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The challenges of developing university-industry partnerships: Innovation under constraint

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Abstract:

Abstract

This paper focuses on challenges to developing university-industry partnerships in post-Soviet Kazakhstan. It aims to identify key constraints to university and industry engagement through the perspectives obtained from university stakeholders, and maps the way in which existing collaborations reflect and respond to the government's agenda for innovation in higher education and a strengthened economy. The aim of the paper is to build on previous literature related to university-industry collaboration and to identify specific factors that can contribute to the development of more successful and sustainable collaborations. Drawing on case studies at two universities, findings show that there is progress in universities developing beneficial partnerships. However, we argue that internal institutional barriers and persistence of Soviet style central control of higher education institutions in Kazakhstan, together with policy makers dictating the agenda for partnerships are creating challenges that hinder innovation, which is one key goal for university-industry collaboration.

Paper:

The challenges of developing university-industry partnerships: Innovation under constraint

University-industry partnerships are not a new phenomenon in Kazakhstan or other post-Soviet republics in general. Governmental reports in Kazakhstan, North America, United Kingdom, Australia and in Germany, among others, place emphasis on developing linkages between universities and industry. While the intended purposes of collaboration appear to be more or less similar, the forms, extent, challenges and risks are country and context specific. .

Partnerships emerge from joint initiatives of universities and industry to develop new study programmes, increase research productivity, enhance opportunities for faculty and students to be involved in cutting edge research (Laursen et al., 2009), advancement of innovation and technology, to establish new funding mechanisms for universities, develop students' work relevant skills; and to make students more employable and effective in changes to production and management of industries and policies affecting universities (Thune, 2011). Partnerships can also house political motives 'such as the enhancement of reputation or institutional prestige and responsiveness to government initiatives' (Prigge,2005). However, the motivation and ways in which universities engage with industry are field-specific (Perkmann, King, & Pavelin, 2011).

There are numerous advantages to university-industry partnerships. For universities, collaboration with industry benefits students, faculty, education programmes, research output and university reputation overall. Scholars suggest that, partnerships with industry can increase awareness among faculty and senior leadership of labour market needs, thereby helping them to maintain the relevance and quality of education programmes and enhance their curriculum (Prigge, 2005; Thune, 2011). Such partnerships are also believed to be a source of adjunct faculty, of funding for faculty, salary, research and of equipment for laboratories (Kaupilla et al., 2015; Prigge, 2005; Valentin, 2000). Moreover, they are also known to have a positive impact on the profile and quality of programmes and prestige of universities (Harman, 2001; Thune, 2011).

The challenges to university-industry partnership encompass practical difficulties, cultural differences between universities and companies, issues over intellectual property and conflict of interest between partner institutions. Scholars highlight that negotiating and managing collaborations can be a difficult task that influences the reputation of universities (Prigge, 2005). The absence of incentives can discourage faculty from participation in partnership initiatives (Salminen-Karlsson and Wallgren 2008). Lack of clearly defined roles for both partners can have a detrimental effect on the outcome of the collaboration (Barnes et al., 2002; Barbolla & Corredera, 2009; Prigge, 2005). Prigge (2005) highlights numerous risks involved in partnerships. These include conflict of interest over research priorities, allocation of personnel, financial and material resources, communication and secrecy, and intellectual property rights. Drawing evidence from several studies on partnerships, Prigge argues that partnerships can be risky, as they can lead universities to shift from basic to applied research and product development, compromise academic integrity, constraint timely dissemination of research, limit choice of research topics, pre-empt finite research and teaching preparation time and encourage the migration of faculty to partner organizations (Prigge, 2005). All these issues point out that partnerships can be complex and require appropriate analysis of potential risks and approaches to minimize these risks.

Having set the goal of Kazakhstan becoming one of the thirty most developed nations in the world, the past President of the republic wished better alignment and partnership between higher education and industry (Nazarbayev, 2013). Ongoing reform of university governance aims to foster better partnerships, and decentralize decision making powers from the Ministry of Education and Science to the institutional level through recently established governing boards. Policy makers in Kazakhstan strongly believe that granting universities institutional autonomy can improve the quality of education through innovation, greater equity in access, and increased efficiency in financing systems and the use of funds. One key point in the argument of policy makers on institutional autonomy is that as universities gain autonomy, they must become more responsible for the quality

of education delivered and graduates' successful transition to working life. Both, the national education strategy for Kazakhstan and many presidential and policy makers' statements emphasize that one key role for universities is to prepare graduates who are responsive not only to local, but also to global labour market needs for skills. University-industry partnerships are therefore argued to be beneficial for innovation, advancement of technology and in the enhancement of students' preparation for the labour market. While policy makers emphasize and promote university-industry partnerships, research on engagement of universities and industry is non-existent in Kazakhstan and other post-Soviet countries. This lack of research on university-industry partnerships is also in contrast to the current policy focus that emphasizes increasing connection between education, research, scientific advancement of technology and innovation. Therefore, our study fills this gap by examining the nature, extent, purposes and intended impact of current university-industry partnerships; and identifies the benefits and barriers to successful partnerships. The overarching research question that guided the study was: 'How and in what ways university and industry collaborate in Kazakhstan?'. Sub questions included:

1.   What are the current forms of university-industry partnerships?

2.   What are the benefits of collaboration with industry?

3.   What are the potential barriers to developing sustainable and effective university-industry?

This paper for SHRE 2019 conference will focus on key barriers to developing sustainable and effective university-industry partnerships and specifically those that impede innovation, which is the ultimate goal of policy makers in Kazakhstan for university-industry collaboration.

This study employed case study methodology at two universities in Astana, Kazakhstan, that are currently engaged in several forms of partnerships with industry. Data was gathered through interviews (with senior leadership of selected universities and faculty engaged in partnerships), observations and secondary data analysis.

The analysis of the data suggests that while there is some progress in developing collaboration with industries, partnerships are primarily centered around preparation of workforce for the national labour market and economy. Research partnerships are extremely limited. Low salaries, heavy teaching load, issues with access to resources and underdeveloped research culture are placing barriers for faculty to engage in partnerships, particularly those related to research and innovation. Moreover, the findings show that universities are largely focusing to develop partnerships in areas which are set as a key performance indicator by the government. Employability of graduates is one such indicator. Research outcomes of universities is not included within Ministry of Education's key performance indicators. We argue that although universities have been granted autonomy, the Ministry of Education continues to exert a great level of Soviet style control over higher education institutions, and places constraints on universities developing partnerships that lead to innovation. This suggests that there is a misalignment between the rhetoric of policy makers promoting universities to become an innovation hub through partnership in research with industry and manifestation of reality where policy makers themselves place barriers to achieve that goal.

The paper contributes to ongoing discourse on the role of partnerships and their impact on

educational practices, policies and research globally. By examining the challenges of existing partnerships, the study identifies barriers to partnerships and practical recommendations on more effective strategies to improve partnerships in Kazakhstan and other similar contexts. The study will also contribute to policy makers' understanding of key challenges and factors for successful university-industry partnerships through an appreciation for the need to provide a more enabling environment to support effective partnerships. Furthermore, the study will contribute to global research on university-industry partnerships. By providing evidence from post-Soviet Kazakhstan, findings will assist in understanding the peculiar forms of partnerships, barriers to partnership, and success factors within a non-western context.

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