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START-UP ECO SYSTEM IN SERBIA

Siniša Pekevski¹

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ABSTRACT

State support and its institutions play a very important role in the process of establishing the start-up companies and their further development and operation. The government should strive to recognize innovative startups and help them to grow. In Europe, each country is trying to establish own startup ecosystem, respecting the rules that apply in the EU as a unified community. Start-up companies move the world and represent an engine for the development of society. Republic of Serbia adopted the law on innovative activity that entered into force in 2023, and according to that law, startups, startup is a newly established business company or entrepreneur that develops an innovative product or service and that has the potential fast and large growth. The purpose of this paper is to present the start-up scene in Serbia and to present how the start-up ecosystem is developing and the programs and measures which are support mechanism for startups. The research methodology is an analysis of secondary data from the delaroom.co platform, which is one of the leading platforms for start-ups and which is used by the most developed start-up countries such as Lithuania, Estonia, Latvia, like other documents and programs.

KEYWORDS

Serbia startup, start up eco system, start up legislative

INTRODUCTION

The paper highlights the importance of a balanced approach legislative and government support in programs and together with other key elements can create companies which can achieve sustainable growth and competitiveness in the global market. Many factors can influence a start-up company to succeed in the global market and show significant success, not just being innovative or creative. Legislative support is one of the key factors for promoting and encouraging start up eco system. Also set of entrepreneurial skills and knowledge, as well as constant improvement of the product offered on the market and deeply listening and following the needs of customers and consumers, is crucial that every start-up company should follow.

Startups are a very important part of all economies, so governments seek to support innovative startups through different supporting programs and help them grow in the right way. This kind of support mainly goes through a network of institutions, whose important task is to assist startups in all their stages of operation. Supports by laws, policies and regulations are essential for this complex process.

¹ SiComunication, Skoplje, North Macedonia, PhD candidate, sinisa@sicommunication.mk, ORCID: 0009-0007-9020-4849



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Startup companies brings a lot of benefits to one country, like opening new jobs, high added-value products and services, are increasing tax receipts and even more innovation in existing large corporations (Weiblen, Chesbrough, 2015).

In general, institutions have a strong impact on the growth and development of new business. "Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction" (Acemoglu, Robinson, 2008), The role of institutions in Growth and development, The International bank for Reconstruction and Development (The World Bank, Washington, Paper no.10).

The term 'entrepreneurial ecosystem' (Audretsch and Belitski, 2016, Stam, 2015), analogous to the terms 'natural' and 'biological ecosystem', was terminologically set up with the purpose of including elements in the entrepreneurial environment that facilitate the success of entrepreneurs in realizing their own entrepreneurial intentions. Respecting the context of startup entrepreneurship, a frequently used term in the literature is also the startup ecosystem (Fredin, Lidén, 2020, Ojaghi et al., 2019) which represents a community of stakeholders that support the efficient and effective development of startup entrepreneurs. Thanks to the characteristics of innovation and significant potential for achieving rapid growth, startups are a key source of economic growth and employment (Ivanović-Đukić et al., 2019, Steve, Dorf, 2014, Valliere, Peterson, 2009). Isenberg (2010) emphasizes that the entrepreneurial ecosystem is a dynamic concept, continuously evolving based on the interconnectedness of its components. The sustainability of this ecosystem relies on a holistic approach to entrepreneurship, considering the country's geographical, cultural, and social factors that can drive potential growth. However, while the government's role in shaping the entrepreneurial ecosystem is crucial, it cannot single-handedly build it.

Some authors believe that one of the biggest obstacles for growing and surviving of startups in Serbia is the lack of financial resources or procedures, which make access to them difficult (Jovin, 2016, Erić, Đurićin, Pantić, 2014)

START-UP LEGISLATIVE AND SUPPORT PROGRAMS

Entrepreneurship is acknowledged as a catalyst for innovation, productivity, and job creation, with innovation being particularly crucial for startups to distinguish themselves in a competitive market. Innovation serves as a formidable tool for securing a competitive edge, offering numerous benefits that facilitate the growth, development, and success of startups. Innovative startups face serious obstacles in their innovation processes because of the high costs of innovations, lack of commercial and managerial competencies, and difficulties in cooperating with industrial agents (Franco-Leal, Diaz-Carrion, 2020).

Innovation and startups are crucial themes in contemporary academic discourse, particularly within entrepreneurship, business management, and economics. The intersection of innovation and startups is often explored through the lens of how novel ideas, products, processes, or business models are developed and commercialized by new or existing firms to create value and drive economic growth. Startups face numerous challenges in their innovation efforts, including resource constraints, market uncertainty, and regulatory hurdles. Despite these challenges, startups are uniquely positioned to introduce groundbreaking innovations due to their flexibility, risk-taking propensity, and focus on addressing unmet market needs. The academic literature emphasizes the critical role of supportive policies, access to funding, and robust entrepreneurial networks in enabling startups to navigate these challenges and capitalize on opportunities for innovation.



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The Republic of Serbia adopted a new Law on Innovation activity that entered into force in 2022. The law also regulates the establishment of the register of subjects of the National Innovation System, which implementation began in 2023. year. According to that law, startups, article 22, startup is a newly founded company or entrepreneur that develops an innovative product or service and has the potential for great and large growth, while article 23, spinoff is a startup founded by an existing legal entity with the aim of developing and commercializing innovations.

According to data and analytics provided by Dealroom.co (Table 1), a global leader in the provision of data insights, the year 2024 witnessed the emergence of 279 start-up enterprises within Serbia, but only 3 startup companies were open in 2023 and in the 2024 are established 4 startup companies. Among these, Serbian startup eco system haven't achieved the status of 'unicorns,' a term denoting start-up companies that have reached or exceeded a valuation of 1 billion USD but it's predicted that till the end of 2024 there will be 1 Serbian unicorn. These start-up entities are located across the country, with a significant concentration in Belgrade. Substantial number of these enterprises are located within business incubators or accelerators, underscoring the unique role these subjects play in fostering entrepreneurial growth and innovation within the Serbia.

Table 1. Established startups and venture Capital Fund Investment

SERBIA	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
No of established startups	10	20	12	12	25	21	30	38	21	3	4
Venture Capital Fund Investment	4	15	9	6	17	14	18	21	6	2	0

Source: Dealroom.co (2024)

State support and development of the start-up system and start-up companies in Serbia is realized through the Innovation Fund, which was established in 2011. The basic idea of the foundation of this fund is to support the development of innovation through appropriate financial, technical and advisory support instruments to empower innovative enterprises and strengthen the link between research and development on the one hand and the business sector on the other, respecting the highest ethical, financial and business standards and practices.

The Fund aims to improve the links between science, technology and the economy and contribute to encouraging the development of innovative entrepreneurship by:

- supporting innovative entrepreneurship, especially in the early stages of development;
- connecting scientific research organizations and private companies for the development and commercialization of innovations;
- enabling new products, technologies and services to enter the market;
- establishing long-term institutional support of the state for innovative entrepreneurship in cooperation with international financial institutions, organizations, donors and the private sector.

Within the framework of this Innovation Fund, several programs have been developed in order to support start-up companies in different stages of existence, or in different stages of operation (Table 2).



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Table 2. Programs for support start-up companies

PROGRAM NAME	Number of applicant	Supported project	Total value of projects (in €)	Approved funds (in €)
MINI GRANTS PROGRAM	2.258	307	35.087.445	25.210.869
MATCHING GRANTS PROGRAM	700	92	42.606.107	26.968.389
COLLABORATIVE GRANT SCHEME PROGRAM	445	77	33.576.018	22.626.286
INNOVATION VOUCHER	1.518	1.267	9.504.052	6.345.479
TECHNOLOGY TRANSFER PROGRAM	97	77	1.564.374	1.564.374
PROOF OF CONCEPT	521	93	1.752.077	1.752.077
COVID-19	229	12	552.793	468.907
SMART START	226	58	2.191.826	1.988.263
KATAPULT	403	62	20.422.193	7.490.411
SERBIA VENTURES PROGRAM	5	2	10.000.000	10.000.000
SERBIA VENTURES BIOTECH PROGRAM	6	1	5.000.000	5.000.000
REGIONAL STARTUP CENTER CAPACITY BUILDING	23	23	980.307	980.307
GOVTECH PROGRAM	47	20	1.751.546	1.176.976
TOTAL	6.478	2.091	164.988.738	111.572.338

Source: www.inovacionifond.rs

- Mini Grants Program – is aimed at private young enterprises which are engaged in the development of technological innovations with a clear market need. This Program is designed to support the survival of companies during the critical phase of research and development and to allow Serbian entrepreneurs to grow effective business capacities through which they will launch their innovations on the market.
- Matching Grants Program – is designed for enterprises looking for significant financial resources for the commercialization of research and development. The Program has the goal to stimulate further knowledge-based development of innovative enterprises, encourage establishment of partnerships with international partners and to increase the number of technology-based companies.
- Collaborative Grant Scheme Program – is designed to incentivize private sector companies and public sector R&D organizations to engage in joint development projects with the goal of creating new products and services, as well as innovative technologies with significant future impact and market potential.
- Katapult – is a technological development and innovation support mechanism intended for startups in the early stages of development and market positioning (Ideation) and startups with proven market traction (Scale-up) that aim to accelerate their growth and secure private external investments.



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- Smart Start program – is to support highly promising teams in their efforts to validate their business ideas and demonstrate future usefulness of their technology through development of a first prototype or a minimum viable product (MVP).
- Technology Transfer Program – provides support to R&D institutions in order to increase their ability and efficiency in the commercialization of inventions
- Serbia Ventures (AI) – is designed to incentivize qualified individuals, private investors and institutions to engage in financing startups with high growth potential which are developing innovative products in the field of artificial intelligence by incorporating venture capital fund in Serbia.
- Serbia Ventures (Biotech) – is designed to incentivize private investors, high net worth individuals and institutions to engage in financing biotechnology startups with high growth potential by incorporating venture capital fund in Serbia

VENTURE CAPITAL FUNDS SERBIA

Start-ups are the strongest manifestation of entrepreneurship and innovation (Giezzi, 2020). They are distinguished from other business ventures by dynamic market expansion executed most of using modern technologies, such as information and communication (Barandiaran-Irastorza, Peña-Fernández, Unceta- Satrústegui, 2020). Their rapid development is guaranteed by unique know-how and investor financial support (business angels; venture capital). Due to the exceptional originality of business ideas, high demand for capital, and intensive pace of development, start-ups are high-risk ventures, intended for visionaries and entrepreneurs with above-average levels of risk acceptance. Krejci (2015) says, a startup is a new and temporary company that has a business model based on innovation and technology. The involvement of venture capital institutions (VCs) in the development of startups is crucial for the growth and success of startups. In addition to providing critical financial support to their investee startups, VCs actively play a professional role in helping these companies establish closer ties with various parties including upstream and downstream business partners and consumers (Macmillan et al., 1989, Steier, Greenwood, 1995, Hsu, 2006). VCs also provide a full range of value-adding services to startups, such as business modelling, market development, corporate governance, as well as refinancing and growth strategies (Gorman, Sahlman, 1989, Busenitz et al., 2004, Park, Steensma, 2012, Vanacker et al., 2013).

VC funds most often focus on investments related to startups. Venture capital funds are entities that raise funds for investment in non-public enterprises at the earliest stages of development (Zasępa, 2013). Capital, the source of which are venture capital funds and private equity funds, is equated with venture capital. The market of these funds brings together entities willing to invest their cash surpluses in innovative, risky enterprise projects in order to achieve extremely high profits on the invested capital. Venture capital funds is undoubtedly donor of cash capital, always correlated with high financial risk. In dictionary terms, the term venture capital has been defined as „risk capital”, engaging cash in a very risky venture, which, if successful, contributes to the investor receiving an excessively large profit (Wallace, Flynn, Collins Business English Dictionary, Sorger Kolon, 1990)

As of 2024, Serbia is home to 15 venture capital (VC) funds that have invested in various Serbian startup companies (Table 3). The most prominent player in the Serbian startup ecosystem is South Central Ventures, with investments in six startup companies across the country.



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Table 3. Top 15 Enterprise VC Funds in Serbia

Investor	Enterprise Serbia investments
South Central Ventures	6
Eleven Ventures	3
SeedBlink	2
Point Nine	2
Version One Ventures	2
Earlybird Venture Capital	2
Credo Ventures	2
Kirov Group Ventures	1
Crew Capital	1
Catalyst Romania	1
ICT Hub Venture	1
Underline Ventures	1
Moonfire Ventures	1
Accel	1
Euroventures	1

Source: <https://shizune.co/investors/enterprise-vc-funds-serbia>

CONCLUSION

One startup manager tells me in one research "Innovation is not just a luxury for startups; it's a necessity" I added to it with the phrase "support from the state in programs and measures is not a luxury, it is a key point in the development of the start-up ecosystem.

Although Serbia is the only country in the Western Balkans to have enacted a startup and innovation law, defining key concepts like startups, spin-offs, and support measures for startup companies, this legislation is merely a starting point for the development of its startup ecosystem. The ecosystem is valued at €2.1 billion, and with 279 startup companies, Serbia is performing well compared to other Western Balkan countries. However, it still falls short of its full potential. For comparison, Croatia, which is half the size of Serbia, has 469 startups, and its ecosystem is valued at €5.8 billion, indicating significantly greater growth and development potential.

In terms of venture capital, Croatia has 34 VC funds with considerably more investments, with the leading VC fund, Fil Rouge Capital, holding 34 investments in Croatian startups. While Serbia's innovation law is a solid foundation for progress, it needs to be further refined. Areas for improvement include extending support for startup longevity, attracting talent to establish startups in Serbia, and encouraging innovation in biotechnology and agriculture. Additionally, the €111 million allocated over 13 years is insufficient to support a sector that could drive Serbia's economic growth.

Future research should focus on segmenting startup companies by industry and assessing whether Serbia is an attractive destination for top startup talent.



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REFERENCES

- Acemoglu, D., Robinson, J. (2008). The role of institutions in growth and development, *Review of Economics and Institutions*, 1(2), 1-33.
- Audretsch, D., Belitski, M. (2016). Towards an entrepreneurial ecosystem typology for regional economic development: The role of creative class and entrepreneurship. *Regional studies*, 55(1), 1-22.
- Autio, E., Thomas, L.D.W. (2014). Innovation Ecosystems and Growth in Startups. In: *The Oxford Handbook of Innovation Management*, Chapter 11(pp.1-28). Oxford University Press, Oxford.
- Barandiaran-Irastorza, X., Peña-Fernández, S., Unceta- Satrustegui, A. (2020). The Archipelago of Cultural and Creative Industries: A Case Study of the Basque Country. *Economies*, 8(1), 21.
- Blank, S., Dorf, B. (2012). *The startup owner's manual: The step-by-step guide for building a great company*. Wiley, New Jersey.
- Cockayne, D. (2019). What is a startup firm? A methodological and epistemological investigation into research objects in economic geography. *Geoforum*, 107, 77-87.
- Christensen, C.M. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Harvard Business School Press, Boston.
- deFaria, V.F., Santos, V.P., Zaidan, F.H. (2021). The Business Model Innovation and Lean Startup Process Supporting Startup Sustainability. *Procedia Computer Science*, 181(6), 93–101.
- Franco-Leal, N., Diaz-Carrion, R. (2020). A dynamic analysis of the role of entrepreneurial ecosystems in reducing innovation obstacles for startups. *Journal of Business Venturing Insights*, 14, e00192.
- Ghezzi, A., Cavallo, A. (2020). Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches. *Journal of Business Research*, 110, 519–537.
- Weiblen, T., Chesbrough, H. W. (2015). Engaging with Startups to Enhance Corporate Innovation. *California Management Review*, 57(2), 66-90.
- Chesbrough, H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Harvard Business School Press, Boston.
- Jesemann, I. (2020). Support of startup innovation towards development of new industries. *Procedia CIRP*, 88, 3–8.
- Jovin, S. (2016). Financing obstacles of small enterprises – empirical analysis in the republic of Serbia. *Teme – Journal of Social Sciences*, 40(3), 1101-1118.
- Erić, D., Djurićin, S., Pantić, O. (2014). Microcrediting of SMEs in the Republic of Serbia. Szabo, A. ed. Final workshop report on "Microfinance for SMEs in the Black Sea economic cooperation region". (pp. 138-157). Bucharest, Romania: BSEC & Konrad Adenauer Stiftung.
- Kaplan, R.S., Norton, D.P. (2001). *The Strategy-Focused Organization*. Harvard Business School Press, Boston.
- Kohler, T. (2016). Corporate accelerators: Building bridges between corporations and startups. *Business Horizons*, 59(3), 347-357.



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Krejci, M., Strielkowski, W., Cabelkova, I. (2015). Factors that influence the success of small and medium enterprises in ICT: A case study from the Czech Republic. *Business: Theory and Practice*, 16(2), 304-315

Paoloni, P., Modaffari, G. (2018). Female-Owned Innovative Startups in Italy: Status Quo and Implications. *Administrative Sciences*, 8(4), 66.

Perin, B. (2015). *A revolução das startups: o novo mundo do empreendedorismo de alto impacto*. Alta Books, Rio de Janeiro.

Spender, J.C., Corvello, V., Grimaldi, M., Rippa, P. (2017). Startups and open innovation: A review of the literature. *European Journal of Innovation Management*, 20(1), 4–30.

Flynn, W. (1990). *Collins Business English Dictionary*. Sorger Kolon, Budapest.

Zasępa, P. (2013). *Zarządzanie ryzykiem portfela przez fundusze venture capital oraz private equity*. CeDeWu sp. z o.o, Warsaw.

https://app.dealroom.co/metrics/ecosystem/f/year_min/anyof_2015/rows/anyof_~startups_count~_~unicorns_count~_~future_unicorns_count~_~years_funding_number~_~years_funding_amount~_~years_exits_amount~_~employees_number~_~current_year_ecosystem_value~_~years_new_funds~_~startups_count_founded_since_2010~/location/anyof_hungary_belarus_austria_serbia_switzerland_germany_andorra_bulgaria~_united_kingdom~_france_montenegro_luxembourg_italy_denmark_finland_slovakia_norway_ireland_spain_malta_ukraine_croatia_moldova_monaco_liechtenstein_poland_iceland~_san_marino_1~_~bosnia_and_herzegovina~_albania_lithuania~_north_macedonia~_slovenia_romania_latvia_netherlands_russia_estonia_belgium~_czech_republic~_greece_portugal_sweden~_isle_of_man~_~faroe_islands~_~gibraltar_1~?applyDefaultFilters=true&sort=-startups_count&id=49758

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