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# Development of Belarusian Higher Education Institutions Based on the Entrepreneurial University Framework

In contrast to developed Western countries, higher education institutions (HEIs) in transition economies such as Belarus do not have the pretension to being key actors in cutting-edge innovation and in creating entrepreneurship capital. Rather, they tend to educate jobseekers or knowledge workers, as well as to adapt, redevelop and disseminate existing knowledge and technologies. At the same time, policy makers in Belarus have realized that transformation of HEIs is needed to respond to the global challenges. In this regard, this policy brief discusses prerequisites and factors conditioning the development of entrepreneurial HEIs in Belarus.

Capitalizing on state-of-the-art academic research, as well as on the custom-made survey of Belarusian faculty members, the brief concludes that Belarusian policy makers need to create a supportive institutional environment before requiring from HEIs outcomes of the entrepreneurial mission. First-priority measures for the current stance are delineated.

# Entrepreneurial university and University 3.0

As a productivity factor, entrepreneurial activities started appearing in economic growth models at the beginning of the twenty-first century (Wennekers & Thurik, 1999; Wong et al., 2005). Consequently, the role of HEIs broadened from educating labor force and knowledge creation to development of "entrepreneurial thinking, action and institutions" (Audretsch, 2014) – HEIs took on the third "entrepreneurial" mission.

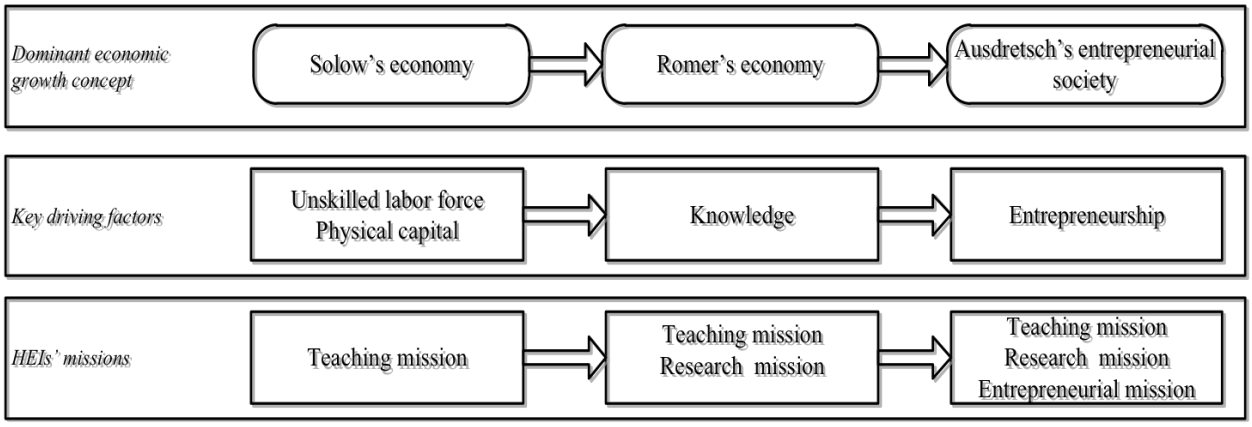
Well-studied outcomes of this mission are new firms (academic spin-offs, spin-outs, student-led start-ups), patenting, licensing and the development of entrepreneurial culture and attitudes among graduates and academics.

The concept of an entrepreneurial HEI is multifaceted and is explored within different research streams: from knowledge transfer to entrepreneurship education and HEI management. Consequently, there is no consensus in the understanding of the term "entrepreneurial university" that can, for this policy brief, be broadly defined as a HEI that acts entrepreneurially and is a natural incubator, creating a supportive environment for the startup of businesses by faculty and students, promoting an entrepreneurial culture and attitude for the purpose of responding to challenges of the knowledge-based economy, and facilitating economic and social development.

Meanwhile, the concept of "University 3.0" – mostly corresponding to the concept of "Entrepreneurial university" and adopted from J.G. Wissema – started appearing in Russian publications, where the number '3' corresponds to the three HEI missions or to the third generation of HEIs. A possible explanation of this renaming is that, on the one hand, in the post-Soviet context entrepreneurship per se still does not have a positive meaning in a broader society and it is not associated to HEIs. On the other hand, it was expected that such numbering makes the evolution visible. However, this led to speculation on this numbering and gave rise to publications on University 4.0 that should correspond somehow to Industry 4.0 – the current trend of automation and data exchange in manufacturing technologies.

Admittedly, the entrepreneurial mission of HEIs is not associated or equaled to start-ups and knowledge transfer any more, but is increasingly considered as a procedural framework for HEI's and individual's behavior.

*Figure 1. Evolution of the HEIs' missions*




*Source:* Adapted from Guerrero & Urbano (2012)

## Belarusian context

Political, economic, social, technological and legal conditions determine the path and the speed of the evolution of HEIs as well as their contribution to national economies in different stages of economic development. Thus, in Belarus – an efficiency-driven economy, i.e., a country growing due to more efficient production processes and increased product quality (World Economic Forum, 2017), – HEIs are considered to contribute to economic development if they successfully fulfil teaching and research missions. While the outcomes of the third mission are supposed not to be relevant at this stage (Marozau et al., 2016).

However, trying to replicate the success of Western HEIs in the development of the entrepreneurial mission, the Ministry of Education of Belarus initiated the Experimental project on implementation of "University 3.0" model aimed at development of research, innovation and entrepreneurial infrastructure of HEIs for the creation of innovative products and commercialization of intellectual activities.

In general, Belarus has a state-dominated well-developed, by some estimates, oversaturated higher education sector that remains mostly rigid and unreformed since the Soviet times. Belarus outperformed all CIS and EU countries except Finland in terms of the number of students per 10,000 population in 2014 (Belstat, 2017) and according to the World Bank has one of highest enrollment rates in tertiary education of about 90%.

Belarusian students have quite high entrepreneurial potential in comparison to other countries participating in the Global University Entrepreneurial Spirit Students' Survey (GUESSS). Thus, in five years after graduation 56.8% intend to be entrepreneurs, while the global average level is 38,2% (Marozau and Apanasovich, 2016). However, curricula of most specialties majors provided by Belarusian HEIs are not supplemented with formal and experiential entrepreneurship education to equip students with entrepreneurial competences. Innovative methodologies and entrepreneurial approaches to teaching as well as faculty entrepreneurial role models are rare. Moreover, all changes in degree syllabuses need state approval that makes HEIs less flexible and nimble. The situation is further complicated by the fact that supporting entrepreneurial activity has not been an important part of the HEI culture.

## Methodological approach

We conducted online and face-to-face surveys of 48 Belarusian HEI authorities and faculty members that were based on HEInnovate self-assessment tool widely used by policy makers and HEI authorities (see Marozau, 2018).

Overall, emails were sent out to a population of 284 pro-active and advanced representatives of the Belarusian academic community whose email addresses were available in the data bases of BEROC and Association of Business Education. We benefitted from open-ended questions included in the questionnaire to study how representatives of Belarusian HEIs perceived the Entrepreneurial university (University 3.0) concept as well as its conditioning factors and potential outcomes.

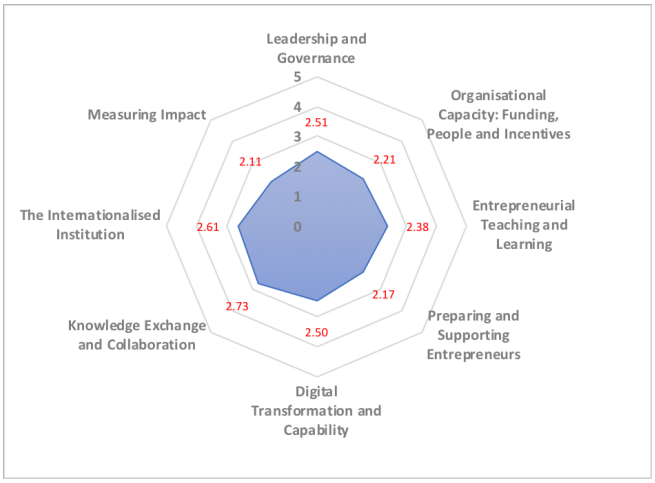
## Main findings

First of all, we revealed that the Belarusian academic community is not unanimous in understanding the concept "Entrepreneurial university". According to the main emphasis provided by respondents, we got the following distribution of answers about what an entrepreneurial is: 12 respondents associated the concept with knowledge transfer and commercialization; 7 respondents stressed the interrelation of teaching, research and innovations; 5 respondents believed that the concept is about earning money; 1 respondent indicated that an entrepreneurial university means developing entrepreneurial competences.

These findings demonstrate the general misunderstanding or fragmented understanding of the phenomenon that may lead to a negative attitude from both HEI staff and policy makers and stress the importance of raising awareness and providing training at least for decision makers and spokesmen.

Figure 2 demonstrates the results of the assessment of Belarusian HEIs against the categories proposed by HEInnovate (1 – very low; 5 – very high).

*Figure 2. Assessment of HEIs*




*Source*: Author's own elaborations

We distinguished pairwise between (i) HEIs that participated in the Experimental project and those that did not: (ii) estimates of faculty members that were aware of the concept and those who were not.

Surprisingly, the representatives of HEIs that were left beyond the scope of the Experimental project and those who were aware of the concept perceived their HEIs more advanced in all the areas.

To understand this paradox, we used the chi-square test for independence to discover if there was a relationship between two categorical variables – awareness of the concept and employment at a HEI participating in the Experimental project. Surprisingly, no statistically significant relationship was identified evidencing that implementation of the Experimental project went without raising awareness and wider involvement of faculty.

The analyses of answers to open-ended questions showed that many environmental factors are not only unsupportive to the HEI entrepreneurial development but jeopardize the sustainability of the higher education system in general.

# Conclusion

The main conclusions from the study are as follows:

- Belarus has not reached the stage of institutional development to foster entrepreneurial HEIs and to expect outcomes of the entrepreneurial mission. To some extent, this explains the skepticism and misunderstanding of the concept of "Entrepreneurial university" (University 3.0).

- The main omission of the Experimental project is that the education and training of HEI authorities and faculty are not defined as first-priority measures. Such policy initiatives need to be clear in their objectives, tools, benefits and outcomes as well as evidence-based and open for discussion.

- Comprehensive initiatives in this sphere should be developed and implemented in close collaboration with the Ministry of Economy that is responsible for entrepreneurship, the business environment, entrepreneurial infrastructure as well as the State Committee for Science and Technology that is subordinated to the Council of Ministers and deals with the state policy in its sphere.

An important concern here is whether it is currently feasible to have the measures that are relevant and not-for-show rather than half-way initiatives and sticking plaster solutions despite the lack of funding, and absence of elaborate study in the field.

- Since the weakest area of Belarusian HEIs according to the HEInnovate tool is the problem of 'Measuring impact', the state should reconsider short-term target indicators for HEIs such as export growth rate and workforce productivity

growth rate to stimulate investments the entrepreneurial transformation. It is worth monitoring such indicators as number of start-ups/spin-offs founded by graduates/faculty members; number of patents, licenses, trademarks co-owned by a HEI, income from intellectual property; number of R&D projects funded by enterprises etc. Alternatively, the Ministry of Education could adopt the ranking of entrepreneurial and inventive activity of universities used in Russia.

- Development of entrepreneurship centers as organizational units at HEIs – 'one-stop shops' or 'single front doors' for students, faculty, businesses – could be an initial step towards both raising awareness and the integration and coordination of entrepreneurship-related activities within a HEI in order to increase their impact and visibility of these activities.

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