

Harnessing innovation potential or a necessary evil? Institutional approaches to industry-higher education partnerships

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Research partnerships and collaboration with industry are promoted in new higher education and science and technology policy in South Africa. They are seen as a critical strand in the balance between knowledge production and the application of research, to contribute to the development of a national system of innovation, and a higher education system that is more responsive to economic and social development.

A number of higher education institutions have developed policy and strategies to promote research partnerships with industry, often drawing on the experience and practice in countries such as the United States, Britain and the Scandinavian countries as guiding models. However, the South African context is distinctive, with a differentiated higher education system, with uneven levels of Science and Technology capacity, uneven levels of research capacity, uneven levels of research funding and resources, uneven regional distribution of industry and opportunities for economic development, and a massive demand for social development. The response and approach to partnership is shaped by each institution's context, research culture, structures and capacity.

The paper will attempt to map the range of responses of higher education institutions, from those who would 'harness the potential' of partnerships, to those who view partnerships as a 'necessary evil'. It draws on a recent HSRC empirical study of higher education-industry partnerships in three high technology fields - ICT, New Materials Development and Biotechnology.

The paper begins by developing an analytical matrix that distinguishes between the strength of the Science and Technology research capacity of an institution on the one hand, and the structured nature of the organisational approach to promoting partnership on the other hand. Using this matrix, it is possible to identify four main types of institutional approach to partnership, and then, key trends in the universities and technikons that adopt each approach.

The heart of the paper will then map out the policies, structures and mechanisms typically associated with each of the four institutional approaches to partnership, to illuminate the ways in which partnerships are currently facilitated and constrained in the South Africa higher education system, in cutting edge high technology fields.

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INDUSTRY NETWORK CONSULTANCY Primarily Intellectual INCENTIVISED CONTRACT EDUCATION FDUCATION Primarily financial intellectual Primarily COMMERCIALISATION DONATION Primarily financial

Structured Harness Innovation Potential for rural development Partnership Building capacity Harness Innovation entrepreneurial Building institutional research capacity Emerging Potential Quilding institutional research capacite **Emergent research** Sound research capacity Capacity Laissez Faire Laissez faire aspirational traditional Building Partnership / capacity Consolidate Teaching focus Unstructured