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YOUTH UNEMPLOYMENT AND ENTREPRENEURSHIP

Nezaposlenost mladih i preduzetništvo

Abstract

High level of youth unemployment, a global problem ever since the world economic crisis has started, poses a serious problem in our society as well. Public policy makers are seeking to find solutions to this problem by stimulating the development of micro, small and medium-sized enterprises, with special emphasis being placed on youth entrepreneurship development. Several strategies defining incentivizing measures have been adopted at the national level, yet there is an evident lack of a systematic and consistent development approach supported across all relevant sectors. An analysis of the position of young entrepreneurs in Serbia indicates that in order to develop youth entrepreneurship, the first necessary step should be systematic work on fostering entrepreneurial culture in the society through the involvement of all the relevant stakeholders, the public sector, business community, the civil society. High-quality education, along with entrepreneurship education, is considered to be a key factor for the development of entrepreneurship. Research at the global level has shown that non-formal forms of education lead to particularly favorable effects in entrepreneurship education, whereas the "Student Company" model has been recognized as the best model of good practice. For us, a particular barrier in the development of youth entrepreneurship is observed in the limited funding modalities. Therefore, it is necessary to improve legal frameworks and develop mechanisms to facilitate access to funds. In addition to this, it is important to reduce the fiscal and parafiscal load for young entrepreneurs in the initial stages of their business operations. In order to increase the degree of innovativeness of the economy as a prerequisite for the development of entrepreneurship in general, it is necessary to change the system of management of science and innovation in Serbia, increase the level of investment in this sector, increase the relevance of scientific research for the development of the economy and develop incentivizing financial mechanisms, along with an institutional framework for linking science and economy.

Keywords: *youth unemployment, entrepreneurship, entrepreneurship education, "Student Company", innovativeness*

Sažetak

Visok stepen nezaposlenosti mladih, koji od perioda svetske ekonomske krize predstavlja jedan od globalnih problema, ozbiljan je problem i u našem društvu. Kreatori javnih politika rešenje problema traže u razvoju sektora mikro, malih i srednjih preduzeća s posebnim akcentom na razvoj preduzetništva mladih. Doneto je više strategija na nacionalnom nivou koje definišu stimulativne mere, ali uočljiv je nedostatak sistemski konzistentnog i kroz sve relevantne sektore podržanog pristupa. Analiza položaja mladih preduzetnika u Srbiji ukazuje da je u cilju razvoja preduzetništva mladih prvo neophodan sistematičan rad na podizanju preduzetničke kulture u društvu, i to kroz uključivanje svih relevantnih aktera, javnog sektora, privrede i civilnog sektora. Kvalitetno obrazovanje, uz preduzetničko obrazovanje, smatra se ključnim faktorom za razvoj preduzetništva. Istraživanja na svetskom nivou pokazuju da posebno dobre efekte u preduzetničkom obrazovanju daju neformalni oblici obrazovanja, a kao najbolji model dobre prakse prepoznat je model „učeničke kompanije“. Kod nas, posebnu barijeru u razvoju preduzetništva mladih predstavljaju limitirani modaliteti izvora finansiranja. Stoga je neophodno unaprediti zakonske okvire i razviti mehanizme za olakšan pristup sredstvima. Uz to, važno je da se u početnim fazama poslovanja mladim preduzetnicima smanje fiskalna i parafiskalna opterećenja. U cilju podizanja stepena inovativnosti privrede, kao preduslova za razvoj preduzetništva, neophodno je promeniti sistem upravljanja naukom i inovacijama u Srbiji, povećati nivo ulaganja u taj sektor, povećati relevantnost naučnih istraživanja za razvoj privrede i razviti stimulativne finansijske mehanizme i institucionalni okvir za povezivanje nauke i privrede.

Ključne reči: *nezaposlenost mladih, preduzetništvo, preduzetničko obrazovanje, „učenička kompanija“, inovativnost*

Introduction

The global economic crisis, which may be characterized as a structural one, has led to significant disruptions in the labor market, with youth proving to be a particularly vulnerable segment. High level of youth unemployment has emerged as one of the most prominent global problems. Youth unemployment happens to be one of the most pressing challenges that Serbia is facing, as well.

Unemployment rate among the young population in Serbia (aged 15-24) ranged from 52.5% in the first quarter of 2014 to 44.2% in the first quarter of the year 2016 [28]. This is more than double the general unemployment rate (19%) recorded during the same period¹. In this age group, as many as 150,000 young people neither attended school nor worked anywhere [10, p. 76].

Since young people are part of the education system even upon reaching 24 years of age, it is realistic for an analysis of the youth labor market to cover the population of those from 15 to 29 years of age². The SORS estimates this segment of the population of the Republic of Serbia to be 1,231,307 [28]. Out of that number, according to their status in the labor market, as many as 54.1% are listed as inactive or are located outside the labor market. Less than one third of young people is employed (31.8%), while the share of the unemployed amounts to 14.2%³.

Almost half (48.7%) of the inactive young population has completed only primary education, while the share of inactive young people with a degree in tertiary education is only 4.6%.

The economy's low level of ability to absorb new entrants into the labor force is certainly one of the reasons why, according to the Global Competition Report (GCR),

Serbia has for years been at the very bottom of the list regarding its capacity to retain talents⁴.

With all these data in mind, the sheer scale of the problem could be perceived beyond doubt.

In the recent years, public policy makers, as well as the professional community, see the solution to this problem in stimulating the development of micro, small and medium-sized enterprises, with special emphasis being placed on supporting the development of youth entrepreneurship. To this end, several strategic documents have been adopted, but there is an evident lack of a systematic and consistent development approach, an approach which would be supported across all the relevant sectors. In order to coordinate and harmonize the existing policies and come up with proper solutions, it is vital to first get a clear picture of the problems faced by young entrepreneurs, and then to define measures for overcoming them, involving all the relevant stakeholders. For a thriving "entrepreneurial ecosystem", governments, entrepreneurs and corporations must work together [6].

In order to define an adequate public policy which would aim to promote self-employment of young people in Serbia, it is necessary to observe real problems that young people struggle with. The purpose of this paper is to highlight the key problems young entrepreneurs in Serbia are facing, as well as to define the directions for their possible solutions.

Entrepreneurial culture

Numerous studies aimed at analyzing the affinity and willingness of young people to "sail" the entrepreneurial waters indicate that ours is an underdeveloped entrepreneurial culture and show that our society does not place enough value on entrepreneurship [3], [14]. There is no clear awareness of the contribution of entrepreneurs to the overall economic development, nor of their importance in creating new jobs. In a study conducted at the University of Novi Sad, more than 40% of the surveyed students perceived business owners as a new category of economic actors

1 By way of comparison, according to the Eurostat data from June 2016, the youth unemployment rate in the EU was 18.5%, while the overall unemployment rate was 8.6%. The rate of youth unemployment is particularly high in Greece (47.4%), Spain (45.8%), Italy (40.3%), Croatia (38.90%) and Portugal (31.9%).

2 According to the Law on Youth, the youth are considered to be persons between 15 and 30 years of age.

3 Depending on the status in the labor market, standard definitions divide the population in three groups – employees, the unemployed and persons outside the labor market (inactive).

4 According to the 2016-2017 Report, Serbia holds the penultimate, 137th place, out of 138 countries surveyed, while in the previous year it was ranked last, 140th out of 140 countries.

whose success is based on doing business in a semi-legal or illegal way [14, p. 94]. This is a result of the attitudes prevailing in the general public opinion. The findings of a survey carried out by CEVES, whose aim was to determine how the citizens of Serbia perceive entrepreneurship, only confirm these conclusions. In a task where respondents rated jobs by awarding the grade 5 to the jobs that enjoy the highest reputation in the society and grade 1 to the least respectable ones, entrepreneurs have occupied the penultimate position, with a ranking of 2.43 (Figure 1).

It is therefore not surprising that in the SORS survey [1], when asked what their desired job position was, almost one half (48.2%) of the young people surveyed stated that they wanted a job in the state and public sector. The period of transition has brought about a serious disruption in the value system in our society, where work is now insufficiently valued and young people are offered the wrong role models.

Entrepreneurs are faced with an environment that does not empathize with their efforts to succeed. They do not receive the necessary support from the society, oftentimes not even from their immediate environment. They experience judgement in case of failure. This has an adverse effect on the orientation of young people toward independent start-ups.

Out of the total number of the employed youth in Serbia, nearly 80% work for a salary, 11.5% work as contributing household members without receiving any direct remuneration, while only 7.8% (30,900) are self-employed, with 1.8% of them being employers at the

same time, and 6% being the single employees in their own companies. Young men are almost twice as likely to start their own business, in comparison to young women (7.6% vs 3.4%)⁵.

Among the self-employed, the highest share is made up of young people with high school diplomas (50.2%) and young people with tertiary education (26.3%).

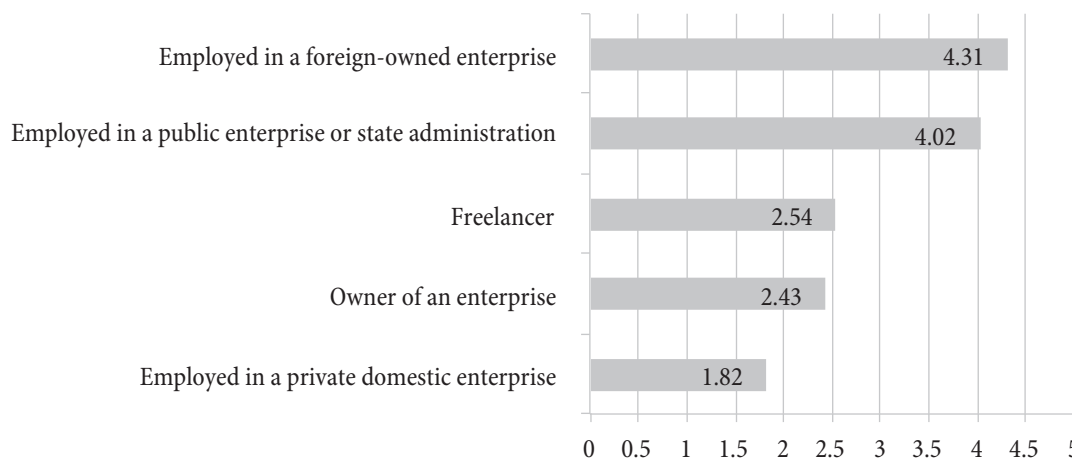
The data presented indicate that in order to develop entrepreneurship in general, and youth entrepreneurship in particular, it is necessary to develop an entrepreneurial culture and raise the profile of entrepreneurship in general. Raising the awareness of the individual's responsibility for one's own life and one's future is a serious task that lies before us.

Cultural acceptance of failure as a frequent potential outcome of entrepreneurial ventures needs to be cultivated, too. Fear of failure and disrespect of the community appears as one of the factors discouraging young people to start their own business.

Developing an entrepreneurial culture requires changes in the existing values and attitudes in our society toward starting a business, willingness to work hard, take risks, partnership, work ethic and business ethics. In addition to the education system, a positive shift in this field requires incentivizing direct actions to be taken by several segments of society (interest groups): private sector (entrepreneurs, corporations with socially responsible

⁵ The highest percentage of young people work in the service sector, with 61.7% employed. It is followed by industry, which employs 23.8% of young people. Agriculture employs 14.6% of the youth population.

Figure 1: Reputation of different ways to ensure existence



activities, business associations, various foundations, etc.), public sector (government agencies, Innovation Fund, state institutions) and civil society (endowments, foundations, various organizations). Fostering entrepreneurial culture and inspiring and motivating young people so that their projects are sustainable and have a developmental perspective require numerous activities on the part of the stakeholders: conferences, seminars, educational programs, discussion forums, public and private initiatives that provide access to knowledge networks, mentors, investors, networking and so forth. Only intense activity of this type with the expected synergistic effect can significantly change the entrepreneurial culture.

The media need to be actively involved in promoting entrepreneurship through:

- series of educational programs on entrepreneurial knowledge and skills,
- promoting entrepreneurship success stories both domestic and abroad, particularly presenting successful young entrepreneurs (creating role models),
- covering various trade fairs, competitions, events where entrepreneurs meet.

Entrepreneurship education

Entrepreneurial thinking and raising awareness about entrepreneurship in general should be encouraged, foremost through the educational system. Entrepreneurship must be viewed as a basic set of skills that are continuously upgraded in the process of lifelong learning. It is necessary to create a comprehensive strategy that will include all levels of formal and non-formal education and all the relevant stakeholders in the education process (pupils, students, teachers, professors, businesses, relevant institutions and organizations).

For young entrepreneurs, embarking on an entrepreneurial activity entails facing a lack of numerous competencies and skills. Research shows that entrepreneurs with a technical background do not possess sufficient financial literacy to make decisions and prepare documentation. Even the entrepreneurs with an economics education background complain about the insufficiency of applied knowledge [9, pp. 57-60]. An additional prob-

lem reported by the respondents was facing their own limitations in entrepreneurial skills (negotiation, team formation and management, presentation, leadership, communication), depending on the stage of development of the company. These challenges were recognized as serious obstacles to growth and development.

High-quality general education, along with entrepreneurship education, is considered to be a key factor for the development of entrepreneurship [6]. The EU expert group [5] defines entrepreneurship education not only as a process of preparation, education and training for establishing own businesses, but in a wider context as the process of fostering an entrepreneurial mindset and entrepreneurial skills.

The objectives of entrepreneurship education, which is being implemented at various levels, are: raising awareness of the participants in the educational process about the importance of assuming responsibility for their own destiny, abandoning the philosophy of “getting a job” and adopting the philosophy of “creating a job for oneself”, fostering and promoting entrepreneurial qualities (creativity, identifying business challenges and opportunities in the environment, risk-taking, flexibility and adaptability, persistence and perseverance, action orientation, accountability for the results achieved) and acceptance of change as a way of life.

Entrepreneurship education should be introduced in the curricula for as many educational profiles as possible, at different levels of education (primary, secondary, post-secondary schools, faculties). In accordance with the best practices, for some educational profiles this should be done vertically – by introduction of a separate subject, while in others horizontally – by integration of entrepreneurial content modules into the existing subjects, with addition, in both cases, of *ad hoc* non-formal education. It is particularly important to further develop the course of “Entrepreneurship” for technical educational profiles (primarily in the areas related to modern technologies) to build up elementary financial literacy and develop entrepreneurial skills of students. This content should also be included in the curricula of post-secondary schools and faculties that train educators and teaching staff. This would enable future teachers and professors (trained in

particular fields) to integrate entrepreneurial content into their fields of specialization. When introducing the course of “Entrepreneurship”, it is important to avoid turning “learning for entrepreneurship” into “learning about entrepreneurship”.

For this purpose, it is important to establish entrepreneurship as a competence of the teaching staff, because it is only the educated teachers who can apply the appropriate teaching methods.

An Ernst & Young research concluded that non-formal entrepreneurial education produced better results than learning about entrepreneurship through formal teaching [6]. The “Student Company” program was evaluated as the best example of good practice in this field on a global level. This program was developed and standardized by the non-profit organization Junior Achievement Worldwide (JAW), founded in the U.S. in 1919, with a mission to develop entrepreneurship and financial literacy among the young. One of the specifics of this program is that it relies on a tight collaboration between the educational system and the business community. The JAW programs are currently being implemented in more than 130 countries in every continent in the world.

In Sweden, after 10 years of implementing the “Student Company” program in their school system, research was conducted with the aim of assessing the impact of the program and the profitability of investment in this type of education. The research was carried out in the period from 1990 to 2007 on a sample of 166,603 participants of the program from 1980 to 2007, and on a control group of non-participants, comprising 221,530 respondents. It was found that program participants launched businesses at the beginning of their career in 20% more cases compared to the control group, and that they did it a year before (on average) the control group. Companies started by the program participants created 130,000 jobs annually over the 20-year period. On average, the companies set up by former “Student Company” participants achieved a 20% higher income compared to the income of the control group, and they were characterized by better sustainability of their businesses than those of the control group; their contribution to replenishing the budget was higher and, in case when participants were employed in companies,

they made quicker career advancement, while their companies grew at a faster pace [24]. Similar results were found in a UK-based research conducted after 50 years of implementation of the “Student Company” program [11] and in the Ernst & Young research in the G20 countries [6].

This program is implemented as an extracurricular activity. It is based on the principle of learning-by-doing. Students conceptualize their company and go through all the stages of work and life cycle of a company.

The company is set up by a team of interested students with the assistance of a trained mentor-teacher, often using input from volunteers from the business community. During the life span of the company, the participants in the program can compete against each other in regional and national contests, and the winners advance to the European competition as an integral part of the program.

The “Student Company” program should be formally incorporated as an extracurricular activity in the syllabi of secondary schools of all profiles, whereas further development of this form of education should be ensured by creating its normative framework. This would consequently ensure the creation of potential new business entities. The development of the normative framework relates to defining the position of student companies in the education system and establishing the conditions for their smooth operation in compliance with applicable regulations.

Although the primary function of the student company is business education of high school students and the development of entrepreneurial awareness among youth through simulation of business operations, certain activities are real (such as the purchase of raw materials and the production of real products, sales of such products or services for money, etc.) and involve interactions with the real economy and its stakeholders (regulatory bodies, entities, regulators). Entering a business relationship presumes legal capacity, but in Serbia, formally and legally, student companies do not possess one. Inexistence of legal capacity of student companies in Serbia severely reduces the potential for acquiring business knowledge and experience for secondary school students, thus hampering the development and growth of innovative student companies. This indicates the need for further

development of the regulatory framework for student companies in the education and economic system of the Republic of Serbia⁶.

In addition to the activities aimed at advancing entrepreneurial education, the development of adequate financial mechanisms and an institutional framework for linking research institutions, universities and businesses in order to transform scientific research products into commercial products would be of crucial importance. This is a basic prerequisite for the development of an “entrepreneurial university” and for a massive expansion of significant science parks, spin-off companies and business incubators at universities.

Sources of financing

A particular challenge in the development of youth entrepreneurship is the availability of sources of financing.

In Serbia, there is no legal framework nor are there mechanisms developed to facilitate access to funds for entrepreneurs (alternative financing models, such as equity-based models – seed, start-up, business angel, venture capital and private equity). Recognizing young entrepreneurs as a separate category within the measures of economic policy is a fairly recent development, and state-budget allocations for youth entrepreneurship development programs are still relatively modest. Due to the limited scope of incentivizing credit arrangements (subsidized loans, state guarantees, etc.), young entrepreneurs are forced to rely on their own resources (savings, family support, loans from friends and so forth), which limits the development potential of their business ideas. The findings of the School-to-Work Transition Survey (SWTS) carried out by the Statistical Office of the Republic of Serbia in 2015 show that in 51.4% of cases young entrepreneurs received financial assistance from family members and friends while starting their own business, 18.2% used their own savings, with only 4.5% taking a loan from state institutions, and 1.2 % relying on a bank loan. When asked about the greatest challenges

faced in doing business, 36.9% of young entrepreneurs who participated in the said survey identified the lack of financial resources as being the major challenge, whereas market competition was mentioned by 7.7 %, and legal regulation by 7.3 % of the respondents. All the other challenges received a significantly lower representation.

For the sake of comparison, in a research conducted by Ernst & Young (2015) in the G20 countries, while answering the question of the top six barriers young people identified as those preventing them from achieving entrepreneurial ambitions, the following were reported: insufficient access to funding (43%), negative economic factors (43%), competition (25%), lack of access to good advice (25%), lack of self-belief (25%) and limited internships (18%)⁷. It is obvious that the problem of limited access to sources of financing is one of the restricting factors for the development of youth entrepreneurship.

The solution to this problem requires normative regulation of investment through venture capital, angel investors etc. by way of adopting a special Law on Venture Capital Funds. These modes of investment are already present; yet it is necessary to establish clear rules and create a legal basis for tax incentives for risky investments.

The Law on Innovation Activity should recognize venture capital funds as entities with business activity aimed at stimulating the development of innovation and innovative companies.

Furthermore, the Law on Companies should include the norms governing investments not based on capital ownership (equity-based investments), where the investor has no shares or ownership of the securities, but the right to an agreed share of company revenues. This is essential, since the modern practice of venture capital investment shows that a significant number of investor rights is regulated by the quasi-equity instruments. This is one of the important mechanisms to stimulate growth in this industry.

Also, it is necessary to reexamine the regulations related to the Insurance Law and the Law on Voluntary Pension Funds and Pension Schemes. The possibility of using a certain percentage of funds of insurance companies

⁶ The organization Junior Achievement Serbia, in cooperation with the German Agency for International Cooperation (GIZ), has initiated the process of advocacy for the regulation of the legal capacity of student companies.

⁷ Respondents were asked to check everything that applied; results do not total to 100%.

and voluntary pension funds for investment in this domain should be considered. An analogous approach may be applied to the Law on Banks, as well.

In addition to the regulations that would relate to the operation of venture capital funds, it is necessary to pass the Law on Microfinance. Due to their costs, microloans cannot be the main source of financing, but they may prove helpful in particular situations.

Tax exemption from corporate income tax for investments in technology start-ups and innovative companies might be a helpful incentivizing measure. This would encourage large companies to invest in smaller ones, either because of the direct benefits of incorporating innovative technological products in their value chains, or because of the possibility of investment becoming an opportunity cost to income tax payment. Another benefit of this measure would be that the State would acquire one of the smartest mechanisms to encourage growth of selected areas of the industry (e.g. information technology and industries based on knowledge and innovation). In addition to this, although to a lesser extent, the stimulating effects may be achieved by introducing tax credits for investment in research and development and tax incentives in the form of tax exemption of profits aimed at high-risk investments. These incentives should be directed at venture capital funds, but also at investors who invest in venture capital funds, especially in the case of institutional investors, such as voluntary pension funds and insurance companies [22].

At the national level, it is necessary to implement and promote national programs in a clear and transparent manner to encourage entrepreneurship, especially youth programs (e.g. the programs that the Ministry of Economy launched in 2016: Financial Support for Programs and Projects to Support Youth Employment, Financial Support for Start-ups, Financial Support for Innovative Projects in Start-ups in the ICT, etc.).

Fiscal and parafiscal load

Along with the aforementioned difficulties in acquiring the necessary funding for setting up and developing entrepreneurial activity, the high level of fiscal and

parafiscal load is often reported by young entrepreneurs in Serbia as being a particular impediment and obstruction for development [9, pp. 54-63]. These costs prove to be a particularly heavy encumbrance in the initial stage of operations, a stage most often characterized by lower and sporadic income generation. The amount of taxes on personal income and social security contributions are perceived as a major burden. In particular, in the case of business companies, gross wage is reduced by almost 70% against taxes and contributions. This results in a failure to declare the full amount of wages to the tax authorities, or failure to register all the employees as such. Such high expenses discourage potential entrepreneurs who are considering to register their activities, and lead to an increase in the number of those operating in the shadow economy.

Moreover, for entrepreneurs who are not registered as business companies, the dynamics and calculation of income tax is often a problem. If there is a business volume decrease, they are required to keep paying taxes for the previously estimated level of income. Only after six months can they apply for adjustment. In case of overpaid taxes, the company funds remain frozen, without a refund option. Instead – the official tax records just show an overpayment. It is also important to emphasize that there are significant differences in the level of lump sum income for taxation per different municipalities in Serbia. All of the aforementioned arguments point to the fact that a more favorable tax treatment may result in stronger incentives for the development of youth entrepreneurship, and prove to be potentially more efficient than the existing models of subsidies for creating new jobs. This may be corroborated by comparative research⁸ [9, pp. 56-63]. Therefore, it is important for the legislators to consider a comprehensive set of measures, starting from reducing the taxes on personal income and social security contributions for young entrepreneurs for a limited time period⁹ along with the adjustment of other corresponding

8 Germany offers a good example of a model which combines financial support and tax incentives for young entrepreneurs. The model is implemented in two national projects "Bridging Allowance" (*Überbrückungsgeld*) and "Start-up Subsidy".

9 In order to prevent possible abuses of the privileges, it is necessary to precisely define the relevant criteria, such as first-time company, the cap of total monthly income, time limits, etc.

types of taxes, accompanied by the introduction of tax credits for these liabilities, eventually leading up to total exemption [9, pp. 78-79].

Furthermore, a special tax treatment for innovative companies should be introduced, allowing lower corporate tax if the profit comes from investment in patent-based product development, or through the commercialization of innovative technological knowledge. Such measures would contribute to the development of investment in new technology and development of high-tech industry in general.

The Strategy for Supporting the Development of Small and Medium-Sized Enterprises, Entrepreneurship and Competitiveness 2015-2020 [16], places special focus on defining measures aimed at promoting youth entrepreneurship. One of the proposed measures involves the development of the Youth Company. The development of the Youth Company model, a company whose founders are young people according to their age group, would enable direct application of various incentives for the development of youth entrepreneurship (temporary tax breaks, exemption from social security contribution obligations, access to guarantee funds, subsidies aimed at development of certain types of economic activities, etc.). For this idea to take root, the Youth Company model should first be recognized in the Law on Business Companies, and then in other corresponding laws.

Innovativeness

If we want to analyze the opportunities for youth entrepreneurship development, as well as entrepreneurship development in general, it is essential that we assess the innovation potential of a certain country. Innovation is a key prerequisite, the cornerstone of entrepreneurship. Against the backdrop of its driving force, a critical question to be raised is whether the degree of innovation in our economy is a fostering or a limiting factor in the development of youth entrepreneurship.

As stated by the World Economic Forum's Global Competitiveness Report 2016-2017, Serbia is ranked as 108th in terms of innovativeness of its economy among the 138 surveyed countries worldwide. By way of comparison,

Croatia scores 103th, while Montenegro holds the 94th, Macedonia the 51st and Slovenia the 33rd place.

Compared to the previous year's results provided in the 2015-2016 report, where Serbia was ranked as 113th among the 140 economies covered, a slight advance may be observed.

According to the methodology applied in this report, an assessment of a country's performance in terms of innovation is made by observing several indicators (Table 1).

Table 1: Innovation as a pillar of competitiveness

Competitiveness indicator	Country's ranking
Capacity for innovation	130
Quality of scientific research institutions	60
Company spending on R&D	121
University-industry collaboration in R&D	96
Gov't procurement of advanced tech. products	108
Availability of scientists and engineers	90
PCT patent applications (applications/million pop.)	50

Source: [26]

The first indicator is the capacity for innovation. This indicator shows the potential of companies to innovate. The current level of development and the poor state of the economy have limited our companies' potential to develop and implement innovations. Businesses lack funds to invest in research and development, and this indicator places us as low as in the 130th position in the world. In terms of company spending on research and development, we hold the 121st place. By way of comparison, the business sector in Serbia accounts for only 7.5% in investment in research and development, while this percentage reaches 60.8% in the OECD countries. In Serbia, only 3.3% of researchers are employed in industry, whereas in the OECD countries this number amounts to nearly 60%.

In respect of the quality of university-industry collaboration, Serbia holds the 96th place. This is a one-place drop compared to the previous year's ranking. Generally speaking, the level of orientation of scientific research toward industry needs is relatively low. Out of the total number of results achieved in the budget-funded scientific research projects in the period from 2011 to 2015, new patents and technical solutions accounted for only 3.3%, while 88% of the projects yielded scientific papers.

These data clearly suggest the need to build up a more efficient relationship between the science and research sector and the industry.

Absence of collaboration among universities, the scientific sector and the industry produces multiple negative effects. On one hand, resources pertaining to the scientific sector do not offer additional incentives for igniting economic growth, whereas, on the other hand, the industry does not play an active and spontaneous role in designing educational curricula and syllabi. In other words, the educational system, which is supposed to develop the workforce for the industry, remains isolated in this process (left to its own devices). As a result, a critical opportunity for young people to become involved with research projects and obtain valuable experience in the course of their education is lost.

The low level of mobility of researchers between the academia and the industry and vice versa proves to be an additional problem, and the collaboration between these two sectors, naturally leading to an increase in innovativeness, presupposes this very type of mobility.

The most successful fields in which scientific and technical solutions find their way to commercial applications in the industry are electrical engineering, telecommunications and information technology. Out of the total number of technical solutions, 38% are solutions in these particular fields, with 90% of them being commercialized in the local and international markets. Biotechnology and agriculture stand out in terms of the number of patents, with a share of 57%.

Apart from the disconnection between the scientific research sector and the industry in Serbia, additional Government incentives aimed at fostering innovation, such as procurement of advanced technological products, are also lacking. In terms of Government innovation incentives for local companies through procurement of advanced technological products, we are ranked in the 108th place.

Poor results for these criteria are at odds both with the scientific potential of this country and its ranking in terms of the quality of scientific research institutions, where we scored 60th. This does not come as a surprise since, according to the latest 2016 Shanghai Ranking,

the University of Belgrade was listed among the best 300 universities. Our share in the total world production of scientific papers is 0.3%, and we hold the 46th position on the list of over 140 countries (SCImago Journal & Country Rank). Our young professionals, educated at domestic universities, find their place in scientific and research centers worldwide. These results are even more significant, bearing in mind that budget investment in science has ranged from only 0.36 to 0.46% of gross domestic product (GDP) in the recent years, while the goal was 0.9% of GDP.

Total investment in this sector, both from private and budget sources, is less than 1% of GDP [17], which is significantly below the EU average of 2.06% of GDP, according to the Eurostat data. Furthermore, there is also a problem in the structure of science investments. Researchers' salaries account for 87% of total investment, while research in many areas require investment in material costs, as well. Investment is minimal in additional staff education, such as referral to specializations abroad, to scientific conventions, where new knowledge is acquired and exchanged.

It may be concluded that, in spite of the decades-long low investment rates, Serbia possesses significant scientific and research potential, awaiting to be further developed and put to more appropriate use.

In terms of availability of scientists and engineers, we hold the 90th place in the world. In comparison to the 2016 findings, this is an eight-point drop in ranking. One of the causes for this decline is certainly the high outflow of qualified professionals, on one hand; on the other hand, our educational system fails to respond to the change of industry needs for certain professional profiles caused by rapid technological development. In addition to these indicators that directly affect the degree of innovativeness of an economy, there are additional factors of importance that determine the broader socio-economic framework and represent the basis for the development of innovation and entrepreneurship. These are the level and quality of health care, the quality of primary and higher education, goods market efficiency and financial market development. They are exhibited in Table 2 with the pertaining rankings of Serbia.

Table 2: Factors of importance for innovation

Competitiveness indicator	Country's ranking
Health and primary education	53
Higher education and training	69
Goods market efficiency	121
Financial market development	110
Technological readiness	70
Country's capacity to retain talent	137
Country's capacity to attract talent	137

Source: [26]

We boast a relatively solid 53rd place in terms of health and primary education (a significant leap from the previous year's 62nd position). In terms of quality of higher education, we are positioned toward the middle of the list of the countries ranked (69th place). We are, however, at the very bottom in terms of goods market efficiency (121st place). This indicator shows the extent in which entrepreneurial activity is stimulated by the existence of active demand in the market, i.e. the market absorption rate.

Serbia scored 110th in terms of financial market development. Our financial sector is marked by a relatively limited number of participants and a low level of activity.

The analysis above may serve as a basis for assessing the state of innovation in our economy. Obviously, we are still far below the desired level, despite the fundamental potential that we possess. Our country is still classified among the "efficiency-driven" economies, and we have a long way to go to reach the status of an "innovation-driven" economy. In order to develop the level of innovativeness of the economy, which is a prerequisite for development of entrepreneurship, it is necessary, as defined in the Strategy of Scientific and Technological Development for the 2016-2020 Period [17], to change the system of management of science and innovation in Serbia, increase the level of investment in this sector, improve the relevance of scientific research for the development of the economy, develop stimulating financial mechanisms and an institutional framework for linking science and economy.

A significant assistance in the development of an innovative local economy could be provided by means of facilitated access to European programs for the development of innovation and entrepreneurship. This step requires

further strengthening of the capacities of the Ministry of Economy (COSMA program), the Ministry of Education, Science and Technological Development (HORIZON 2020 program) and the Ministry of Labor, Employment, Veteran and Social Affairs (EaSI program). This would allow young entrepreneurs to obtain the necessary information and learn about project application procedures.

Conclusion

One of the key problems in the Republic of Serbia is high youth unemployment. Less than one third of young people aged from 15 to 29 are employed (31.8%). Public policy makers are seeking to solve this problem by way of creating new jobs through the development of small and medium-sized enterprises. Special emphasis is being placed on fostering the development of youth entrepreneurship. These findings point to the relatively scarce opportunities or low preferences among young people in Serbia to create their own jobs.

Studies that included analyses of the conduciveness of the environment for youth entrepreneurship development in Serbia show that entrepreneurship is not sufficiently appreciated in our society. There is no clear awareness of the contribution of entrepreneurs to the general economic development, or the importance of entrepreneurship for job creation. Entrepreneurs face a lack of understanding from the environment and are met with disrespect in case of failure. This certainly produces a discouraging effect on the entrepreneurial inclinations among young people.

Furthermore, due to inexistence of a clear strategy for the development of our educational system and the sluggishness of the reforms, the youth workforce supply falls short of the industry needs, whereas graduates are ill-prepared for the job requirements and trends in the modern economy. For young entrepreneurs, engaging in entrepreneurial activity means facing a lack of numerous skills and knowledge. Entrepreneurship education is not integrated in the curricula; therefore, the desirable entrepreneurial qualities are not being developed in students. Moreover, skills such as presentation, teamwork, communication, negotiation and leadership are not being

nurtured either. It is the lack of these very skills in young entrepreneurs that is often the limiting factor for further development of their businesses.

Young people who embark on the entrepreneurial journey face numerous hurdles. A major challenge is the limited access to funding. Due to the underdevelopment of standard forms of funding of innovative ideas that exist in developed-market economies and due to a limited scope of incentivizing credit arrangements (subsidized loans, state guarantees, etc.), young entrepreneurs are forced to rely on their own resources (savings, family support, loans from friends and so forth), which limits the development potential of their business ideas.

An additional problem is that young entrepreneurs are generally uninformed about legal regulations that define the framework for business operations. The basic system of legislation which governs the setting up of entrepreneurial activity and business entity, the rights and obligations in labor relations, management of business documents and business reporting, taxation, customs system, foreign exchange and foreign trade operations and the like, comprises 14 laws. In addition to these, there is a number of regulations and legal acts relating to particular sectors and business activities. It is evident that without professional help, be it from certain institutions or in the form of legal assistance, which requires additional expenses, they cannot cope with the applicable regulations. Most often, young entrepreneurs acquire knowledge and experience in this field by learning from mistakes.

Apart from the lack of necessary funding in the initial stage of their business operations, they also face considerable costs incurred by the high fiscal and parafiscal load. This undoubtedly hinders the chances for success and discourages young entrepreneurs from leaving the gray economy and joining the regular course of business operations.

Moreover, on top of all these problems, our economy lacks a supportive entrepreneurial climate. The level of innovativeness of the economy is relatively low, the link between the scientific sector and the industry is weak, investment in scientific research that would result in commercial products is insignificant, the industry lacks funds to finance new technologies, the most talented and

educated young people are leaving the country and we do not have the capacity to retain them.

Public policy makers have defined measures for supporting youth entrepreneurship development in several strategies, yet there is an evident lack of a systematic and consistent development approach which is supported across all relevant sectors of youth entrepreneurship [16], [17], [18], [19], [20]. The scope of measures that target youth entrepreneurship is relatively modest. It can be concluded that there is no real understanding of the degree of causal relationships between the improvement of education, the development of innovativeness, entrepreneurship and impact on economic development thereof.

In the long term, measures of the utmost significance would be the ones aimed at fostering entrepreneurial culture and education.

Improving the entrepreneurial culture calls for a change in the existing values and attitudes in our society toward starting a new business. In addition to the educational system, a positive shift in this field requires incentivizing direct involvement of the business community, the public sector and the civil society. Active involvement of the media should also play an important role.

Improving the quality of general education, along with entrepreneurial education, is certainly a key factor for the development of entrepreneurship. Different studies have shown that the best effects in the development of entrepreneurial skills and competences are achieved through non-formal forms of education, whereas the “Student Company” model has been recognized as the best model of good practice. This model has been standardized, and is based on tight collaboration among the educational system, the business community and the civil society. It is implemented as an extracurricular activity and does not place financial burden on the educational institutions. This program is already being implemented in Serbia, and in the last ten years over 30,000 high school students have participated therein. A network of almost 700 trained mentor-teachers and more than 200 volunteers from the business community is formed each year. The program is organized by the NGO called Junior Achievement Serbia and relies on the ability of its members to secure the necessary resources. The quality of this program has

been recognized in strategic documents [16], yet systemic support measures and the normative framework have not been completely developed in order to exploit the full potential of the program. Recommendations for overcoming these problems have been defined and the competent institutions should implement them [4], [9].

In addition to the activities aimed at advancing the educational system, development of adequate financial mechanisms and an institutional framework for linking research institutions, universities and the industry in order to transform scientific research products into commercial products would be of crucial importance. This is a basic prerequisite for the development of an “entrepreneurial university” and the expansion of significant science parks, spin-off companies and business incubators at universities, and consequently for raising the level of innovativeness of our economy.

In order to facilitate access to finance and to diversify sources thereof, it is necessary to improve the legal framework (legislation on investment funds, microfinance, tax incentives for investments in innovative projects, etc.). On the other hand, to reduce the cost burden in the initial stages of business operation, it would be necessary to define a consistent set of measures which would determine tax incentives for a defined time period aimed at young entrepreneurs.

If we wish to reduce the youth unemployment rate and encourage and empower young people to create their own jobs, a full understanding of the factors essential for the development of youth entrepreneurship is necessary, as well as the cooperation of public policy makers in all relevant fields, synchronized action and hard and persistent work.

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