



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 11-Apr-2019 | Report No: PIDC26452

**BASIC INFORMATION****A. Basic Project Data**

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|--|--|---|--|
| Country Serbia | Project ID P170185 | Parent Project ID (if any) | Project Name Serbia Accelerating Innovation and Growth Entrepreneurship (P170185) |
| Region EUROPE AND CENTRAL ASIA | Estimated Appraisal Date Oct 10, 2019 | Estimated Board Date Oct 01, 2019 | Practice Area (Lead) Finance, Competitiveness and Innovation |
| Financing Instrument Investment Project Financing | Borrower(s) Republic of Serbia | Implementing Agency Ministry of Education, Science and Technological Development | |

Proposed Development Objective(s)

The project's development objective is to increase innovation activities of individuals and businesses, through: 1) increased excellence and relevance of scientific pursuits, and 2) improved access of early stage companies to funds, markets, and knowledge necessary for their growth.

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

| | |
|---------------------------|-------|
| Total Project Cost | 48.00 |
| Total Financing | 48.00 |
| of which IBRD/IDA | 48.00 |
| Financing Gap | 0.00 |

DETAILS**World Bank Group Financing**

| | |
|--|-------|
| International Bank for Reconstruction and Development (IBRD) | 48.00 |
|--|-------|



Environmental and Social Risk Classification

Low

Concept Review Decision

Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. Following years of recession and slow growth, the Serbian economy expanded by 1.8 percent on average over the 2015-2017 period, with a stronger growth of 4.2 percent in 2018, prompting the need to rethink the overall growth model for the country. Growth started to recover on the back of higher investment (average annual growth of 8.3 percent annually) and strong growth of exports (up 10.7 percent annually in real terms). Consumption recovered as well, but at a slower pace (at 1 percent annually in real terms). Growth of the industry and services sectors contributed most to the overall growth of the economy between 2015 and 2017, while agriculture had a negative contribution to growth in 2015 and 2017. In 2018, growth was broad-based with all three major sectors rising faster than in the previous year. Despite the generally positive economic outlook in the near-term, challenges remain. Growth will depend on the pace of ongoing structural reforms and progress toward EU accession.
2. Labor market performance has improved. Labor force participation rate increased to 54 percent in 2017, the highest level since 2005. The average 2017 employment rate reached 46.7 percent, led by services, which created 33,000 new jobs (a quarter of them in wholesale and retail trade), spurred by higher consumption and fast-growing services exports. By the fourth quarter of 2018, the employment rate was 47.4%, while the unemployment rate was 12.9%.
3. Strong revenue performance and spending controls led to the budget surplus in 2017 and 2018. In 2017, Serbia had a surplus of 1.2 percent of GDP, underpinned by strong revenue collection, spending controls (including savings from interest payments), and, to some extent, due to under-execution of public investment. In 2018, the budget recorded a surplus of 0.6 percent of GDP despite some relaxation in spending controls. As a result of prudent fiscal policies, public debt continued to decline and stood at 54.3 percent of GDP at the end of December 2018, with further, albeit slower, declines expected during 2019.
4. As Serbia positions itself for EU membership, increasing competitiveness in the European market remains a priority. A structural shift in Serbia's growth model, driven by increased productivity and higher-value added production, is needed to boost competitiveness and spur economic growth. This can be achieved, in part, through enterprise innovation facilitated by increased and more efficient investments in applied research and development (R&D), and, support for research commercialization, enterprise formation, and growth of innovative small and medium enterprises (SMEs).



Sectoral and Institutional Context

5. Innovation-related indicators show that Serbia has 1) low levels of R&D expenditures, 2) a science financing model that results in inefficiencies, due to its largely non-competitive structure, and 3) low levels of public-private research collaboration, which results in low levels of commercialization of research results that could support economic growth. Around 0.9 percent GDP is invested in R&D, well below EU average of 2.03 percent, with most of the funding coming from the Government.
6. To address these challenges, the Government, supported by the World Bank and the European Union Delegation to the Republic of Serbia (EUD), has committed and initiated significant reforms of the country's research and innovation system. The reforms aim to reduce challenges recognized in the Research for Innovation Strategy 2016-2020. The Strategy also envisions a series of measures to boost innovative entrepreneurship in the country, including through improved access to financing and knowledge necessary for enterprise founding and growth.
7. A key element of the reforms is changing the model of financing R&D activities in the country, including a transition to competitive financing through the introduction of a new funding instrument, the Science Fund of Serbia. To this end, a new Law on the Science Fund was adopted by Parliament in December 2018.
8. To create a more effective R&D financing model, a new institutional framework is being developed. Based on good international practice, Serbia has established an independent and professional government institution to implement research funding (comparable to Science Funds, Councils or Agencies in EU member states). The Science Fund (SF) addresses the above-mentioned barriers, as a vehicle for 1) increasing R&D funding as a percentage of GDP, 2) improving the effectiveness of public spending on R&D, by fostering competitive funding that sparks excellence, and 3) improving business-academia collaboration and, in turn, greater commercialization rates of research. In addition, a model for providing institutional base funding will be introduced (this does not exist today).
9. The new Science Fund will conduct competitive calls for proposals for R&D grants and rely on independent and expert decision-making based on international peer-review. By supporting high quality basic and applied research, the Science Fund will leverage public R&D spending to forge business-academia linkages and encourage private sector R&D investments. Furthermore, a recent set of tax breaks for R&D investment could further boost private R&D spending. Based on regular monitoring, reporting and evaluation, the Science Fund instruments will be adjusted over time to improve their effectiveness and impact.
10. Financing for innovative businesses in Serbia is low. According to USAID's Serbia Business Survey 2017, 84 percent of SMEs are financed from their own sources. Micro-financing and venture capital investment are impeded by an unclear legal framework, high costs of deal discovery for investors, and persisting information asymmetries between entrepreneurs and investors about opportunities for investment. Meanwhile, bank loans are accompanied by high requirements for collateral or long history of operations, neither of which young, innovative firms typically possess. Lack of affordable financing, coupled with



limited training and mentoring, is preventing Serbian companies to modernize their production and invest in innovation and commercialization, with young firms and SMEs particularly affected by this.

11. A 2016 World Bank analysis shows that the Serbian entrepreneurship ecosystem is growing, but the momentum could be lost due to:
 - Constrained supply of IT, managerial, and creative skills,
 - Lack of “smart money,” i.e., training and mentoring coupled with financing for innovative early-stage and growth-stage enterprises, with a gap especially prominent in the \$500,000-\$1,500,000 range,
 - Low rates of commercialization of inventions and innovations, and
 - Challenging business environment for entrepreneurs.
12. While the Government is working on an extensive reforms agenda addressing the first, third and fourth constraints, the second deficiency is proving particularly challenging to resolve. In 2017, the total venture capital investment in Central and Eastern Europe (CEE) was approximately €108 million. In Serbia, the amount was only €1.5 million, compared to €5.6 million in Romania, €4.8 million in Bulgaria, €3.6 million in the Czech Republic, €2.6 million in Croatia, and €28.6 million in Hungary. Thus, adjusting crudely for GDP, we can estimate that, with a better business environment, the average venture capital investment in Serbia could increase by several fold, €7-20 million annually.
13. In fact, Serbia received the lowest amount of venture financing in the CEE region (with the exception of Ukraine, which received €1.47 million, and other countries where negligible amounts were recorded -- Bosnia & Herzegovina, Macedonia, Moldova, and Montenegro), despite positive upward trends in business formation generally, and in innovative technology sectors specifically. Further, studies show that citizens of Serbia have positive entrepreneurial attitudes compared to many other European countries, with nearly half of the population reporting confidence in their ability to start a business, based on availability of expertise, funds, perseverance, and commitment.
14. Interest rates are significantly higher in Serbia than in benchmark countries, (4.25 percent in December 2018 compared to 1.4 percent in Czech Republic and Hungary), making debt financing prohibitively expensive to many early-stage entrepreneurs.
15. The restricted supply of early-stage funding, coupled with limited mentoring and training, are frequently cited as a barrier to innovation and entrepreneurship in most ecosystems around the world; in Serbia, interview data indicates a particularly acute situation:
 - Consultations with existing and aspiring angel investors conducted by the World Bank in 2016, 2017, 2018 and 2019 indicated that the incentives equity and early-stage investments are inadequate, which negatively impacts the supply of private early stage equity capital. This finding was corroborated by interview and survey responses by entrepreneurs, very few of whom reported receiving equity investments.



- A small number of experienced angel investor groups is active in the country (approximately five in total, with low levels of activity) and very few startups have received equity investments so far.

Over half of the interviewed entrepreneurs indicated finding investors, especially those with valuable expertise, as a challenge.

16. Finally, a World Bank Public Expenditure Review (PER) on SME Support (forthcoming, 2019) shows that there is a lack of selectivity in which SMEs are provided with support. The strong global evidence is that most SMEs do not grow. As Serbian programs rarely have selection processes that are based on any qualitative assessment of applicant firms' growth orientation and strategy (the Innovation Fund {IF} programs being a welcome exception), most funding is probably going to firms that are unlikely to grow and contribute substantially to the government's policy objectives. This means that at best, resources are being provided to SMEs that will not grow (although the resources may make them more efficient), and at worst, that the funding is not even impacting their productivity. In fact, these resources may be keeping SMEs in business that would otherwise leave the marketplace. Although such businesses could be sources of employment - thus justifying support - they may not ever grow. Meanwhile, growth-oriented businesses may not be receiving the support that would most benefit Serbia in terms of income growth and job creation.

Relationship to CPF

17. **The proposed operation is fully congruent with the World Bank Group's Country Partnership Framework (CPF) for FY16-20¹ focus areas (Focus area 1: "Economic Governance and the Role of the State" and Focus Area 2: "Private Sector Growth and Economic Inclusion").** Both focus areas are aligned with the Government's *Strategy of Scientific and Technological Development of the Republic of Serbia for the period 2016–2020: Research for Innovation*. The operation specifically responds to the second focus areas Objective 2a: Contribute to priority business climate improvements. An important intervention under this objective is continued support to building Serbia's innovation and technology transfer system based on promising results yielded from pilot efforts in these two areas and a need to scale them up to create a broader impact on employment generation. All three components of the Project directly and jointly contribute to the Research for Innovation Strategy, with activities of the Science Fund supporting primarily public research and development, activities of the Innovation Fund supporting primarily innovation in enterprises, and the diaspora-related activities supporting innovation generated by both public and private entities.
18. The proposed operation also has links to the first CPF focus area, Economic Governance and the Role of the State, specifically Objective 1b: More Effective Public Administration & Service Delivery. Establishing and maintaining the appropriate governance of the Science Fund and improving governance across the public research organizations would allow these entities to improve the efficiency and effectiveness of

¹ Report No. 94687-YF discussed by the Board of Executive Directors in June 2015



the scientific research system, more effectively stimulate the supply of excellence and relevance of scientific research, as well as link these institutions and the private sector more effectively.

19. The proposed operation is a continuation of decade-long and successful cooperation between Serbia, the EU and the World Bank on research, innovation and entrepreneurship. From 2011 to 2016, the World Bank administered the first EU IPA financed Serbia Innovation Project (SIP) aiming to assist the Government of Serbia (GoS) in building the institutional capacity to stimulate innovative activities in the enterprise sector by supporting the operationalization and institutional capacity building of the Serbia Innovation Fund, piloting financial instruments for technological development and innovation by enterprises, and encouraging selected public RDIs to engage in applied R&D and technology transfer and assisting Government in formulating the RDI sector reform policy.

C. Proposed Development Objective(s)

20. The project's development objective is to increase innovation activities of individuals and businesses, through: 1) increased excellence and relevance of scientific pursuits, and 2) improved access of early stage companies to funds, markets, and knowledge necessary for their growth.

Key Results (From PCN)

- (i) Number of international scientific publications in top 10 percent of recognized journals
- (ii) Number of innovative companies financed
- (iii) Number of innovative products or services introduced to the market
- (iv) Number of joint R&D projects between public research organizations and private sector

D. Concept Description

The Project will consist of the following three components and subcomponents:

Component 1: Research Sector Reforms

21. **Subcomponent 1.1: Serbia Science Fund (indicative amount US\$30 million)** – This subcomponent will finance the Science Fund programs/activities that include competitive basic science grants, applied research grants with incentives for promoting linkages between the private sector and R&D community, incentives for enhancing collaboration with EU (e.g., Horizon 2020, Horizon Europe) and other international programs, and Smart Specialization Strategy (S3) and infrastructure support for public research institutions. Activities under this component will support the operationalization of the Science Fund, including governance, organizational structure, monitoring and evaluation (M&E) and other key components. In addition, the project will support designing the Science Fund programs based on international best practices. Finally, an activity focused on skills of researchers to access international financing and collaboration opportunities will be designed and integrated into the programs of the



Science Fund. A Serbian diaspora program, described in Component 3, will be closely connected to the Science Fund.

22. **Subcomponent 1.2: RDI Reforms Pilot (indicative amount US\$6 million)** – This subcomponent supports piloting of RDIs sector reforms by providing appropriate incentives for undertaking institutional reforms by RDIs on a voluntary (opt-in) basis. This will include providing financing to a select group of RDIs (2-4) who are willing and able to reform. The pilot will build upon the successful experience under the Serbia Innovation Project where several RDIs initiated important institutional reforms, consistent with the Research for Innovation Strategy 2016-2020.

Component 2: Enterprise Acceleration

23. The acceleration program will build on existing enterprise support instruments offered by the Serbian Innovation Fund, and will focus on supporting a) early (idea) stage, and b) growth (scale-up) stage companies with innovative offerings, through a combination of mentoring and tailored capacity building, in addition to investment co-funding alongside private sector investors. The goal of the program will rapidly advance development and valuation of each company. If, throughout the program, market feedback on a company's product, service, or strategy, does not indicate high growth potential, mentors will work with company founders to "pivot," or adjust strategy to market demand, if that is possible. Companies participating in the growth-stage stream will have already demonstrated "market traction," i.e. evidence of demand, through the presence of users or paying customers, and thus, it is expected that most of these companies will be able to advance their growth during and after the program. Companies participating in the early stage stream may also need to reexamine the basic idea and assumptions behind the company, and, in some cases, decide not to pursue the idea further; however, founders will still benefit from an intensive course that will cover project and people management practices, strategy development and execution, market entry, partnership development, fundraising, and so on. The focus will be on businesses based on digital technologies, and specialized sub-groups could be considered (e.g. ICT, food and agriculture, health, biotech, education and gaming, etc.). Companies would receive non-dilutive investment (through a co-financing facility) and extensive technical assistance in negotiating with individual investors or early stage funds, which may be equity-based.

Component 3: Serbian Diaspora Facility

24. The proposed project will support the launch of a *Serbian Diaspora Facility (SDF)* to leverage the strengths and desire of its diaspora community and benefit from this immense potential in the development of innovation and entrepreneurship in Serbia. The SDF will aim to attract promising scientists, researchers and entrepreneurs from the Serbian diaspora community to transfer knowledge and skills back to Serbia through a variety of activities, such as a diaspora network, collaboration *in scientific and applied research and technology transfer, participation in innovative entrepreneurship mentoring and angel investments, and participation in policy making, governance, program management, advisory bodies and networking.*



| Legal Operational Policies | Triggered? |
|---|------------|
| Projects on International Waterways OP 7.50 | No |
| Projects in Disputed Areas OP 7.60 | No |

Summary of Screening of Environmental and Social Risks and Impacts

The project is classified as Low Risk taking in account the low impact and predictable nature of the interventions, the experience of the implementing agency in managing similar activities and the application of new and energy efficient technologies. Project will not directly fund civil works and no adverse impacts such as involuntary land acquisition, impacts on biodiversity, on cultural heritage, are expected. The environmental risks will be small in magnitude, of temporary nature and directly associated with the listed investments and TA activities under the Project. In few cases, the mitigation activities will need to be designed to deal with disposal of wastewater, communal, industrial or hazardous waste. Any activities that may have moderate and significant environmental and social impacts, including involuntary impacts on land or assets, and unpredictable risks for the environment, community health and safety will be deemed ineligible through the Project’s Environmental and Social Screening Procedure to be used for defining grant eligibility. Any minor impacts will be identified by the ESMF and addressed in activity-specific ESMPs. The ESMF will ensure that the grant selection procedures are fair, transparent and merit based.

Note To view the Environmental and Social Risks and Impacts, please refer to the Concept Stage ESRS Document.

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APPROVAL

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