

---

## ENTREPRENEURIAL UNIVERSITIES IN THE FORMATION OF NATIONAL INTELLECTUAL AND SOCIAL CAPITAL

Marat Ibatov, Valeriy Biryukov, Gulnar Zhaxybayeva and Gulnaz Mussina

This paper discusses challenges of developing entrepreneurial universities and their crucial role in building intellectual capital of the nation. Entrepreneurial universities position themselves not only as academic institutions of knowledge “transfer” but also as a generating system for social networks with higher levels of national and social capital that can solve complex intellectual tasks that have a direct impact on the real world. This feature can be implemented and continued through giving university graduates an opportunity to learn to solve applied research problems in their corresponding fields of study. From this perspective, the entrepreneurial university should sustain practice of formation of different research schools, uniting graduates not only by a certain body of knowledge but by research and development of schools outside the university as a social network. Entrepreneurial universities may become an important element of industrial clusters, overcoming the lack of financial resources and promoting the development of regions in which they operate.

Increasing competition in the education market and reduction of direct financing from the state budget complicate adaptation of higher education institutions to new conditions. Best practice of the world’s leading universities suggests that entrepreneurial activity provides an adequate response to changes in the environment and therefore could be considered as the key to success of university development. Higher education leaders who want to set a culture of entrepreneurialism on their campuses should be able to start from small and cut through entrenched patterns of institutional practices and status quo. As Davies (2001, p. 29) states,

*“This relates to the nature and rate of expansion of entrepreneurial activity (continuing education, R and D, technology transfer, consultancy, etc.), and a spectrum may be observed from situations where this type of activity is really quite marginal to the institution, and has not permeated the culture to any significant degree, to situations where it is very extensive and part of the lifestyle.”*

Entrepreneurship contributes to satisfaction of both society and market needs. In this regard, definition of the essence of the entrepreneurial university as a form of integration of education, science and business is especially important in the framework of the national innovation system. In order to achieve international competitiveness, local academic institutions of higher learning should carefully analyze and effectively use international practice but at the same time to develop and apply their own approach in the local context.

Shared understanding among stakeholders plays an important role in tackling the gap between research and business cultures. Scholars’ language is not always comprehensible for practitioners. At the same time, researchers do not always understand the needs of businesses and markets. Advanced companies are taking the form of industrial clusters that understand that research and innovation is an important factor for the development of business. Basically, they perform the role of network intermediaries and are able to speak the language of both business and science. At present, these companies fill the niche of entrepreneurial universities.

Education has always been one of the pillars of human capital development. In Kazakhstan's case, the State Program of Education Development for 2011–2020 indicates that “investments in human capital are of vital importance in the development of technically progressive, productive labor force, which can adapt to the rapidly changing world. Those economies that invest in development of education, skills and abilities of population will gain success in the future. Education should be regarded as economic investments, but not just as social expenditures” (2010, p. 6). Human capital is the result of a conscious investment of financial resources into education, accumulation of work experience and health (Clark, 1998). When discussing the cost of human capital development, two basic positions are considered. The first position is constituted by tuition fees, interests on educational loans and other direct costs. The second position, according to the theory of opportunity cost, is loss of income that could be caused by spending time and money spent on increasing human capital (Becker, 1964).

Getting an education lays the foundation for professional competences, qualities and abilities. Education is not only an essential element of human capital development but, also, is an important indicator of human development. As powerful mechanisms of social reproduction, academic institutions promote stereotypes and contribute to the stratification of society (Bourdieu & Passeron, 1990). Stratification of society becomes the basis for social differentiation. If people do not get a quality education, it increases major economic and social costs.

In the last two decades, Kazakhstan has removed the state monopoly in the field of higher education. Higher education institutions with different forms of ownership were established: state universities, academic institutions that are run as joint stock companies, private and international higher education institutions. These institutions provide an opportunity for higher education to a large number of graduates of secondary and post-secondary institutions. On the one hand, the development of private higher education opened the possibility of training on a fee basis. On the other hand, drastic reduction of the number of places for university entrants due to the lack of state budget has limited access to higher education for those that are not able to pay for their education.

The concept of entrepreneurial university is significantly important for contemporary higher education institution's transformation. This term refers to a higher education institution that is capable of attracting additional financial resources; or to a university that uses innovative methods of instruction; or to an institution that closely cooperates with industry and demonstrates the development of university-based researchers. The disparity between academia, research and industry complicates operationalization of the concept of “entrepreneurial university” and leads to self-declaration of universities as “entrepreneurial”.

It seems appropriate to consider some key elements of entrepreneurial activity at higher education institutions in order to facilitate strategic planning of their activities. Based on the work by Röpke (2000, p.3) and the study by Konstantinov & Filonovich (2007, p.53), we believe that the concept of “entrepreneurial university” means the following:

- university demonstrates entrepreneurial behavior as an organization.
- members of the university – faculty, students, employees – are turning themselves somehow into entrepreneurs.
- interaction of the university with the environment should follow entrepreneurial patterns and lead to organic connection of the university and the region.

In 2013, the Ministry of Education and Science of the Republic of Kazakhstan initiated the inclusion of special courses focused on entrepreneurship in academic programs. This approach implies studies of entrepreneurship with the focus on acquisition of practical skills and development of entrepreneurial orientation. The primary feature of an entrepreneurial university is openness for commercialization and knowledge transfer. University members are willing to take initiatives in commercialization of academic traditions and take risks in respect of a negative impact of entrepreneurship on the quality of education. The entrepreneurial orientation assumes diversification of the university's funding sources. It is believed that a management style of a university should provide flexibility and strategic interaction with the environment. Also, higher education governance and management is an important factor for effective functioning of an entrepreneurial university.

One can argue that in order for a higher education institution to be called an 'entrepreneurial university', that institution must overcome limitations in the following three areas:

- knowledge generation: to constantly work on generating new research, to explore new areas of knowledge and to identify new challenges in the research areas;
- teaching: to develop innovative teaching methods and to integrate learning content with cutting-edge research, latest achievements in science and practice;
- implementation of knowledge into practice using various approaches to the university's regional engagement.

Restrictions in those three areas always involve a deficiency of basic types of resources. More specifically, these are financial, information and human resources. It is not possible to establish an entrepreneurial university without the solution of the resource problem. Therefore, traditional universities are likely to understand that these problems should not be resolved solely on their own but by all the members of their regional environment.

Under the new conditions of austerity measures, universities are expected to reduce government spending and be economical in research and development while engaging with innovation development. Universities are extremely sensitive to the reduction of public expenditures on education – for instance, budget of UK universities has been decreased by 20–25%. According to the studies conducted by the European University Association, reduction of state spending on higher education per student has become a global trend. Development of the process of diversification of funding is one of the key EU priorities (Estermann, 2009). The process of modernization of higher education contributes to the diversification of funding of higher education. Problems with resources could be resolved by changing the internal environment of a university. Particularly, changes of the university's corporate culture as well as changes aimed at decreasing trends for isolation and tackling the "ivory tower" issue could be helpful.

An entrepreneurial university should be a network player in the cluster that can solve problems that go beyond the existing limitations and enhance the competitiveness of the company, industry, region and country. Location has always played an important role in the competition, but in recent years this role has changed dramatically. The concentration of companies in a small area that serve institutions and universities has become an important factor in achieving competitive advantage, especially in the generation of innovations. Examples include Hollywood in entertainment, Silicon Valley in IT, shoe industrial cluster in Lombardy, Italy. Universities have always been a generator of social networks, especially those which have managed to generate successful alumni. Those business schools that

have established solid professional alumni communities for people to support each other in business and management after graduation have turned to be very successful.

Another perspective for the university to become an entrepreneurial institution is to reconsider its institutional philosophy of curriculum design. Through modernization of curriculum content and instructional practices, an entrepreneurial university can play an important role in community engagement. In this regard, such forms of organization as interdisciplinary teams, centers and networks must be used in higher education institutions' academic programs. This model of teaching-and-learning process enables university faculty to conduct joint projects, develop understanding of systems of concepts and study language and mindset of another corporate culture. At this moment, the current organizational structure of universities prevents the implementation of this idea. Universities should enable students to focus on their career orientations right from their first days on campus and not to deprive them of the opportunity to master and read professional languages of education and industry cultures at the same time by developing some key academic programs along with employers, local firms and companies.

Long-established conservative structure of academic departments, faculty's formally fixed functions and responsibilities as well as unequal distribution of funding are the major problems that innovative initiatives face. Current organizational structure of academic departments of many universities fails to meet changes occurring in the university management and falls behind the dynamics of the development of higher education in Kazakhstan. Established practice to abide to centralized state education standards, transition to the system of multi-level education, development of vocational education and training, and other important circumstances should be taking into account when discussing approaches to building entrepreneurial universities.

Another tendency of formation and development of entrepreneurial universities is commercialization of education. Education has become business (Williams, 1995). According to the World Trade Organization, the global education market capacity is 50–60 billion dollars. Higher education institutions of post-Soviet era, especially STEM education, used to enjoy recognition and respect around the world. These days we must recognize that the post-Soviet countries are losing ground in the global market of educational services in a competitive environment.

Kazakhstan has made some steps forward in developing innovative and entrepreneurial universities. For instance, Nazarbayev University is one of the models of integration of education, science and innovation. It is expected to become a center of education and research cluster in Central Asia and the CIS. Today, the University has Nazarbayev University Research and Innovation System that includes Center of Energy Research, International Interdisciplinary Instrumental Centre. Also, Kazakhstan's network of technical universities has a capacity to become a new generation of universities that will combine functions of education, research, and entrepreneurship. It is necessary to consider mechanisms of transformation. For example, in Sweden the process of transition to the entrepreneurial university began with the 1990s. All universities in the country established a system of entrepreneurial education, i.e., entrepreneurs were invited to universities as instructors and faculty members (Johannisson, 2006).

Finally, the transformation of a higher education institution into an entrepreneurial university is not possible if the initiative will only come from the state or other external counterparties. Therefore, it is necessary to form an innovative environment and entrepreneurial culture in the organization. Higher education leaders should encourage academic departments and faculty members to engage with problems and solutions that have practical significance to relevant markets. The task of the university is to support creative initiatives of people who are able to implement innovative projects, creating conditions for the development of new products and technologies, implementation of application solutions used in the economy, in particular companies and enterprises. It will take a major change in the structure and content of curriculum, the essence of which would require the academic community to go beyond the use of didactic and transmission approaches to teaching and learning. We believe that key curriculum innovations of the entrepreneurial university will include trends in communication technology, critical thinking and imagination aimed at solving practical real-world problems, project-based learning and teamwork. In this system, the traditional role of the professor will definitely change. Faculty's teaching activity will be supported by the organizers of the communication industry and technology experts, project leaders.

### References

- Becker, G.S. (1964) *Human Capital*. Chicago: University of Chicago Press.
- Bourdieu, P., & Passeron, J. C. (1990). *Reproduction in education, society and culture* (Vol. 4). Sage.
- Clark, B. R. (1998). *Creating entrepreneurial universities: Organizational pathways of transformation* (No. 378 CLA).
- Davies, J. L. (2001). The emergence of entrepreneurial cultures in European universities. *Higher Education Management*, 13(2).
- Estermann, T. (2009) EUDIS European Universities Diversifying Income Streams. European University Association. Madrid: EUDIS Seminar. Retrieved from: [http://www.eua.be/Libraries/eudis-madrid-seminar/Presentation\\_Thomas\\_Estermann\\_1.pdf?sfvrsn=0](http://www.eua.be/Libraries/eudis-madrid-seminar/Presentation_Thomas_Estermann_1.pdf?sfvrsn=0)
- Johannisson, B. (1991). University training for entrepreneurship: Swedish approaches. *Entrepreneurship & Regional Development*, 3(1), 67–82.
- Konstantinov, G., Filonovich, S. (2007). Что такое предпринимательский университет [What is Entrepreneurial University]. *Voprosy obrazovaniya*, 1.
- Ministry of Education and Science of the Republic of Kazakhstan. (2010). *State Program for the Development of Education for 2011–2020*. Astana: Ministry of Education and Science of the Republic of Kazakhstan.
- Mukhamedzhanova, A. (2001). Человеческий капитал Казахстана: формирование, состояние, использование. [Human capital in Kazakhstan: formation, state, using], 274 (2). Almaty, Kazakhstan: Gylm, Research Center.
- UNDP Regional Bureau for Europe and CIS. (2005). *Report on Human Development in Central Asia. Bringing down barriers: Regional cooperation for human development and human security*. Retrieved from: [http://hdr.undp.org/sites/default/files/central\\_asia\\_2005\\_en.pdf](http://hdr.undp.org/sites/default/files/central_asia_2005_en.pdf)

Röpke, J. (2000). The Entrepreneurial University. Innovation, academic knowledge creation and regional development in a globalized economy. Retrieved from: <http://etc.online.uni-marburg.de/etc1/010.pdf>

Sagadiyev, K. (2013). Человеческий капитал и факторы его роста (Human capital and factors of its growth]. *Kazakhstanskaya Pravda*, 21 Feb., 4.

Williams, G. L. (1995). The “marketization” of higher education: Reforms and potential reforms in higher education finance. *Emerging patterns of social demand and university reform: Through a glass darkly*, 170–193.