

## PREFACE

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The fifth Eurasian Higher Education Leaders' Forum and its themed conference proceedings, "Higher Education and Modernization of the Economy: Innovative and Entrepreneurial Universities," could not have come at a more appropriate time as policy makers, higher education leaders, faculties, practitioners and other stakeholders are discussing different models of higher education institutions with the "entrepreneurial university" becoming a key focus. The development of entrepreneurship education *per se* has been supported by the Global Entrepreneurship Monitor (GEM), an international group of researchers that conducts the world's foremost study of entrepreneurship since 1999. Initially starting with the aim of considering why some countries are more 'entrepreneurial' than others, the GEM report is now in its 18th consecutive year. The report points out that "the GEM countries in the 2016 survey cover 69.2 per cent of the world's population and 84.9 per cent of the world's GDP" (Global Entrepreneurship Monitor, 2016). Concerns are expressed on the part of higher education leaders around the world about how to respond to globalization of the modern knowledge economy, as many universities in post-Soviet states are revisiting their roles and missions.

While the society expects universities around the world to come out of their shadows to fulfil their third mission activities and commercialize their research, academic institutions and their leaders are finding themselves in the demand-and-response imbalance (Clark, 1998). As Clark puts it, "national systems of higher education can neither count on returning to any earlier steady state nor on achieving a new stage of equilibrium. (...) Universities are caught in a cross-fire of expectations. And all the channels of demand exhibit a high rate of change" (1998, p. 6). Etzkowitz amplifies the issue stating that "governments are offering incentives, on the one hand, and pressing academic institutions, on the other, to go beyond performing the traditional functions of cultural memory, education and research, and make a more direct contribution to "wealth creation" (1995, p. 1). Understanding that the policy trend of 'entrepreneurial university' adds to the institutional complexity of modern universities, the European Commission alongside the OECD have developed the Guiding Framework for Entrepreneurial Universities "(...) aimed at those European universities looking for advice, ideas and inspiration for the effective management of institutional and cultural change" (EC-OECD, 2012, p. 1).

As in much of the world, universities of the post-Soviet era are expected to go through transformational change to be able to play a more active role in community engagement and demonstrate a societal impact. Following the rhetoric of Western academic models of the 'research' and 'entrepreneurial' university, higher education institutions of the post-Soviet context have much to learn and at the same time to unlearn in order to be able to develop and sustain a triple helix model of academic – industry – government relations. For example, central to these proceedings' theme, one thing Kazakhstan's higher education institutions need to learn is developing a strategy for integrating science and industry. With an array of state programs established to stimulate socio-economic development of the nation, public universities in Kazakhstan are functioning in an environment geared towards organizational change. More specifically, for instance, the State Program for Industrial Innovative Development of the Republic of Kazakhstan for 2015–2019 places a special emphasis on the integration of science and industry where the development of qualified human resources plays a crucial

role. Now the state is heavily investing into strategic collaboration between local universities and their international peers with the purpose of developing academic programs to prepare graduates qualified to work in the areas of information technologies, oil & gas industry, electrical energy, space industry, food industry and metallurgy – all considered a high priority on the national agenda.

State-funded international collaboration between universities for the sake of developing industry-focused academic programs is an emerging pattern of intensive interaction between university, industry and government. This pattern brings about institutional and cultural change at academic institutions. At the same time, adopting an emergent entrepreneurial paradigm is more easily said than done. Moreover, as Kirby points out, “unlike many large private sector corporations, most [universities] have never had to be entrepreneurial and are not based on a tradition of enterprise” (2006, p. 599). Therefore, it is worth noting that even established universities are likely to find it challenging to develop academic entrepreneurship on their campuses.

Goals and challenges behind the development of Entrepreneurial University relate to context-specific characteristics of a particular academic institution based in its national and international environment. In the case of higher education institutions of post-Soviet states, embedded in different patterns of centralized governance, adopting an entrepreneurial role is likely to be challenging, as academic entrepreneurship means ownership of ideas and engagement with industry without any institutional or cultural barriers. Given that an entrepreneurial university is first and foremost a self-regulating institution, this links directly to issues associated with university autonomy and accountability in higher education governance, policy reform topics now widely discussed in many parts of the world including post-Soviet states (Hartley et al., 2016). Thus, granting autonomy to higher education institutions is an important step forward on the way to academic entrepreneurship, yet one that exposes the need for new conceptions of leadership. As Clark reminds us, “universities need autonomy but they also need to develop entrepreneurial leadership to put that autonomy to effective use” (2001, p. 19). Clark goes on to call for “active autonomy” which in the context of the entrepreneurial university is very different from the passive type” (2001, p. 19), where leadership could respond effectively to increased pressure from the state and trustees to act commercially and generate funds via institutional transfer of research development and spin-off companies.

In sum, as globalization of the knowledge economy highlights the importance of innovation and entrepreneurship, the state and society call on universities to transform their traditional roles and adopt a more entrepreneurial paradigm in response (Etzkowitz et al., 2000). This transformation, difficult in any context, takes on unique complexity in post-Soviet, Kazakhstani context characterized by barriers related to the need for control, limited institutional autonomy, the conservatism of the corporate culture, and a lack of entrepreneurial talent (Kirby, 2006). The chapters of these proceedings speak to these issues of developing academic entrepreneurship in Kazakhstan, and more importantly they explore institutional and cultural changes happening or foreseen on university campuses.

An academic institution aspiring to be an intellectual enterprise has its own story and recipe of how to start to commercialize university-based activities, innovate and engage with the community. In these conference proceedings, President of Tel-Aviv University (TAU), a public, state-funded, highly regulated institution, as the author puts it, Joseph Klafter (chapter 1), identifies six core ingredients of fostering innovation and entrepreneurship in universities. Taking the case of TAU, Professor Klafter eloquently outlines essential elements

and characteristics of successful academic entrepreneurship with experimentation and risk taking, institutional freedom, bridging academia and industry and international collaboration among them. He also raises a point of interdisciplinary collaboration and the importance of university's determination to break down the walls that separate different fields and disciplines.

Straightforward recommendations on developing entrepreneurial universities, as proposed by many scholars and authors, necessitate a university-based entrepreneurship ecosystem development. For instance, Greene et al. (2010, p. 1) are adamant that "a university-based entrepreneurship ecosystem is integrated and comprehensive, connects teaching, research and outreach, and is woven into the fabric of the entire university and its extended community for the purpose of fostering entrepreneurial thought and action throughout the system" (2010, p. 1). As pointed out by Assylbek Kozhakhmetov, Nina Nikiforova and Sholpan Maralbayeva (chapter 2), creation of an effective entrepreneurial ecosystem is a sine qua non of entrepreneurial universities' successful engagement with the community on national and regional levels. In their nation-specific chapter, the authors discuss challenges and opportunities for cultivating an entrepreneurship ecosystem in Kazakhstan's higher education sector.

One issue of building an entrepreneurial university that is rarely addressed is its embeddedness in a certain socio-cultural and political environment. With extensive institution building experience, Dennis de Tray (chapter 7) discusses the phenomenon of 'institutional middle-income trap' or 'institutional reform trap' whereby the development of a world-class university in middle-income developing countries has a good start but then stagnates due to cultural and other barriers. The author reflects on an array of factors that influence the discussed institutional trap and proposes ways and measures to overcome it. Shared vision, risk tolerance, balancing a strong system of autonomy and accountability, reduced dependence on the state are among them.

In order for the entrepreneurial university to be a source of intellectual and social capital development – a point persuasively made by Marat Ibatov, Valeriy Biryukov, Gulnar Zhaxybayeva and Gulnaz Mussina (chapter 6) – it is necessary to form an innovative environment and entrepreneurial culture in the organization. The authors' insight echoes with Kirby's statement that "a culture of enterprise is required that both encourages and enables academics and students to commercialise their intellectual property and inventions. Universities need to recognize that entrepreneurial behaviour should pervade the whole organisation and be recognised as an integral part of their missions" (Kirby, 2006, p.602–603). Considering an entrepreneurial university as a network player, the authors are adamant that academic institutions should not only engage with knowledge "transfer" but also serve as a generating system for social networks with higher levels of social capital that can solve complex intellectual tasks that have a direct impact on the real world.

Collaborative research among academics from different parts of the world is essential for the university to be on a par with other reputed institutions. Aliya Kuzhabekova, Jack Lee and Magzhan Amangazy (chapter 5) make the point that a flagship university needs to link its faculty to international research networks in order to engage with global knowledge production system. In the context of integrating academia, research and industry, the authors take Nazarbayev University as a case to examine the extent to which international faculty in a non-Western country align their research output to the research priorities determined by the government.

The academic dimension of international collaboration as a prerequisite for university entrepreneurship is comprehensively dealt with by Sholpan Tazabek (chapter 3). She sees the university curriculum as the springboard for international collaboration among academics. As she rightfully points out, while universities should pursue collaboration with industry, they should also seek more engagement with other international universities committed to entrepreneurialism. Discussing cross-national and cross-university collaboration around the curriculum, Sholpan argues that faculty plays a crucial role in international partnerships and hence may have a final say in internationalization of curriculum in the entrepreneurial paradigm.

On a related note, with the advent of globalization and internationalization of higher education, the potential impact of Massive Open Online Courses (MOOCs) on instructional practices of universities and students' learning experiences has emerged as an important pedagogical topic. As discussed by Abay Zhussupbekov (chapter 4), MOOCs offer a wide array of opportunities for experimentation on the part of academic entrepreneurs and university managers, with prospects for international team-based approaches to online course design. Universities may establish start-ups and companies providing MOOCs services to the community on national and regional levels.

To sum up, the chapters presented in these proceedings shed light on global and local nuance of developing academic entrepreneurship. The authors invite the reader to take part in the discussion of eminent challenges and reflect on long-term issues of building an innovative and entrepreneurial university. It is hoped that these proceedings will be valuable to university leaders, faculty, graduate students and other stakeholders who have to interact with higher education institutions. Nation-specific chapters on Kazakhstan could be useful to scholars who research developments of higher education in this region.

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