etc. However, these are still individual and isolated cases. It will take a considerable amount of time for these technologies to be fully implemented.

The COVID-19 pandemic accelerated the application of artificial intelligence in the healthcare sector. How can Serbia and the regions of Šumadija and Western Serbia integrate artificial intelligence into their healthcare and well-being improvement policies?

Serbia, as well as the Šumadija and Western Serbia region, can integrate AI into their healthcare and well-being improvement policies through various implementation programs. Prior to that, the implementation of appropriate regulations is needed, such as the use of AI technology for medical devices and therapy. Additionally, it is vital to fund projects that introduce AI into our healthcare system and its application in diagnostics and therapy. That is not an easy process, and it will take a lot of time for implementation, but it is necessary to initiate that process.

Education for artificial intelligence – over 65% of children starting primary school today will encounter new job types when they enter the job market. How can we educate workers needed in the future?

It is likely true that children starting primary school today will encounter new types of jobs that do not exist today, but that does not mean their education will be in vain. As the job market evolves, universities need to be the most responsive by adapting their study programs according to market changes. The skills and competencies that will contribute to added value in society and an AI-based economy are primarily programming, maintenance, and AI management. That includes the production of robots, new advanced computer

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processors, biocomputers, new chips, etc. Regions need to keep up with trends, and universities in the region should adjust their study programs to contribute to their population developing all the necessary skills, knowledge, and competencies.

Can you list some projects that are part of the HORIZON 2020 program?

SILICOFCM - Development of a computer platform for better diagnosis and prediction of the progression of familial cardiomyopathy.

TAXINOMISIS - Computer platform for assessing the development of carotid artery disease in patients.

HarmonicSS - Computer platform for harmonizing and analyzing regional, national, and international databases for Sjogren's syndrome, disease assessment, treatment, and the development of new regulations.

PANBioRA - Personal risk assessment in the development of new biomaterials.

InSilic - In silico clinical studies for the development of new biodegradable stents.

HOLOBALANCE - Development of holograms for personalized therapy using a virtual therapist for older people with balance disorders.

SMARTool - Computer system for clinical decision-making in the treatment of coronary artery disease.

DECODE - Computer platform for simulation and optimization of treatments for peripheral blood vessels.

SGABU - Capacity development of Serbia in multi-scale modeling and medical informatics in biomedical engineering.

COVIDAI - Application of regression methods based on artificial intelligence and machine learning in modeling the spread of COVID-19.



Digital Way of Thinking: Who's Driving?

Branislav Vujović, Founder of New Frontier Group, Austria

Vienna, Friday, March 17, 4:00 PM. As the work meeting will end timely, during the break, I use a personal assistant app on my mobile phone and request to organize transportation from the building where the meeting took place to my home by 6:00 PM.

At 6:05 PM, a self-driving car waits for me in front of the building entrance. I check if my grocery order from the supermarket and my dry-cleaned clothes are in the trunk. As soon as I enter the car, the screens around the back seat connect to my mobile phone, allowing me to respond to messages, perform and confirm a few

banking transactions, check the latest news, and then relax into the comfortable backseat of the driverless car that silently drives me home.

I grab a glass of Prosecco and contemplate how well my personal assistant chose to use the cars offered by the local supermarket chain this Friday. It's easy to add an order for the weekend, and they even provide a nicely chilled bottle of Prosecco, which is quite enjoyable. If I must commute quickly from one point to another in the city, the personal assistant app selects Uber cars since they are plentiful and arrive quickly.

And if the journey is long, opt for a vehicle from a telecommunications company since they have the best service programs and the fastest internet connectivity.

March 17, 6:05 PM, but which year? Can we realistically assume that we will be using these services in five, ten, or more years?

Consider that driverless cars are already tested in some cities in America and China.

Consider that driverless cars are already tested in some cities in America and China.

If you believe this will happen sooner or later, the next question is, who will own the cars? Will there be more or fewer cars? Will the same capacity for garages and hospitals still be necessary? How will this impact insurance companies, taxes, healthcare expenditures, and traffic safety?

All vehicles will communicate with each other to avoid collisions and dangerous situations.

Would it be reasonable and ethical for private individuals to own cars, pay for insurance, struggle with parking zones, and spend time, energy, and money on cars if they can choose the model and size of a car to transport them from one point to another at any given moment?

Society might shift from a consumer-driven desire for ownership to an economy where resources are shared among multiple participants, reducing production and pollution, while returning to nature.

Consider that today, most of us have at least one electric drill (many have two or three), even though it's known that on average it's used for only 11 minutes per year. We can see the extent of resource wastage. If a self-driving car or drone can deliver an electric drill whenever you need it, is it still necessary for us to own three drills?

These changes are revolutionary, and not only do we need to change laws to regulate new ways of doing business, but also the criteria and measures of success come into question. This is already happening today, but we are not prepared to recognize the new reality.

For example, we can look at messaging apps like WhatsApp or Viber. We all use them and are happy to communicate quickly and efficiently with friends or business partners, regardless of their location. And it's free. Due to new companies offering free communication, the revenue for message transmission for telecommunications companies worldwide

All vehicles will communicate with each other to avoid collisions and dangerous situations. Would it be reasonable and ethical for private individuals to own cars, pay for insurance, struggle with parking zones, and spend time, energy, and money on cars if they can choose the model and size of a car to transport them from one point to another at any given moment?

has decreased from \$100 billion to \$50 billion, while the number of sent and received messages has increased significantly. How much have governments lost in terms of taxes, licenses, and frequency sales? Laws are strict for telecommunications companies, but they do not regulate WhatsApp and Viber—no licenses, fees, or taxes. Yet, they bring value to us as users. How can we measure that value in gross national income, or should we, like the country of Bhutan, switch to measuring the level of national happiness?

The digital revolution is rapidly permeating other industries, entering everywhere. Or private lives and the way of doing business are changing in telecommunications, banking, insurance, agriculture, and public administration.



Many believe necessary to be well-versed in new technologies to tackle the threats posed by the digital revolution in their industry. While knowledge of technology is helpful, it is not the primary issue. Instead, one needs to understand the impact of new digital technologies on business models. Klaus Schwab, the organizer of the World Economic Forum in Davos, highlighted two main challenges in his book on the Fourth

Industrial Revolution, which he refers to as the digital revolution: 1) understanding the digital revolution and the opportunities it brings, and 2) the lack of talent to lead digital transformations at the company, national, or global level.

That is why my book “Between Two Worlds” aims to help understand the impact of the digital revolution on business and foster digital thinking.



Regional Development Agencies as a Bridge Between the National and Local Level

*Nenad Popović, President of the Governing Board, Serbian Association of the
Regional Development Agencies*

Regional development as continuous and controlled process requires well-organized institutional framework. Regional development agencies have been established due to creation of institutional prerequisites for sustainable regional development on the territory of entire Serbia. Members of the network were the key drivers of development processes on the territories within their scope of work, through partnerships with public and private sectors.

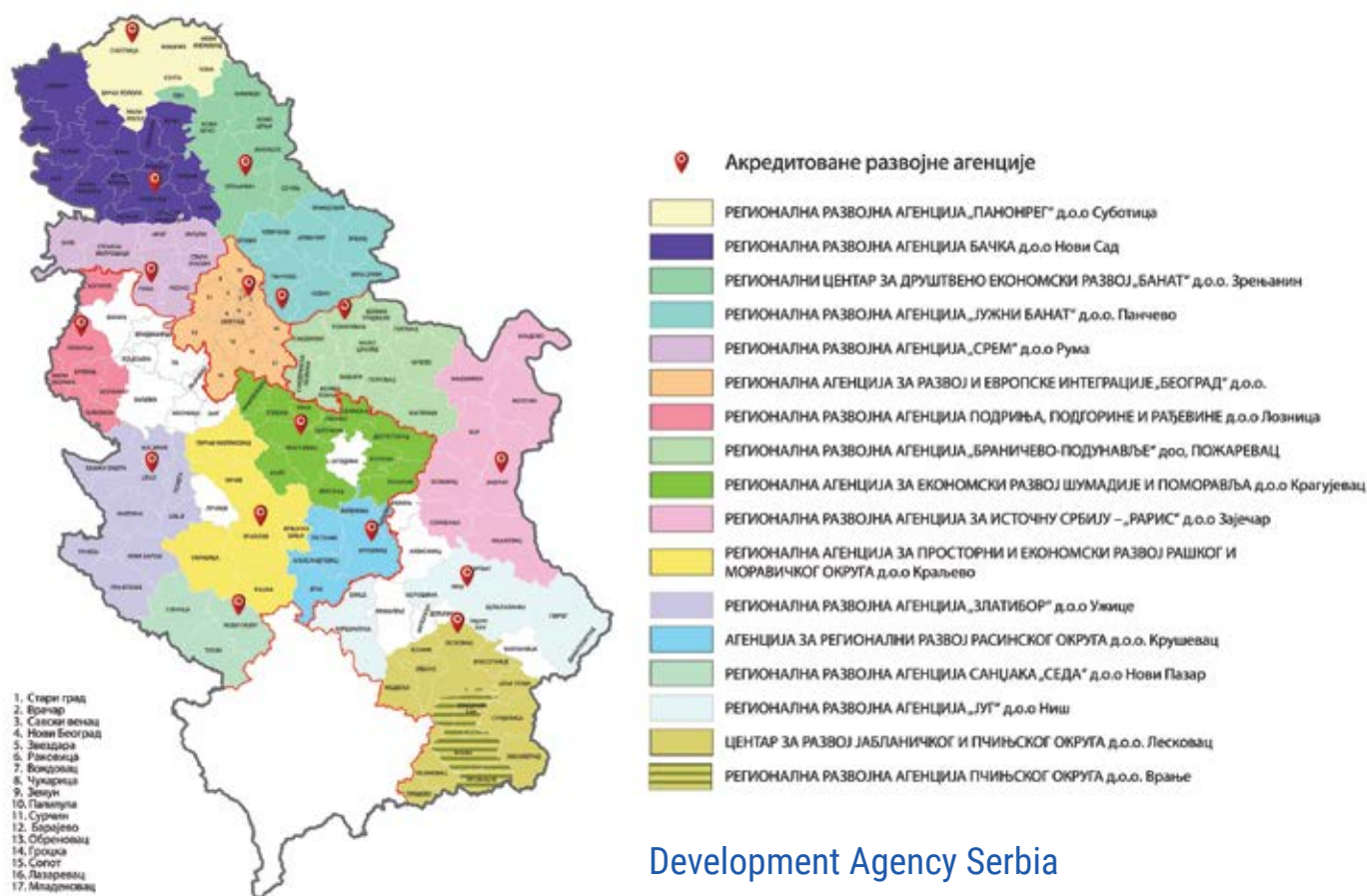
Introduction and distribution of consultancy services to SMEs sector created the preconditions for the development of entrepreneurship. By management of development projects, agencies included its' territories in the international donor initiatives and national programs for entrepreneurship development and balanced regional development.

The core of regional development consists of the effective establishment of inter-sectoral cooperation and considering social - economic development as a complete and fully integrated process, regional development agencies successfully connect stakeholders from multiple sectors.

One of the pillars of regional development is municipal cooperation, that includes networking of local governments as key drivers of local economic development, in partnership based on strategically identified needs and interests. Coordination of these strategic processes is conducted by regional development agencies.

The strength of the networks is in the fact that it, through its members within the network, meet many key stakeholders on the local, regional and national level, that members through the network of employees are able to deliver most of the services that contribute to the economic development, taking responsibility for planning and management of development processes on their territories. By filling the institutional gap at the regional level, agencies are becoming an important factor of integration between national, local and donor institutions.

Flexible in their work, agencies adapted to the dynamic requirements of the environment and thus became bearers of development processes and key partners to the international donor institutions. Experience in



Development Agency Serbia

<https://ras.gov.rs/regionalni-razvoj/akreditovane-regio->

the work with SME sector and public administrations on removing obstacles to economic development, promotes them as reliable partners for all future development initiatives.

PRIMARY SERVICE	SERVICE DESCRIPTION
Support to entrepreneurship development	<ul style="list-style-type: none"> ▪ Business information ▪ Consulting ▪ Business networking ▪ Training
Support to public sector development	<ul style="list-style-type: none"> ▪ Strategies/Analyses/Studies ▪ Consulting ▪ Development of the Projects and Project Management ▪ Training ▪ Support to vulnerable groups

By filling the institutional gap at the regional level, agencies are becoming an important factor of integration between national, local and donor institutions.

Presenting: Regional Economic Development Agency for Šumadija and Pomoravlje

The Regional Economic Development Agency for Šumadija and Pomoravlje Ltd, was founded in 2005 through the transformation process of the Regional Agency for small and medium enterprises 'Šumadija' which was established in 2002 within the project "The Non-financial support to the SME sector in Serbia", financed by the European Union and the European Agency for Reconstruction.

The mentioned transformation was performed within the framework of the Regional socio-economic development program, funded by the European Union, and based on the discerned needs for services related to the issues of sustainable development of the region and the necessity to analyze the strategic points in the development processes, within the activities of the institution with adequate resources for it.

The Regional Economic Development Agency for Šumadija and Pomoravlje represents a partnership of private, public and NGO sectors from the area of two districts: the district of Šumadija and the district of Pomoravlje. There are 11 municipalities on the territories of these districts: Aranđelovac, Batočina, Knić, Lapovo, Rača, Topola, Despotovac, Paraćin, Rekovac, Svilajnac and Čuprija and cities of Kragujevac and Jagodina, as administrative centers of Šumadija and Pomoravlje region.

The primary objective of the Regional Agency is to create conditions and stimulate economic and social development of the Šumadija and Pomoravlje region.

Director: Nenad Popović





Serbia will become a Society of Organic solidarity

Nebojsa Bjelotomic, Director, Digital Serbia Initiative.

You support the vision of Serbia as a leader in the digital economy in the 21st century. How do you currently see Serbia within the framework of the Western Balkans, the European Union, and on a global level?

I believe that education is still a significant asset to our country. It can and should be improved, but some anachronisms in our education system seem advantageous. For example, students obtain a wide educational foundation and significant algorithmic and general STEM¹ education.

Regarding Serbia's position, I believe that the Western Balkans cannot reach its full potential without an economically developed Serbia. Furthermore, without a developed Western Balkan region, there can be no peaceful and stable European Union. Regarding the global level, I want to believe that all of us Europeans have enough capability and unity to have our own path and a place in the world.

How do you explain the expansion of the IT sector in Serbia? What are your expectations regarding the development of the IT sector in Serbia?

External demand has stimulated the expansion of the IT sector in Serbia to a degree. Geopolitical events, as unfortunate as they have been, contributed to the expansion of the IT sector in Serbia. At the same time, the amount of knowledge we had to be able to "win" and deliver the first projects fifteen years ago, and then the ability to almost triple the sector in the past decade, in terms of people and export value, has positioned us to climb the value chain of the global IT industry in recent years.

The IT sector in Serbia has a solid foundation, and there is still room for quantitative and qualitative growth. Our development has not been solely based on price competitiveness for some time now. I expect further diversification of the sector in several directions. IT services will diversify geographically, reducing our dependency on the EU and US markets, while the product development segment will fight for its place and continue its progress.

1. Science, Technology, Engineering, and Mathematics - STEM

The IT sector, together with the supporting organizations it created, is trying to make a shift in the quality of communication. Internal communication within the IT sector, as well as communication with other actors in society and beyond, is vital to us.

What fundamentally distinguishes one society from another is the origin of their solidarity. Members of societies characterized by mechanical solidarity perform the same tasks. In contrast, in modern societies characterized by organic solidarity, a developed division of labor emerges in which people perform specialized jobs. What kind of solidarity, or division of labor, dominates the IT sector in Serbia?

The existence of the Digital Serbia Initiative speaks to the development of organic solidarity. We have never been we professional lobbyists; our goals have always reflected objectives that benefit the entire society. Serbian society has always suffered from a lack of quality communication, both internally and externally. The IT sector, together with the supporting organizations it created, is trying to make a shift in the quality of communication.

Internal communication within the IT sector, as well as communication with other actors in society and beyond, is vital to us. Our sector does not want to move "from service provision" but rather to further develop it. From body leasing, we have progressed to out-tasking partners and research and development. Our IT service companies can and are already planning how to move forward and improve. At the same time, this sector is the biggest support, both financially and experientially, for the development of innovative technology companies engaged in product development. This sector has made significant progress but these are still in the early stages.

We are also working together to enrich the IT sector with professionals who have diverse domain knowledge. Our aim is to diversify the sector and make it attractive to a wide range of users, both in terms of services and sales.

How do you see the regions of Serbia when it comes to the digital economy? To what extent can the IT sector change the export structure of underdeveloped regions, from resource and labor-intensive to medium and high-tech-intensive?

Thanks to the university centers in Kragujevac and Nis (specifically, the University of Kragujevac has faculties in six cities in Šumadija and Western Serbia), Šumadija, as well as western and southern Serbia, is working towards becoming even more significant players in the IT sector. I won't mention Novi Sad and Vojvodina because they are already leaders in the IT sector. Certain IT service companies already have offices in Kragujevac, Čačak, and Čuprija. I believe numerous companies see a competitive advantage in developing outside of Belgrade.

In terms of areas, global trends dictate the development of machine learning and computer vision, as these two scientific fields drive the development of artificial intelligence and autonomous vehicles, which will be the biggest disruptors in global markets in the next decade.

In terms of areas, global trends dictate the development of machine learning and computer vision, as these two scientific fields drive the development of artificial intelligence and autonomous vehicles, which will be the biggest disruptors in global markets in the next decade.

The national innovation system of Serbia is rapidly developing. In that context, how do you assess regional innovation ecosystems? How can you contribute to the concept of smart villages in Serbia? How can the national innovation system be utilized for regional development?

The Innovation Community of Šumadija and Western Serbia is a good model for the regional development of the innovation system. It brings together innovation centers from Kragujevac, Jagodina, Vrnjačka Banja, Užice, Čačak, Kraljevo, and Gornji Milanovac. Through collaborative efforts, it develops projects and introduces partners to the government, industry, and other supporting stakeholders. It is crucial that this group receives support from the University of Kragujevac, which is present in almost all mentioned locations. Through collaboration with local and national authorities, as well as the local economy, an atmosphere for developing innovative companies is created and promoted. Since the Science and Technology Park Čačak is also a member of this community, there is a connection to the national innovation system.

How can regions develop their own innovation ecosystems? Especially those regions which do not have significant institutional capacities of their own (unlike Vojvodina or Belgrade).

I believe that science and technology parks (STPs) alongside universities can serve as institutional anchors for the regions south of the Sava and Danube rivers. They have the capacity and knowledge, and to a large extent, already act as driving forces for creating local innovation ecosystems. The STP in Niš is doing an exceptional job, not only for Niš but also for the surrounding areas of Leskovac and Bor. We have already mentioned the STP Čačak in the context of ecosystem collaboration in Western Serbia. In just

over a year, we expect the establishment of the STP in Kragujevac, which we hope will be a catalyst for the entire Šumadija region.

There are initiatives at the regional level to develop Smart specialization strategies. How can you engage in such initiatives? How can the activities of the Digital Serbia Initiative become dispersed, while respecting the principle of “no territory left behind”?

Last year, employees of the Digital Serbia Initiative's executive office traveled nearly 10,000 kilometers. Considering the size of the country, that's a considerable distance. We made efforts to establish contacts and provide support to a wide range of organizations. For example, an informal education group has opened Makers Lab spaces in eight cities - Čačak, Vršac, Zaječar, Leskovac, Ruski Krstur, Knjaževac, Beograd and Šabac.. This year, the plan is to open 7 more such spaces from Knjaževac to Rusk Krstur. In these spaces, high school students can connect their curriculum with the latest technologies they learn about and then create student companies, exploring their commercialization with mentoring from industry professionals.

The Innovation Community of Šumadija and Western Serbia is a good model for the regional development of the innovation system.

Do you collaborate with regional development agencies in Serbia? Do you collaborate with civil society organizations in Serbia? What are your experiences?

At our initiative, civil society organizations that are part of the innovation ecosystem meet quarterly to exchange experiences. Apart from Belgrade, these meetings took place in Niš, Čačak and Novi Sad. The collaboration is exceptional, and communication is open. I believe that we have found a way to achieve much more through synergy than any individual entity could accomplish alone.

Glossary

- 1. Sustainable Development Goals (SDGs)**, also known as global goals, represent a set of objectives relating to future social and economic development in accordance with sustainability principles. They were created by the United Nations and are promoted as the Global Goals for Sustainable Development. They replaced the Millennium Development Goals, which expired at the end of 2015. The Sustainable Development Goals are in effect from 2015 to 2030. There are 17 main goals, each with 169 specific targets.
- 2. Quadruple Helix governance model** - the principle of partnership between universities, industry, government, and society.
- 3. The fourth helix in the quadruple helix (civil society organizations)** consists of the following components: media-based publics and culture, as well as civil society. The inclusion of the fourth helix has become critical as scientific knowledge is increasingly valued for its social power and inclusivity. Civil society organizations, or the fourth helix, emphasize new discoveries and innovations that enhance social well-being.
- 4. Dimensions of sustainable development** - it is commonly believed that the concept of sustainable development can be divided into three basic dimensions: environmental, economic, and social sustainability. A fourth dimension, culture, is introduced, and the fifth dimension is institutional sustainability.
- 5. Socio-economic analyses of regions depend on NSTJ levels:** NSTJ 1 - major socio-economic regions, NSTJ 2 - basic regions for the application of EU regional policies, NSTJ 3 - small regions for recognizing specific problems.
- 6. Externalities** occur when someone carries out certain activities from which others can benefit or suffer, but those others neither pay nor receive any compensation for the effects. Externalities can be positive or negative. Positive externalities refer to externalities arising from the spread of knowledge (e.g., technological knowledge). Negative externalities relate to phenomena such as pollution and congestion, which occur in industrial or highly urbanized areas.
- 7. Euroregions** are institutional phenomena specific to the European Union. They are formed with the aim of advancing the common interests of border populations. They can be connected by common interests, have their administrative structures, some of them have their strategies and shared development plans, but they do not have their own sources of funding.
- 8. Europe of regions** - regions - rather than national states - are the basic geopolitical entities based on real natural (geographical), political, economic, historical, and cultural foundations that define a region as a specific entity. Their balanced development and intensified cooperation are crucial prerequisites for the development of the EU.
- 9. Formal institutions** refer to the constitution, laws, and other types of state regulations that significantly influence the economic system, as well as the type and nature of the rules of the game upon which not only economic but also political systems of countries are based.
- 10. Helix** (Greek: "twisted" or "coiled"; often equated with the concept of a spiral) - a spatial curve that does not close but has the form of virtual circles. The application of helix logic can be found in processes oriented towards the application of science as a service to individuals and society as a whole, so that scientific and technological revolution corresponds not only to hi-tech infrastructure but also to an innovative, learning, knowledge-based society.
- 11. Institutions** - there are formal and informal institutions.
- 12. Institutional paradox related to smart specialization** - the less developed a region is, the more important it is for the development of that region to be based on smart specialization. The institutions of less developed regions are not developed to the extent that they can effectively implement the smart specialization strategy.

- 13. Institutional leapfrogging** - the preparation and implementation of smart specialization strategies in the economies of the Western Balkans at the NSTJ 2 level represent a way to solve the “institutional paradox”.
- 14. Cohesion funds** - the beneficiaries of these funds are regions, not countries, while cohesion policy is primarily directed at the NSTJ 2 level.
- 15. Comparative advantage** - a state possesses a comparative advantage if it can produce something at a relatively lower cost than other countries.
- 16. Competitive advantage** - when a state can produce something with higher profit compared to other countries and lower costs for consumers.
- 17. Corrective regional policy** aims to respond to the consequences of development in a specific territory.
- 18. Me too syndrome** - the tendency of all regions to direct investments towards trendy areas such as the IT sector, nanotechnology, biotechnology, and similar fields.
- 19. Informal institutions** include customs, morals, traditions, and value systems.
- 20. Nomenclature of Statistical Territorial Units (NUTS) in Serbia:** NUTS 1: Serbia - North, Serbia - South, NUTS 2: Vojvodina, Belgrade, Šumadija and Western Serbia, Southern and Eastern Serbia, Kosovo and Metohija, NUTS 3: existing administrative districts.
- 21. Nomenclature of Statistical Territorial Units (NSTUs)** (French: Nomenclature des unités territoriales statistiques - NUTS) is a hierarchical system for identification and classification of spatial units for official statistics purposes in European Union member countries.
- 22. NSTU classification** is a hierarchical system for dividing EU economic territories for the purposes of collecting, developing, and harmonizing EU regional statistics, socio-economic analysis of regions, and defining EU regional policies.
- 23. Sustainable development** represents an integral economic, technological, social, and cultural development, harmonized with the needs of environmental protection and improvement, enabling present and future generations to meet their needs and improve their quality of life.
- 24. Smart Specialization (SS)** is designed within the framework of the reformed cohesion policy of the European Commission as a locally rooted strategic approach that characterizes the identification of priority areas to support. The development of a smart specialization strategy is a basic requirement for accessing European Structural and Cohesion Funds.
- 25. Quintuple Helix Model and the challenges of sustainable development** - in addressing the challenges of sustainable development, there is a need for a new type of partnership in the form of the quintuple helix model. The quintuple helix model represents further development and evolution that integrates ecology (including social ecology) into existing approaches to knowledge production and innovation. The quintuple helix is already being formed as an innovative model that offers solutions formulated for directly addressing the problems of sustainable development, indicating a path for socio-ecological transition to master and enhance knowledge and innovation production (Carayannis et al., 2012: 4).
- 26. Preventive regional policy** aims to prevent the creation of new regional disparities, as well as intensifying existing ones.
- 27. Economic growth** is a narrower concept compared to economic development because growth is essentially a component of development. Economic growth is a quantitative measure, while economic development implies both quantitative and qualitative changes.
- 28. Economic development** refers to the increase in the production of goods and services in the national economy, accompanied by simultaneous structural changes and changes in the functioning of the economy along a general upward development line (structural, organizational, institutional, and technological). Economic development is a component of social development.
- 29. region** - a region is considered as an “intermediate territorial level located between the central and local levels of authority.” The economic definition of a region is formed in relation to “the existence of common patterns of production, interdependencies and market connections, as well as labor markets, while the broader functional definition of a region is defined according to the specificity of patterns of social interactions. There are geographical regions, economic regions, historical-cultural regions, as well as political (constituent, administrative, and statistical) regions.

- 30. Region in international relations** - a part of the global international system. It encompasses a set of (neighboring and/or similar) states that share a common space of a certain part of the country or continent. They are established under the influence of exogenous factors - political, economic, and similar.
- 31. Regionalization** is the process of creating lower-level administrative-territorial units within a country and transferring central authority to these units. These administrative-territorial units are of a middle level of authority, between central authority and municipalities. Regionalization is a social process and is generally understood as the creation of a new level in the state's territorial organization. It refers to the process of establishing a specific form of territorial organization of the state that involves vertical power division, in which regions are formed as a specific form of decentralization and power organization.
- 32. Regionalism** - a political and ideological phenomenon. Regionalism is a term that denotes a kind of movement for political-legal recognition of greater or lesser autonomy of specific communities and their territorial units of authority.
- 33. The regional policy of the European Union** aims to reduce economic and social disparities between member states of the European Union.
- 34. Regional innovation system** - a set of public and private institutions that create systemic effects that encourage firms in the region to adopt common norms, expectations, values, attitudes, practices, where the culture of innovation is nurtured, and knowledge transfer processes are improved.
- 35. Contemporary regional policy** - it started from the competitive advantage of a particular region.
- 36. Traditional regional policy** - it started from the comparative advantages of a particular region.
- 37. The entrepreneurial discovery process (EDP)**
Is a key process in defining the priorities of a smart specialization strategy (S3) and hence the main element of successful creation of this strategy. The EDP, as a bottom-up approach, represents the main difference between creating RIS3 and previous innovation strategies. The necessity of having an EDP implies that policymakers do not have knowledge about potential future priorities in terms of market needs and demands. Therefore, policymakers must have a mechanism to listen to entrepreneurs, researchers, and citizens to identify potential priorities.
- 38. Instrument for Pre-accession Assistance (IPA)** - the formal goal of financial support: facilitating/ expediting the accession process; the substantive goal of financial support: assisting democratic and economic reforms in the country that the country itself must implement; preparing for the use of structural funds and CF, respecting the principle of national co-financing (a model of joint financing of EU cohesion priorities).
- 39. Europeanization** - the process through which the model of European Union policymaking is transferred to the national level, i.e., to the situation when the member states themselves apply EU policies within their borders.
- 40. European Territorial Cooperation** - a framework for cooperation among member states at the national, regional, and local levels within the framework of the EU's regional and cohesion policies, consisting of three pillars: Interreg A - cross-border cooperation, Interreg B - transnational cooperation, and Interreg C - cooperation between regions.
- 41. European Structural and Investment Funds (ESIF)** - previously known as Structural and Cohesion Funds. They are funds aimed at strengthening economic, social, and territorial cohesion. They are intended to reduce disparities in the level of development.

Smart regions 2023



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