

Cooperation and strategy in higher education: evidence from Serbia

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Abstract

Without any doubt, education represents large and important part of a society and higher education institutions are crucial partners in delivering state's education strategies towards growth and prosperity. Quality of education has a statistically significant and very important positive economic effect. Moreover, education is becoming one of the key economic objectives in a complex and competitive knowledge marketplace. To cope with these challenges, higher education institutions need an appropriate strategy, which should be implemented according to the best practice and principles. The purpose of this paper is to provide prescriptive guidance to stakeholder's representatives such as: university, business sector, policy makers and students. Despite comprehensive literature reviews on similar topics, studies focused on competition and strategy in higher education in Serbia are still at the initial phase. The study proposes a SWOT (strengths, weaknesses, opportunities, threats) analysis illustrating key trends that will impact higher education and academia in the future. Considering the results of the analysis and disadvantages in the current system of higher education in Serbia, several core challenges are identified that higher education institutions will face and that have important outcomes for research and practice. The study offers quality basis of information for all the aforementioned stakeholders.

Keywords

education strategies, education outcomes, SWOT analysis

1. Introduction

Higher education has a very important role in the nation's development. Having in mind increasingly global, dynamic and digital environment, higher education will not be immune to changes. Therefore, it is crucial to point out that policies and strategic guidelines can improve situation and provide future development direction.

Higher education is a very important factor in society and is constantly faced with the need to develop and improve so that its contribution could be recognized not only in university circles, but also among other stakeholders. The importance of qualifications offered by higher education is best reflected in the labour market. The organization of educational institutions and objectives should be clearly and accurately defined and transparent, all in order to adequately apply knowledge and skills in practice.

The increasing complexity and uncertainty characterizing today's society are inevitable. It is high time that HE institutions in Serbia paid attention to brain drain which has marked the country for more than three decades. Luo (2012) pointed out that the core task of strategy within HE is to fulfil close integration of education, science and technology, economy and politics. Moreover, the author suggests that special attention should be given to university-run enterprises as human development is essential for every country.

Having in mind that education is delivered by private universities and companies which do not have appropriate qualifications and experts, knowledge marketplace has become complex and very competitive. Therefore, the constant research on mission and strategy of the higher education sector should be one of the top priorities of HE institutions (Pucciarelli, 2016).

Universities have three basic conflicted missions: teaching, research, and public service. Two key directions for improvement are recognized: 1) Business practice should be part of HE, and 2) HE institutions are responsible for development of competitive strategies (Pucciarelli, 2016). HE institutions serve as non-profit organizations, prioritizing the public good and serving as providers of knowledge and a path for educational development (Council of the European Union, 2014). On the other hand, they have become increasingly focused on competition and revenue creation. Several developments are occurring at the same time such as: the spread of the curriculum, the massification of higher education, the increasing number of private providers as well as the rise of global markets for education and research (Boer et al., 2002). The same situation is within other not-for-profit players and public entities which should continue to work for public good, giving their best to make a trade-off between profitability and costs.

2. Theoretical background

For the purpose of this study, we structured the extant research into two broad streams: setting-specific and model-developing research. The first stream of research encompasses numerous studies discussing key issues in HE sector. The other stream of research is focused on the development of SWOT analysis for the research on current trends within academia.

Viegas et al. (2016) have tried to address the existing lack of depth and comprehensiveness in HE by identifying and categorising the critical attributes of sustainability in Higher Education. The results of the study show that programmes on sustainability in higher education are missing philosophical debates, and aspects of pedagogies, personal values and inherent complexity.

Sekuloska (2014) has presented the interdependence between the quality of the educational and training system and the level of competitiveness, suggesting that investment in human

capital means investment in competitiveness creation. It is proved that human capital is a key precondition for productivity growth.

Yeravdekar et al. (2014) have pointed out that internalization of higher education has strong impact on corporate competitiveness. HE institutions should be responsive to those skills which constitute work-preparedness—and one of the ways is through internationalization of higher education.

Boccanfuso et al (2015) have examined the effect of higher levels of education on labour market outcomes in developing countries. The results of their study indicate that “quality improvements in higher education could have significant positive effects not only on the labour market outcomes of university-trained individuals, but also on the dropout rate and on university attendance”.

Recent researches suggest that quality of education is strongly associated with income and economic growth. Kaarsen (2014) have shown that one year of schooling in the U.S. is equivalent to three or more years of schooling in a number of low-income countries. Manuelli et al. (2014) have investigated the role of human capital in highly developed countries and propose a model that can explain differences in schooling and earnings profiles of the countries.

SWOT analysis aims to identify the strengths and weaknesses of an organisation and the opportunities and threats in the environment. Having identified these factors, strategies are developed which may build on the strengths, eliminate the weaknesses, exploit the opportunities or counter the threats (Dyson, 2004). Despite the fact that SWOT analysis has been seen as outdated and replaced by more developed methods, it is widely used especially for the first phase of the research. Moreover, literature review shows that SWOT analysis is not only a commonly used tool for strategic planning, but also a form of brainstorming (Phadermrod, 2016).

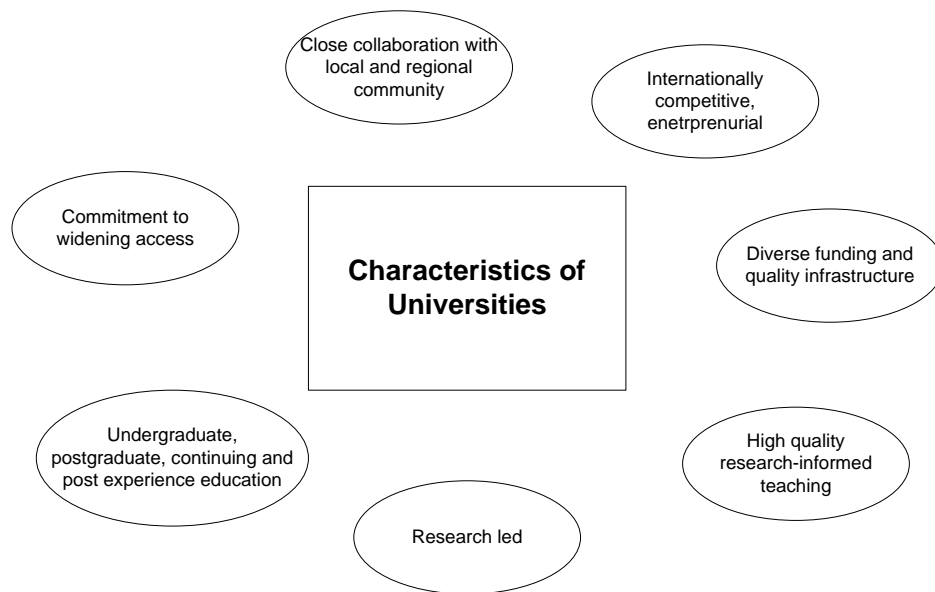
SWOT analysis is a tool widely used by leading companies as well as academics because of its simplicity. Nevertheless, Ghazinoory et al. (2011) have pointed out that “there are shortcomings existing in the traditional SWOT approach as it produces superficial and imprecise list of factors, relies on subjective perception of an organisation's staff who attended the brainstorming session, and lacks factor prioritization regarding the importance of each SWOT factor”.

In order to overcome the main disadvantages of SWOT analysis, researches propose combination with other quantitative methods such as Analytic Hierarchy Process (AHP), Fuzzy Analytic Hierarchy Process, and Analytic Network Process (Kangas et al., 2001). In addition, there are many articles which use SWOT analysis to discuss higher education issues (Ardelean, 2015; Phadermrod, 2016; Romero-Gutierrez et al. 2016; Luo, 2012). We assume that by applying SWOT analysis, the HE institutions can recognize the core opportunities for decision-making, planning, and building strategies which will result in current situation improvement.

3. Mission of universities and learning outcomes

The purpose of this paper is to contribute to the future development and improvement of HE in Serbia. Authors suggest that SWOT analysis can be used as a tool for further discussion on the mission and characteristics of particular University. Dyson (2004) used this approach in order to describe an application of strategy formulation and its incorporation into the strategic development process at the University of Warwick. In addition, the author draws attention to the mission and characteristics of universities in general (Fig.1).

Figure 1. The mission and characteristics of universities



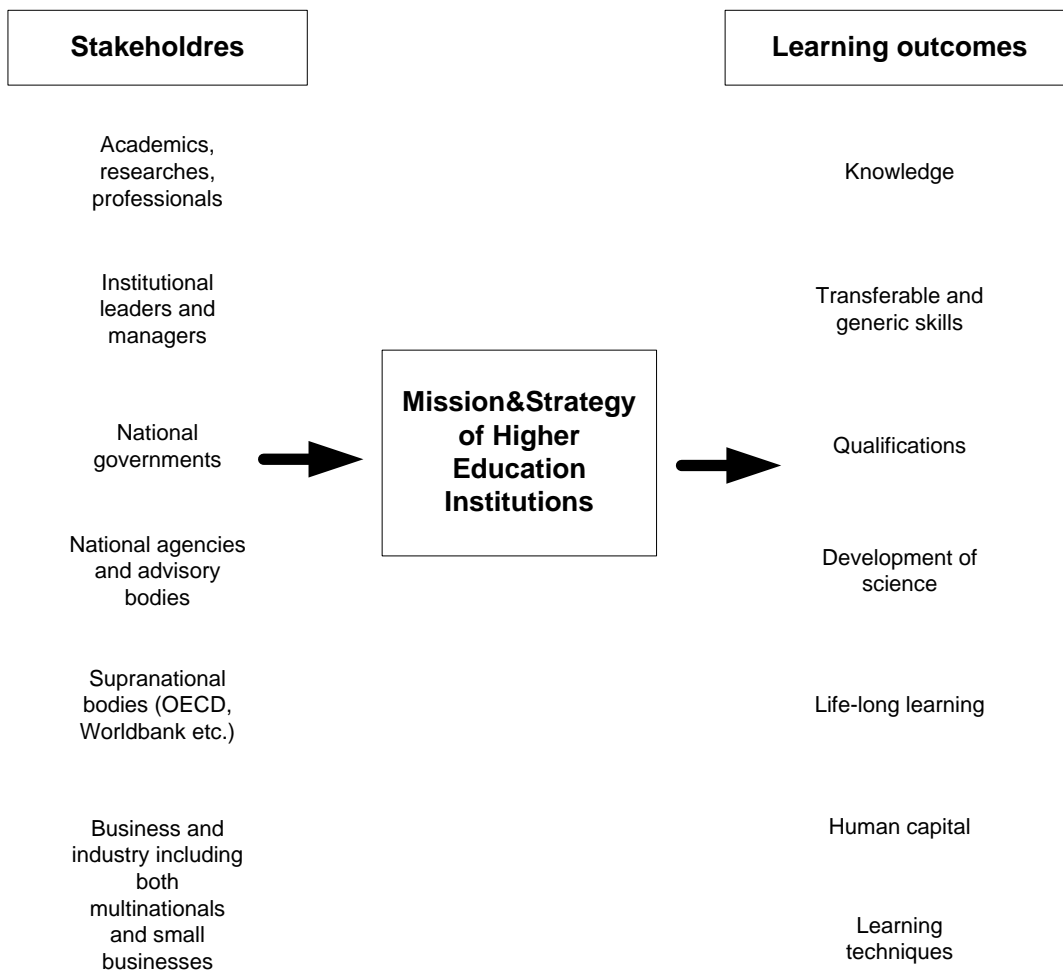
Adapted from: Dyson (2004)

Education and training systems are dynamic and universities should constantly balance and rebalance priorities in response to a wide range of pressures and in order to develop a more competitive economy. Nowadays, employable, productive and innovative learners are the key to improving the Higher Education System. Therefore, strategy and mission of a particular University should be developed in accordance with all stakeholders. Moreover, some authors (Bergan, 2007) have stressed that the main objective of defining the necessary qualifications set is a higher degree of connection among the universities, the Ministry of Education and national and international labour market.

The concept of qualifications is a link between knowledge developed during education and demands from the world of work (Bergan 2007). Additionally, learning outcomes express what a person with specific qualifications is able to know, understand and perform (Barjaktarović Rakočević et al, 2015).

Methods for defining learning outcomes vary widely among universities. Taking into account the views of representatives of the teaching staff, students, Ministries of Education and companies, learning outcomes are defined as the skills and competencies that students expect to gain after graduation. However, the interviewed representatives have categorized learning outcomes in different ways. Some have divided learning outcomes in three categories: knowledge, skills and competences, while others have described learning outcomes as a result of what students have learned, understood, and they are able to apply in practice. It is believed that learning outcomes should be a starting point for evaluation of the previous work of HE institutions. The next figure presents the identified learning outcomes and their correlation with HE.

Figure 2. HE institutions and learning outcomes



Source: Boer et al. (2002); Barjaktarović Rakočević et al. (2015)

4. SWOT analysis of the key trends within Higher Education System

Analysis of the key trends and developments affecting HE was driven by the previous work of Boer et al. (2002). Those authors have defined seven trends that have the strongest influence on academia's future. Those trends are as follows: 1) the development of information and communication technologies, 2) the marketization in higher education and science, 3) globalisation, internationalisation and regionalisation, 4) an advancing network society (rise of consortia, strategic alliances etc.), 5) an advancing knowledge society, 6) socio-cultural trends and 7) demographical trends.

After the comprehensive research review and using the work of Pucciarelli (2016) as an introduction to the current situation of HE sector in Serbia, we will be able to discuss suggestions and recommendations for the HE strategy improvement.

The following table presents SWOT analysis of current trends within HE sector. A detailed examination of the strengths, weaknesses, opportunities and threats might be helpful in order to define the most suitable guideline for the HE improvement.

Table 1. SWOT analysis of the current situation within HE sector

Strengths	Weaknesses
<p>Essential source for a society's talent and innovativeness</p> <ul style="list-style-type: none"> • Institutionalized public service with a societal mission • Important provider of knowledge and innovation <p>National driver and global ambassadors</p> <ul style="list-style-type: none"> • HE as domestic resource, engine of growth and economic recovery • International expansion and global knowledge dissemination 	<p>Substantial delay in entrance of business practices into HE</p> <ul style="list-style-type: none"> • Tradition of being a public service financed and protected by the State • Resistance of faculty, who are often organized in strong public sector unions <p>Low responsiveness to changes within the corporate world</p> <ul style="list-style-type: none"> • Little adaptation of programs and curricula to recruiters' needs and job expectations • Myopic 'publish-or-perish' research strategies leading to purely academic publications without consideration of other stakeholders
Opportunities	Threats
<p>Fast-evolving HE environment through ICT</p> <ul style="list-style-type: none"> • Development of new market, potential productivity gains, and branding possibilities • Advancement of both general knowledge and network society <p>Rapid transformation encouraged by socio-demographics</p> <ul style="list-style-type: none"> • Millennials seeking augmented educational experience • Growing and changing student population 	<p>Continuous decrease in public funding</p> <ul style="list-style-type: none"> • Necessity for external fundraising and increased self-financing • Need for marketization of HE, potentially lowering academic standards and quality <p>Increasingly competitive environment</p> <ul style="list-style-type: none"> • Domestic deregulation leading to new market entrants • Globalization broadening competition to an international scale

Source: Pucciarelli (2016)

5. HE in Serbia: current position and future direction

Education is a vital component of a country's human capital. It creates efficient employees and drives economies towards sustainable development and progress. Quality higher education and training is vital for economies that would like to progress the value chain beyond simple production processes and products (Bughin et al. 2010).

According to Global Competitiveness Index published by World Economic Forum, Serbia holds position 71 out of 140 countries for the Higher education and training pillar. This research have been done for the year 2015-2016 and total score for Serbia for this pillar is 4.3, for being 7 as the best and 1 the worst result. The Global Competitiveness Index measures the competitiveness of 140 world economies, giving information about drivers of their productivity and prosperity. Higher education is definitely viewed as one of the important

pillars that will ensure economic growth of a country. Today, fast changing economies require countries to raise a number of well-educated workers who are able to perform complex tasks and adapt rapidly to their varying environment and the growing needs of the businesses. This pillar measures secondary and tertiary enrolment rates as well as the quality of education as evaluated by business leaders (Schwab, Ed. 2016).

Higher education and training belong to the efficiency enhancers' subindex that comprises pillars key for efficient – driven economies. Efficiency-driven stage of development of a country is stage when a country must begin to build up more efficient production processes and increase product quality. At this point, competitiveness is increasingly driven by higher education and training, among other pillars in this group. In this report, quality of education in Serbia has low rate (106 out of 144 for 2014/2015). For the pillar 12th, Innovation, and indicator “University-industry collaboration in R&D“ Serbia holds position 95 out of 144 for 2014/2015.

According to this report there is a huge space for improvement of higher education in Serbia. If Serbian economy wants to advance in social and economic development, it needs to have well trained and highly innovative professionals. For the BRICS countries, Carnoy et al (2013.) consider that important factor for those economies to reach highest level of economic development will depend on „how successfully they create quality higher education that puts their labour forces at the cutting edge of the information society“.

Since we live in the era of high-technologies industries, they would be of extreme importance for economic development of every country. That means that Serbia has to think about HE strategy that would strongly consider information systems and technologies as one of the important paths for educating professionals for the future. These fields of education are currently of a very high level of quality in Serbia. As one of the evidence for this statement we can take the fact that there are number of IT leading world companies (like Cisco or Microsoft) present in Serbia directly or through partners.

But also, we cannot forget about constant necessity for fostering management education and higher education for sustainable development as Adomßent et al suggest (2013). There is still strong pressure on business schools to create and prepare professionals that will lead economies towards all future challenges and crises situation.

As we mention before, Serbia has huge problem with brain drain. Non-official numbers say that every year more than 30.000 highly knowledgeable and trained professionals, from different scientific fields, leave country. That is huge problem for Serbia since less than 9% of population has tertiary education. Since demand for employers with high skills will continue to rise in the future, and in order to further develop higher education in Serbia and create highly knowledgeable and trained professionals that will stay in and help developing Serbian economy, in the next part of the paper authors consider several aspects that have to be focused for future direction of HE in Serbia.

6. Connections and value co-creation with key stakeholders

European Commission (2011a) has seen a reform strategy for the modernisation of higher education as necessary and urgent. If properly supported, higher education can be the engine of Europe's competitiveness and innovation and a key driver for growth and jobs in Europe. Even more this could be implied for small country like Serbia is, that strives for economic growth and development. Skilled, trained and knowledgeable employers are needed for any kind of development and prosperity in a country, putting constant pressure on higher education development and connections with key stakeholders.

In this paper we will consider several aspects of possible paths for the development of Serbian HE in the future, and it all refers to one arm of the key stakeholders – different forms of business sector cooperation:

- Cooperation with business sector,
- Connections with entrepreneurial development – through business incubators, start-ups, and MSME generally.

Even though we consider HE strategy for the cooperation with business sector, it also indirectly implies to other key stakeholders like students and government.

7. Cooperation with business sector

Since Serbia is one of the candidate countries for EU accession, it could follow EU strategies for higher education. European Commission, in its modernisation agenda for higher education points out five key priorities for higher education in the EU (European Commission, 2011b):

1. increasing the number of higher education graduates;
2. improving the quality and relevance of teaching and learning;
3. promoting mobility of students and staff and cross-border cooperation;
4. strengthening the "knowledge triangle" between education, research, and innovation;
5. creating effective governance and funding mechanisms for higher education

One of the important pillars for higher education development should be cooperating with business sector and creation of settings for joint education and scientific collaboration. Cooperation between universities and business sector is very important even for the developed markets and economies, and there is space for constant improvement of this connection. Serbian position regarding cooperation between university and business sector is globally on a very low level. Higher education strategy in Serbia should give special emphasis to very close cooperation with business sector as one of the main stakeholders in the field.

Together, HE institutions and business sector should act in order to improve educational process and setting learning outcomes align with labour market needs. Business role in modernization of curricula is invaluable having in mind that will provide insight into business needs and orientation. Involving business sector in the collaboration with universities will lead to quick respond to market needs but also foster sharing and transfer of knowledge and good practice (Barjaktarovic Rakoccevic at all, 2015). Both parties will have highly valuable outcome of joint collaboration: businesses will improve performance with opening up to academia and students in different activities and HE institutions will have study programs in line with business and labour market qualifications and desired skills. Those activities that will link HE and business, in broader sense could include solving real business problems in the classroom (with multidisciplinary approach to the problem), possibility to create curriculum jointly, long-term partnerships on different project proposals, evolving “business” mentors for students research, having expert from business in the classroom, discovering talents while still studying etc. Especially important is collaboration of universities and business sector in research and development (R&D) and also commercialisation of R&D results. All this should also lead to joint publications of academia and business sector in order to improve both theory and practise.

Entrepreneurs and micro, small and medium enterprises (MSME) in both developed and emerging countries, are viewed as leading force for economy growth and development. According to Statistical Office of the Republic of Serbia (2016), this sector have the highest number of enterprises, more than 99%, it employs about 70% of the workforce in Serbia and gives more than 50% of the country GDP. This year, 2016, has been pronounced as year of

entrepreneurship in Serbia, meaning that government will help and support environment for entrepreneurship development and create entrepreneurship culture. The EU policies also promote entrepreneurship as a significant way for creation of new businesses and jobs. One of three areas for immediate intervention within EU for this plan is entrepreneurial education and training for all, but especially for young people, to support growth and business creation (European Commission, 2013).

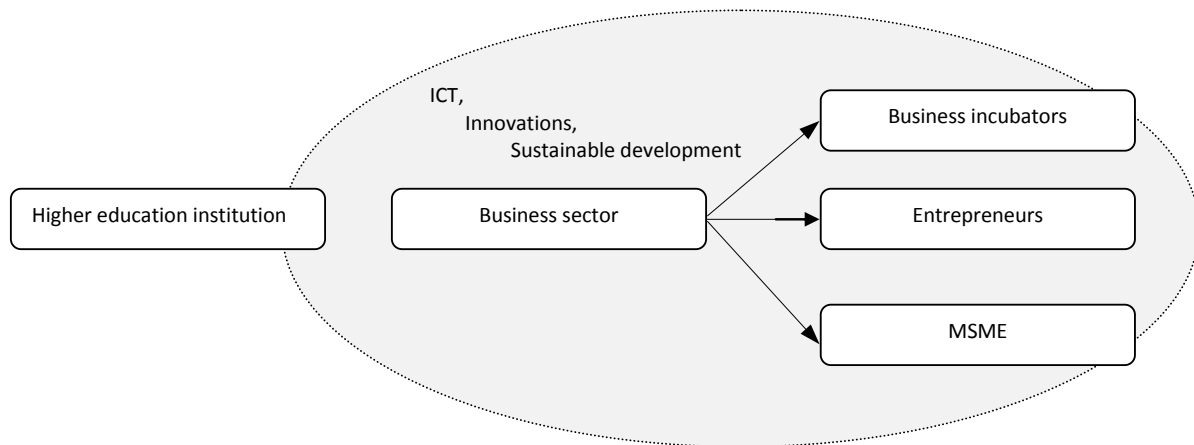
If Serbia wants to create new jobs it needs more entrepreneurs. That means that there is huge need for entrepreneur education programs and training that will deliver knowledge and prepare people for management of the business and challenges coming from the environment. HE institutions should include key competence for entrepreneurship into curricula as fast as that is possible. Generally, of high importance is to build an environment where entrepreneurs can prosper and develop.

When it comes to create new businesses, important issue is financing options for the entrepreneurs. Access to finance is one of the biggest constraints on growth and entrepreneurship, not just in Serbia but all over the Europe. Entrepreneurs have particular difficulties in raising finance in the early stages of their businesses. There is a huge initiative for business incubators and start-up hubs in Serbia, especially within technological entrepreneurship. We could say that there is very positive incentive and connections between HE institution and business incubators so far in Serbia. Very important part of successful business incubators are pull of mentors and lecturers who will deliver knowledge and give support and help entrepreneurs in order to convert their ideas into real business. For the HE development strategy it is important to create and support entrepreneurial and innovative ideas of its students and graduates and to help them enter into real business world. Also, helping business incubators, HE institution gives new learning options to current students and introduce them practical experience while still studying. Also, this connection should represent important part of the HE strategy since it gives employment option for the graduates and also create strong and successful alumni of HE institution.

Apart from cooperation between HE institutions and business sector, whether it is micro, small, medium or large enterprise or entrepreneur, there are couple of trends that are common for different industries and have very important impact on the strategies and performance. Those are information and communication technologies - ICT, innovations and sustainable development. ICT is the key source of growth for national economies and MSMEs grow two to three times faster when they embrace ICT. Better use of information and communication technology can significantly help new businesses to thrive (European Commission, 2013). In today's global economies, innovations and sustainable development are for the business sector conditions "sine qua non" if they want to compete, prosper and growth. That implies that HE strategies must think of those trends when creating curricula and in direct cooperation with students, business sector, local community and government.

All this, mentioned before, is presented as the model for the HE strategy for business sector cooperation, in Figure 3.

Figure 3. Model for the HE strategy for business sector cooperation



Source: Authors

This is just a part of questions or areas that should be consider for the good and comprehensive strategy for the higher education in Serbia. There are more questions considering HE strategy that are of huge importance like learning outcomes, government expenditures for the HE, financing of HE and more.

8. Conclusion

Higher education is facing new and increasing demands for their outcomes since it should create more employable, productive and innovative learners who contribute to competitiveness of economies. Higher education should also contribute by making the knowledge economy work better. It should create effective links between education, research and business to produce innovation and sustainable development.

Education creates efficient employees and drives economies towards sustainable development and progress. That is the reason why higher education strategy for the future should include all the necessary strong connections with key stakeholders in order to create value of the education process for a country and respond to growing needs of the businesses.

Serbia has a lot of space to improve quality of higher education and to improve connections with the business sector. In this paper we have presented possible corporations with, not just large enterprises, but maybe even more important with entrepreneurs and MSME. Serbia makes endeavours for economic growth and development and consequently need skilled, trained and knowledgeable employers. That should put pressure on higher education development and connections with key stakeholders. In this paper we just tackled connections with business sector, as one of the important parts of higher education strategy, but there are a lot of other questions within higher education's strategy, as mentioned, that remains open and could be subject for the further research.

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