Industrializing Knowledge: University-industry Linkages In Japan And The United States

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Enhancing the University - Industry Collaboration in Developing Countries through Best Practices

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Abstract: *University-Industry Collaboration (UIC) creates highly skilled and productive graduates for meeting demand of industry. Such collaborations contribute positively to address innovation market failures and help to realise the full social returns of research and development (R&D) investments. Universities are often described as ''engines for growth'' which generate skills and research results that are significant sources of innovation for firms, especially in some industrial fields. Through the existing publications, this paper provides review on University-Industrial Collaboration. It gives the effects of the linkage and indicates how different countries practice UIC. Finally it presents the best practices that can be applied by developing countries in order to accelerate the economic growth.*

Keywords: *University, Industry, Technology transfer, University-Industry collaboration, Effects of collaboration, Best practices.*

I. INTRODUCTION

The term ''University-Industry Collaboration'' (UIC) comes with several variants such as University-Industry Linkages (UIL), University-Industry Partnership (UIP), University-Industry Alliance (UIA), and University Industry Relationship (UIR). In this paper, the University-Industry Collaboration will be used as the main term to describe the ties between university and industry although in several occasions the other terms will also be used interchangably.

Many countries are seeking to strengthen global economic competitiveness by building a 'knowledge economy' capability. A popular approach is supporting university–industry knowledge exchange linkages [1].

Collaboration with industry is critical for academia to create scientific knowledge and obtain industrial data. In turn, collaboration with universities is crucial for organizations in joint, scientific-based research projects in order to develop solutions for production-sourced problems [2]. In a modern economy transforming scientific research into competitive advantages is essential [3].

Many scholars have argued that, university–industry research collaborations are extremely important mechanisms for generating technological spillovers. Such collaborations contribute positively to address innovation market failures and help to realise the full social returns of research and development (R&D) investments [4]. Moreover, there is a burgeoning empirical literature showing an increasing level of academic commercial activities, such as patenting and licensing, and generation of spin-out companies. This has been accompanied by an increase in research joint ventures and joint scientific publications. At the same time many governments have introduced an increasing range of policies encouraging the involvement of universities in technology transfer [4]. The capacity of a nation to produce wealth depends increasingly on the investment it undertakes in strengthening the so-called ''triangle of knowledge'', which is composed of research, education and innovation [5].

The university-industry collaboration brings new prospects of research funds, real world problems and research challenges and new ingredients in curricula development. The collaboration also creates innovation and provides national economic benefits [6, 22].

In today's economic environment it is crucial for businesses and public sector organisations to continuously innovate products, processes, and services. Industry-university collaborations provide the perfect foundation for innovation. By working with a university partner, businesses gain access to cutting-edge expertise and techniques that they don't have in-house, enabling the development of new approaches. Equally, working with industry enables academic institutions to test the practical applications of research on real-world problems and informs future research [7].

The impact of university-industry interactions on regional development became even more important since higher education institutions moved from a traditional role, focused on basic research and training, to a new role more involved in innovation and productive tasks. Referring to the new role of universities as one inserted in a "Triple Helix Mode" of innovation, universities will be one blade, together with firms and governments, for the development and use of new knowledge in the

bjornhalldal.com: Industrializing Knowledge: University-Industry Linkages in Japan and the United States (): Lewis M. Branscomb, Fumio Kodama.University-Industry Linkages in Japan and the United States In Industrializing Knowledge, Branscomb, Kodama, and Florida have signigicantly advanced our.Industrializing Knowledge: University-Industry Linkages in Japan and the United States. Edited by Lewis M. Branscomb and Fumio Kodama. Cambridge, MA.This book compares the economic effects of university research in the United States and Japan--countries similar in economic and technological capabilities but.Full-Text Paper (PDF): Industrializing knowledge: university-industry linkages in Japan and the United States.Industrializing Knowledge: University-industry Linkages in Japan and the United. States # # pages # #MIT Press, The dynamics of principle in the case when the processes of re-separation are spontaneous.Industrializing knowledge: university-industry linkages in Japan and the United States / edited by Lewis M. Branscomb, Fumio Kodama, and Richard Florida.Industrializing knowledge: university-industry linkages in Japan and the United States. edited by Lewis M. Branscomb, Fumio Kodama, and Richard Florida.Subjects: Research -- United States. Research -- Japan. Research, Industrial -- United States. Research, Industrial -- Japan. Universities and colleges -- Research.Promoting UniversityIndustry Linkages in Japan: Faculty strong during times of economic stagnation, such as in the USA in . central roles noted above: as a producer of fundamental knowledge and as a .. technology transfer in Japan', in L. Branscomb, F. Kodama and R. Florida (eds), Industrializing.University-industry linkages (UILs) are not widely spread in Asian countries, but their are more common, which is different from the case of the United States. () Industrializing Knowledge: University-Industry Linkages in Japan and the .Industrializing Knowledge: University-Industry Linkages in Japan and the United States. There is intense public interest in the role of universities.Industrializing knowledge: university-industry linkages in Japan and the United States. Book.His research compares university-industry cooperation in Japan, the United .. and Technology Transfer, in INDUSTRIALIZING KNOWLEDGE: UNIvERSrrY-. INDUSTRY LINKAGES IN JAPAN AND THE UNITED STATES a wider space with flows of knowledge (May and Perry). This article, by focusing on ; Kitagawa a). The changing nature of university industry linkages in Japan reflects . Korea and the United States spend and per cent of their GDP on . Governments throughout the industrialised countries have.Previous: Industry-University R&D Partnerships in the United States Universities can contribute to industry innovation in three ways: knowledge transfer RIKEN was established in at the initial stage of Japan's industrialization as the first .. NOTE: Science linkage is the number of cited scientific papers in the U.S.This report will attempt to review a small part of the University-Industry cooperation .. Knowledge: University-Industry Linkages in Japan and the United States.University-Industry partnerships with a focus on BRIC countries: A .. knowledge: university-industry linkages in Japan and the United States, MIT. Press.To develop

knowledge-based economy, China enacts a range of S & T policies since For instance, the key S & T policy that US universities actively transfer their . (university researchindustry linkages) of CIMS and its industrialization. .. Both in developed countries (such as USA, Japan and Italy) and emerging.