ACADEMIA PRIVATE SECTOR PARTNERSHIPS
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Analysis Framework

- The Policy Framework and the degree of high-level policy endorsement within Government, the Academia and Private Sector for integration of knowledge creation, innovation and technological advances in productive and development activities;
- The level of effort on awareness raising on academia-private sector partnerships, both internally, within the organisations, and in consultations with the EAC Partner States;
- Progress on the development of operational measures on integrating knowledge creation, innovation and technological advances considerations within development activities, especially productive sectors. This could include, for example, specific tools and instruments as well as practical guidance for best practices;
- The degree of cross-fertilisation and collaboration between various actors and institutions, including the sharing of experiences, joint projects, and harmonisation of approaches in this area;
- Progress on the assessment of the impacts/implications of academia-private sector partnerships on development activities; and
- The level of resource allocation/budget for academia-private sector cooperation.

Policy Framework

There Is Significant High-Level Policy Endorsement within Academia and Private Sector for the Need to Integrate Universities into the Local Industrial Innovation Processes. The national Governments are yet to make deliberate efforts to pronounce and implement APSP related policies and strategies.

Government	Academia	Private Sector
• Vision 2020/2025/2030 • PPP policy and strategy • Science & Tech Policy • IP • SAPs • Sector policies	• Consultancy • Research • IP • International Links • Agreements/MOUs	• Associations • Some private sector firms
Challenges		
Capacity Priority Orientation Funding	Capacity Priority Orientation Funding	Capacity Priority Orientation Funding
Reinvest in human capital development Deliberately develop the infrastructure required Re-examine the mission of HEI		

Legal and Regulatory Framework

Government	Academia	Private Sector
• University Education Acts • Science Technology and Innovation Acts	• Consultancy rules and regulations	• Procurement Rules and Procedures
Needed: Single legislation pronouncing the role of APSP in national development		
The EAC must turn more great ideas into successful products and services in order to make a mark in the global economy. We also have to close a worrying 'innovation divide'. Therefore, the EAC and its partner states have a) To define their innovation ecosystem b) Develop and launch innovation indicator help measure how we are doing and pinpoint areas where countries need to take action.		

Awareness Raising

Academia and Firms Have Made Little Progress on Awareness-Raising on the Role and Impact of Academia Private Sector Partnerships		
Government	Academia	Private sector
Limited External	Low key Internal	Low key Internal
Through Media Seminars and workshops Counsel Intellectual property office	Through Written materials Training seminars Conferences exhibitions	Through Written materials Training seminars Policy dialogues
• The university is not primary sources of information on technology & innovation • The supply chain and own research has been and is		
Need for a structured and coordinated awareness raising programme		
Universities and the apex private sector foundations, strengthen their efforts to raise awareness among external collaborators through the inclusion of interactions in regular policy dialogues with Partner State authorities and at EAC level		

Cross-Fertilisation

Important in reducing time and effort, and contributing to greater APSP harmonisation at national and EAC levels

The Degree of Cross-Fertilisation and Collaboration Will Need to Be Further Enhanced To Make the Interactions More Efficient and Harmonised

Government	Academia	Private Sector
• Research Institutions • Presence on MDAs Commissions and Task Forces • Policy Analysis and Formulation • Space for attachments	• Rudimentary with firms • Robust with other HEI a) counter-part b) Mentor and sponsor • Curriculum development in some study areas	• Rudimentary with academia and local firms • High with international firms • Presence in university governance • Space for attachments

- Attachment opportunities beyond the hard sciences. The bridge for attachment should be strengthened. – structured internships and attachments.
- Private sector should provide space
- Bring more programmes into accreditation and registration
- Exchange meetings to share experiences
- Promote cross-fertilization within national priorities

Operational Measures

These are measures required to manage interactions		
The Development of Operational Measures on APSP Interactions Is Still At an Early Stage, but Some Recent Progress Is Nevertheless Discernible		
Government	Academia	Private Sector
Too many actors and none responsible for developing required framework	• Ad hoc • Policy guidelines in research and consultancy • Liaison offices exist	Discrete projects
Operational measures are lacking at all levels.		
Required Measures for (i) engaging in APSP thematically, (ii) managing your reputation as a transferor/an acquirer, (iii) confirming the strategic vision, and (iv) managing synergy targets across the APSP life cycle.		
(i) APSP is not a tactical necessity (ii) It is a strategic capability delivering a competitive advantage in the market place		
Clear and structured learning and evaluation systems designed to grow APSP		

Impact Measurement

More Efforts, However, Are Needed to Assess the Contribution and Impact of APSP on Local Economic Development		
Government	Academia	Private Sector
Nothing happening	Rudimentary Research not industry driven Teaching not industry and national priority focused	Rudimentary Low absorptive capacity

- the EAC emphasizes the critical role of research and technological development and investment in knowledge
- Universities to target basic research linked to utilization through a series of intermediate value-added processes stimulated by government and driven by the private sector and targeted at transfer of knowledge and technology;
- the publication and patenting assume different systems of reference both from each other and with reference to the transformation of knowledge and technology into marketable products;
- the academia should upscale its research and publication effort to include innovation and technology transfer within an institutional framework that has clear regulatory regime and an interface strategy designed to integrate commercialisation; and
- the teaching should quickly transform to become an integral part of the industry and social structure present and desired for posterity.

Resource Allocation & Utilization

A weak funding base for education, research, science technology and innovation indicates a weak APSP institutional base, and therefore a weak innovation frontier		
The link between the characteristics of finance, both public and private, and research and technology transfer is essential for the evolution of a strong industrial and scientific structure		
Government	Academia	Private Sector
Negligible financing Weak fiscal environment Low political will	The Academia forced to seek external donor support and collaboration with international universities and researchers	Desperate

Collaborative Links Between Academia And Industry

- **General Support Link:** Non-research sponsorship, Links with business clubs, Industry support to university exhibitions
- **Education & Training Links:** Course development for industry, curriculum development, Student sponsorship, student mentoring, Executive in Residence.
- **R&D Links:** Sponsored Research, Joint Research, movement of researchers between academic and industry (staff exchanges).
- **Commercialization of Institution Infrastructure:** Consultancy, Conference facilities

Collaborative Links Between Academia And Industry: Link Mechanisms

Institution-Based (Linkages as extensions of institutions)

- Industrial Liaison Office
- Technology Transfer Office
- Research Contract
- Consulting Contract
- Affiliate Programme
- Executive/Entrepreneur in Residence

Collaborative Links Between Academia And Industry: Link Mechanisms

Linkages through creation of additional organisational infrastructure

- Clusters and or Hubs (communities for innovation)
- Centre of Excellency
- Advanced Technology Centre
- Incubation Centre
- Technology Incubator
- Business Incubator
- Learning and Experimentation Centres

Challenges and Fears:

- Common perceptions: Universities -'ivory towers of knowledge'. Public Research Laboratories - 'black holes of public funding'.
- Institution and Industry Lack Mutual Trust.
- Institutions-Fear threats to academic freedom, Lack of financial resources.
- Industry - Doubt ability of academics in problem-solving; Lack confidence in university originality.

Towards An Enabling Environment

Problems and Constraints

- **Policies mainly focused on research in basic sciences.**
- **While formulating Policy, real technical requirements of productive sector & economic conditions not taken into account.**
- **Inadequate and under-trained human resources to design own APSP related policies.**
- **Lack experience of APSP Policy formulation and implementation.**
- **EAC economy is largely a commodity-exporting resource sector, strategically inclined to rents from raw materials than adding value**

Need for Policy Orientation

- **Should have a strategically designed APSP Policy commensurate with challenges of globalized society.**
- **Institutions should establish strategic collaboration with industry for stimulating knowledge transfer and accelerating economic development.**
- **Different approaches for different institutions based on mission, size & facilities and for different countries based on level of knowledge transfer capabilities and infrastructure.**
- **Clear perspective planning, discipline, motivation, commitment, energy & resources & right kind of people supported through a set of policy initiatives.**

Suggested Policy Initiatives

A. Increase in Investment on knowledge transfer:

- **Adequate allocation of funds for knowledge transfer capacity building, R&D and HRD;**
- **Funding for organizational infrastructure for Linkages;**
- **Support for technology transfer activities of the institutions;**
- **Venture Capital funding with liberal lending terms.**

B. Motivating the Industry:

- Encourage Private sector investment in institutions on R&D and technology transfer by appropriate policy measures.
- Financial subsidy on expenditure for participation in academia R&D projects & in-house development work.
- Tax rebates and incentives to sponsor R&D projects in institutions, for in-house R&D and exp on manufacturing activities in selected high technology areas.
- Duty exemption for import for R&D.
- Awards and recognition on industrial technology development, innovation and entrepreneurship.
- Awards and recognition for providing space for internships and fellowships

C. Motivating the Institutions:

- Provide space for internships and fellowships
- Provide encouragement and flexibility for technology innovation and knowledge transfer activities;
- Provide support to establish linkage infrastructures;
- Allow institutions to take part in commercial activities, in equities, start companies;
- Set explicit and equitable rules on sharing income from industry work.

D. Motivating Institute Personnel and HRD:

- **Provide Training & Retraining of personnel;**
- **Allow accepting assignments from industry;**
- **Have flexible rules on- owning property, taking equity in companies, receiving commercial income, patent law, conditions for IPR.**

E. Choice of Knowledge & Promotion of Knowledge based Enterprises:

- **Use a mix of intermediate & appropriate technologies and high & leading edge technologies;**
- **Build indigenous technological capability, Import modern technologies selectively;**
- **Adopt Policy measures for promoting small technology based enterprises.**

F. Other Policy Measures

- **Strengthen National S&T Information System;**
- **Establish National System on Standardization, quality control and accreditation;**
- **Adopt appropriate IPR Law & awareness program;**
- **Establish a network of academic and research institutions and knowledge transfer Policy experts.**

Conclusions

- There is weak linkages between the knowledge generation process in institutions of higher education and the capacity of private firms to adapt the knowledge being generated for commercial purposes.
- institutions of higher education must work to align their efforts to improve knowledge transfer capabilities with the realities of the local innovation systems in which they are embedded
- One driver of successful innovation is technology transfer, in which the private sector adapts university research for use in the marketplace.

Recommendations

- Establish an interagency workgroup on technology transfer to define the way forward on APSP.
- Establish performance goals, metrics, and evaluation methods
- Streamline the academia technology transfer and commercialization process
- Facilitate commercialisation through national and regional partnerships
- Ensure that HEI, research institutes and centres of excellence are strengthened with resources that are free from any encumbrance
- Establish National System on Standardization, quality control and accreditation;
- Adopt appropriate IPR Law & awareness programs;
- Establish and launch innovation indicator

Innovation Indicator

The proposed indicator is based on four components chosen for their policy relevance to knowledge transfer in the EAC region.

- **Technological innovation as measured by patents.**
- **Employment in knowledge-intensive activities as a percentage of total** employment.
- **Competitiveness of knowledge-intensive goods and services.**
- **Employment in fast-growing firms of innovative sectors.**

Questions and Comments