

Chapter 16

Innovation and Commercial Orientation: A Case of Premier Technology Institution in India

Bhaskar Bhowmick
IIT Kharagpur, India

Susmita Ghosh
IIT Kharagpur, India

ABSTRACT

The role of technology institutions has evolved many folds in last two decades. This evolution initiates the thought of conceptualizing the construct called Innovation and commercial orientations of technology institutions. The contextual case study focuses on the environmental aspirations and the preparedness by the institute in dealing those. The background thought of Triple-helix model helps to build the scenario. The insight is drawn on the experience in dealing with the variables by the stakeholders, the shortcomings of the newly adopted directions and observing the developments within the environment. The study contributes towards developing a measure of innovation and commercial orientations of technology institutes in emerging country context.

INTRODUCTION

Many developing countries are trying to transform their economy from natural resource base, low technology towards technology-based economic growth. This transformation is guided by their desire to make their economy less dependent on limited and diminishing natural resources, and other constraining factors that inhibit growth. Technology-based economic growth is guided by a number of several other factors and successful integration of those factors in an economy. A common characteristic of technology-based economy is industrial collaboration with knowledge creation on production at research institutes and transformation of the knowledge into innovative products or services. Thus, the seamless interac-

DOI: 10.4018/978-1-5225-2548-6.ch016

tions between institutes and industry have become a topic of increasing attention for researchers in the recent years. Emergence of science-based industries or “high-tech” industries have motivated research institutes to have a more direct role in the innovation process and market development. In this context, there is need to examine the potential and scope of institute research on knowledge production of firms, citations of institute research on firm patents, joint publications and spin-off formations of new firms by institutes members. Knowledge flow and especially types of knowledge interaction among various actors have also attracted the attention of researchers. However, there are only a few studies that have explored institutes-industry interactions in developing countries. This limitation actually indicates the shortage of scientific expression for capturing the orientation of the institutions which are innovation oriented and capable of translating those into meaningful commercialization scopes.

The present scenario of capturing and expressing the acumen of scientific and industrial output for a technological institute remains in very vague terms at least in the emerging country context. The identified deliverables of the institutes are also not conceptualized in robust manner. In the changed scenario of globalize world the economy and the governance is putting pressure on premium technology institutions especially which are heavily funded by the government on transferring knowledge. The premier technological institutes in India are facing dilemma of delivering national expectation and their call for being truly international. The international aspiration may spread over to many sections of understandings, but one very common and reliable measure could be the “Innovation and Commercial Orientation” of the identified institute. Present literature does not mention any scale to qualify that. Hence this study tries to explore and conceptualize the measure with a major step in understanding the growth of university-industry ties is to identify which universities are most involved, and what it is about them that explain their involvement. Further, the establishing or expanding ties with industry, universities saw the opportunity to increase their resources for research and to enhance their reputations. Changes in organized science further encouraged university interests in expanding technology transfer. Time from discovery to application had been shrinking, while the scale of research in the sciences and applied sciences continued to grow. Thus, the interest of government, industry, and universities converged for the establishment of a more attractive environment for university-industry partnerships. This study would try to capture valuable information about the institute or universities research and scope of these researches in industrial and market application from its stakeholder’s perspective. The proposed study will use data from the primary survey of institute and examine trends in university collaborations with industry for research sharing and finding opportunities of theses research implication in industrial level. The study uses three objective understandings of university–industry ties beyond the theoretical inter-linkages like funds received from industry for research and development (R&D); number of licenses generated by university research; and amount of licensing income received. This study is an effort to conceptualize the term innovation and commercial orientation of a technological institution based on examination of a wide range of potential influences on university-industry collaboration for improve institute status, enhance investment in science and engineering, and study research of technology transfer.

PEEPING INTO LITERATURE

In the present context, it is difficult to comprehend a situation whereas given task can be independently performed by an individual or an institution with own support and without any interactions with the outside world. Major innovations and discoveries all over the developed world are primarily a result of carefully

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:
www.igi-global.com/chapter/innovation-and-commercial-orientation/182633

Related Content

Principals and Student Achievement: A Comparative Study of Eight Countries

S. Marshall Perry, Karen M. Sealy, Héctor X. Ramírez-Pérez, Thomas C. DeNicola and Yair Cohen (2021). *Research Anthology on Preparing School Administrators to Lead Quality Education Programs* (pp. 1378-1404).

www.irma-international.org/chapter/principals-and-student-achievement/260477

Internet Banking Encounter Quality of Arab Middle East Banks: Organizational Determinants

Yazan Khalid Abed-Allah Migdadi and Ola Maher Al Omari (2021). *Encyclopedia of Organizational Knowledge, Administration, and Technology* (pp. 1379-1392).

www.irma-international.org/chapter/internet-banking-encounter-quality-of-arab-middle-east-banks/263623

The Refugee Experience and Peace Leadership Education: A Case Study From the Margins

Lazarina Topuzova and John H. Horsman (2022). *Evolution of Peace Leadership and Practical Implications* (pp. 142-162).

www.irma-international.org/chapter/the-refugee-experience-and-peace-leadership-education/303467

Serving Without Hurting: How to Walk the Black Faculty Tightrope Without Falling

Krista D. Mincey, Nandi A. Marshall and Stacy W. Smallwood (2022). *African American Leadership and Mentoring Through Purpose, Preparation, and Preceptors* (pp. 195-221).

www.irma-international.org/chapter/serving-without-hurting/297675

Internationalization of Higher Education: The Methodological Critiques on the Research Related to Study Overseas and International Experience

Agung Nugroho and Saud Saif Albusaidi (2022). *Global Perspectives on Quality Assurance and Accreditation in Higher Education Institutions* (pp. 75-89).

www.irma-international.org/chapter/internationalization-of-higher-education/288843