



ACADEMIA-INDUSTRY-GOVERNMENT RELATIONSHIP: EXPERIENCE OF THE COLLEGE OF ENGINEERING AND TECHNOLOGY, UNIVERSITY OF DAR ES SALAAM

by

BLM Mwamila and AK Temu

**College of Engineering and Technology,
University of Dar es Salaam**



Outline

- **Introduction**
- **College structure**
- **College-Industry Relationship**
- **College-Government Relationship**
- **Government-Industry Relationship**
- **Concluding Remarks**



Introduction

- **Products and Services expected from Engineering Training Institutions**
 - **Critical mass of engineers sufficiently equipped with the requisite knowledge and skills to solve the society's problems, meet the challenges of development and attain competitiveness at regional and global levels**
 - **Disseminated research outputs and expert services to the community for effective and efficient utilization of natural resources**
- **Government has the role of formulating policies to enhance linkage between Industries and R&D Institutions for national development.**
- **Industries have to rely on R&D Institutions if they are to be competitive**



College Structure: **Historical Development**

IPI (1980)

- Technology development
- Technology transfer
- Services and consultancy
- 14 academic staff

FoE (1973)

- 4 UG + 13 PG programmes
- About 1200 students
- Research
- Consultancy & Services
- 98 academic staff

CoET (2001)

- 15 UG + 7 PDD + 15 PG programmes
- About 2000 students
- Research with clear agenda
- Increased scope of C&S
- Technology dev, incubation, brokerage & transfer
- 115 academic staff



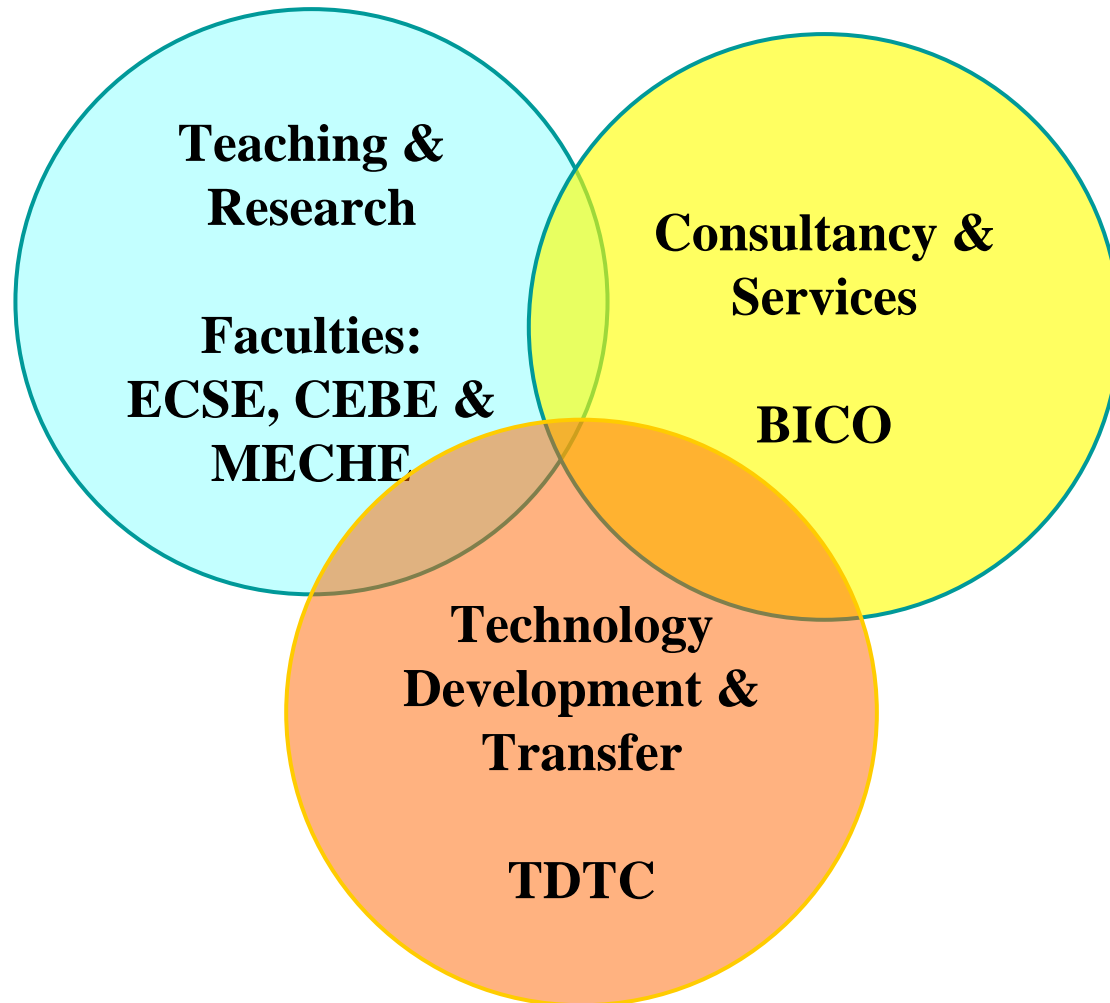
College Structure - Objectives

□ Three College Basic Objectives

- 1) To supply the country with sufficient middle and high level engineering human-power as agents of development and change, thus contributing to the indigenous development of infrastructure, industry and trade
- 2) To perform research in the interest of suitable exploitation and local processing of natural resources in Tanzania, ultimately leading to the innovation of technical products and production processes for the local industry
- 3) To provide expert professional services in the form of consultancy to industry as well as public and private organisations and institutions



College Structure – Three Pillars for Realization of the Basic Objectives





College-Industry Relationship

- Practical Training (PT) Coordination Office liase with Industries for UG students to get 8 weeks PT placement annually.
- Tanzania Gatsby Trust (TGT) financed nationwide SME survey (2225 Enterprises) to map and identify their technological strength and weaknesses.
- Every year TGT is financing 15 final year projects which have SME collaborators. Some of the results have been adopted by SMEs



College-Industry Relationship

- ❑ Business/technology Incubation project addresses some of the SME problems.
- ❑ College is conducting Tracer and Employer/Graduate Surveys every 5 years to establish market needs and incorporate the same in curriculum review.
- ❑ Consultancies & services to industries and continuing professional development courses are offered through BICO. This is the major link with large firms.
- ❑ Because of the level of our industries, contracted research is yet to be seen.



Government-University Relationship

- Most of government development strategies are not providing for universities roles in the implementation (NSGRP, mining sector privatisation, etc.)
- **CoET formulated Research Agenda with Government in mind**
 - **Priority areas of research, expected outputs/ impacts, organizational set up, dissemination of research results and required resources (inputs).**
 - **Strategies for sustaining research in the College to support national development, teaching and consultancy (public service).**
- **Government contribution to R&D Institutions Research budget is negligible (0.18% of GDP compared to SA - 0.81% and USA - 2.79%)**



Government-Industry Relationship

- ❑ SMEs surveyed only knew Business registration and Tax offices.
- ❑ SMEs were getting no assistance from the government with regard to marketing their products and market requirements.
- ❑ Acquisition of credit to become competitive was not facilitated by the government.



Government-Industry Relationship

- SMEs policy is now in place with a number of interventions to stimulate SMEs growth.
- Different strategies for implementation of SME policy are now in place (Property & Business Formalization Programme, SCF, National trade Policy, National Business Incubation Programme, Export Processing zones, etc.)
- Innovations are now recognised by the government and awarded, but no policy in place.



Concluding Remarks

- **University has continuously strived and succeeded to have a functional linkage with industry at all levels.**
- **Although SME sector is, at present very weak and underdeveloped, the existing government policies, legal and institutional infrastructure is comprehensive enough.**
- **Resources that are available at present are grossly inadequate to cover the whole country and the needs of SMEs.**



Concluding Remarks

- ❑ **Innovation System and Clusters Programme spearheaded by CoET promises provision of the mechanism for change of mindset in favour of competitiveness, enhanced quality consciousness and productivity, among SMEs.**
- ❑ **ISCP-Tz advocates triple helix operation as the means of bringing about faster socio-economic development**
- ❑ **Awareness creation on the importance of triple helix is still needed.**



THANK YOU FOR LISTENING

THE PRESENTATION

IS OPEN

FOR DISCUSSION