

KUMASI TECHNICAL UNIVERSITY



PRIVATE SECTOR ORIENTED POLICY

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1.0 Introduction

The importance of the private sector development in Ghana cannot be over emphasized. The private sector comprises mainly the Micro, Small and Medium Scale Enterprises (MSMEs). These MSMEs have some technological challenges. If these challenges are not resolved, development cannot be sustained in a country such as Ghana. The private sector needs revitalisation and regeneration with innovative and creative inputs from Science, Technology and Innovation (STI) institutions such as Kumasi Technical University (KsTU). Over the years, the Government of Ghana has supported STI institutions to develop and transfer technology to the private sector.

The Private Sector Oriented Policy of KsTU has been crafted in line with the direction of the Ministry of Environment, Science, Technology and Innovation (MESTI) and COTVET. Consequently, KsTU used certain provisions of Ghana's Industrial Policy, as well as other private sector policy documents to prepare this policy.

The overarching principle which guides the development of this policy is that the private sector can only be competitive in its local and global markets if:

- i. research institutions can provide solutions that are highly demanded by the private sector, and
- ii. the private sector firms can absorb and implement those innovative solutions in their operations.

Accordingly, this policy provides a comprehensive set of guidelines for KsTU, on the development and diffusion of private sector oriented and innovative outputs. The policy document thus covers four (4) basic themes, namely,

- i. Governance Policies
- ii. Orientation of Corporate Culture towards private sector
- iii. Compensation and General Welfare
- iv. Recruitment and Training

The key policy objectives are to:

- i. enhance the capacity of research staff to develop and transfer to the private sector, demand-driven technology and innovative solutions;
- ii. provide appropriate infrastructure for the development and diffusion of private sector-oriented solutions;
- iii. provide incentives to support and motivate the staff in the development and diffusion of private sector innovative solutions; and
- iv. support the private sector, in terms of training to adopt and adapt the innovative solutions developed by KsTU.

2.0 Policies

2.1 Policy Prescriptions

- i. **KsTU is to identify technology research and service needs of the private sector (PS) in order to develop solutions for them. In this regard, the University should:**
 - (a) Direct its core activities towards private sector needs in terms of research, innovation and appropriate technology developments.
 - (b) Identify potential private sector partners and initiate dialogue on PS requirements for skills, technological

innovations, and Technical and Vocational Education and Training (TVET) programmes.

- (c) Obtain from industry specific demands for PS-driven programmes and identify industry problems for applied research solutions.
- (d) Engage the appropriate sector ministries and other TVET agencies on reward systems for achieving targets of strategic importance to government and National Development.
- (e) Liaise with the COTVET, NCTE, NABPTEX and relevant ministries for special windows for creative initiatives in the new PS oriented system.
- (f) Ensure that PS-oriented vision, initiatives, directives, objectives and budget lines are included in the institutional strategic plan and implementation activities.

ii. To develop industry-responsive technology research and services, the University shall

- (a) Ensure that laboratories and workshops are adequately equipped to help staff deliver appropriate solutions to the private sector.
- (b) Direct the Academic Board to focus on staff research that has direct potentials to be applied or adapted to solve private sector problems or improve upon existing situations.
- (c) Identify skilled/professional staff to handle PS requested projects at agreed packaged rewards (fees, incentives, awards, sponsorships), on professional basis.

- (d) Specifically motivate successful staff initiatives appropriately by rewarding them for projects won and executed.
- (e) Encourage staff to initiate PS oriented training programmes and schemes that fit into the COTVET/CBT model. This should be more of outreach and skill transfer modules of short term training packages.

iii. To diffuse industry-responsive technology research and services to the Private sector, the University should:

- (a) Publish success stories in its Bulletin.
- (b) Empower the Academic Board to showcase results of PS-oriented programmes/awards/ projects in diverse ways on a regular basis for example Research and Technology Fairs.
- (c) Encourage and resource faculties to participate in National and International Technology Fairs.
- (d) Patent original KSTU Technology and research innovations as well as safeguard or protect the works of staff through copyright and other IP protection options.
- (e) Have business dialogues with PS firms for production and profit sharing of new technologies and solutions.

2.2 Corporate Culture Policies

2.2.1 Corporate Culture Orientation Towards

Private Sector Research and Engagement

Policy Objective

- i. To develop a positive corporate culture towards private sector research and engagement by

- ii. Identifying, developing and diffusing industry-responsive technology research and services.

Policy Prescriptions

- i. KsTU will establish the need for a private sector culture for its core staff by means of:**
 - (a) Ensuring that departments and research staff develop reports for private sector needs assessment for technology products and services.
 - (b) Directing departments and research staff to develop technology product and services based on the needs assessment each year.
 - (c) Ensuring that there is special education on private sector operations, workshops and seminars for all staff every year.
 - (d) Ensuring the establishment and operation of a private sector oriented project center.
 - (e) Approving more courses that are private-sector focused.
 - (f) Ensuring that all new programmes involve key stakeholders in the development of the curricula to meet the needs of the private sector.
 - (g) Supporting departments to facilitate the development of strategic partnerships.

2.2.2 Private Sector Research, Technology, Innovation and Development for Industry

2.2.2.1 Overall Level of Private Sector Research, Technology and Innovation at KsTU

Policy Objective

To increase the overall level of private sector research and development for technology and innovation.

Policy Prescription

KsTU will support the strengthening of the Science, Technology and Innovation (STI) research base available to the units through the following:

- i. Strengthening of units, especially the Institute of Research, Innovation and Development (IRID), with requisite resources to undertake private sector research.
- ii. Increasing the knowledge capacity of units to carry out technology research and development; and diffusion to the private sector.

2.2.2.2 The Scope of Science, Technology, Research and Innovation at KsTU

Policy Objective

To raise the level of science and technology research and innovation undertaken in the University.

Policy Prescription

KsTU will:

- i. institutionalise or establish a private sector research grant for staff;
- ii. make budgetary allocation for private sector oriented research; and
- iii. provide support for the production units to increase their capacity to generate funds.

2.2.2.3 Support for Private Sector to absorb research outputs in Science and Technology for Innovation

Policy Objective

To increase the capacity of the private sector to absorb appropriate innovation and technology from STI research.

Policy Prescriptions

The University shall:

- i. Strengthen and expand the provision of business development services and support private sector firms undertaking and exploiting science and technology research for innovation;
- ii. provide support in terms of expert training to raise the absorptive capacity of private sector firms, particularly the indigenous micro, small and medium sized enterprises;
- iii. support the units to promote and market their technology and innovative products and services to the private sector; and

- iv. Support the units to develop MOUs with PS industries/NGOs, companies, and stakeholder institutions for cost sharing on training models, sponsorships, direct funding or consulting for solutions (for example time-bound sponsored solutions).

2.2.2.4 Linkages within the Science, Technology and Innovation System

Policy Objective

To strengthen linkages among key agents in the science, technology and innovation system.

Policy Prescriptions

KSTU shall:

- i. strengthen the research capabilities and capacity to effectively collaborate with other STI institutions for best practices and shared research; and
- ii. encourage researchers and units to adopt and adapt STI solutions of local and international research and technology institutions.

2.2.2.5 Science and Technology Promotion and Delivery

Policy Objective

To strengthen coordination and collaboration mechanisms for the promotion and delivery of STI output to the private sector.

Policy Prescriptions

KsTU shall:

- i. establish an interdepartmental strategic network to coordinate and promote the development of science, technology and innovative products and services, and process them for private sector absorption; and
- ii. carry out STI annual fairs in close collaboration with relevant ministries, sister STI institutions, private sector stakeholders and entrepreneurs.

2.2.2.6 Intellectual Property Rights for Industrial Development

Policy Objective

- i. To establish adequate and appropriate legal framework of Intellectual Property Rights to support and protect the interests of staff of KsTU in STI development.
- ii. To stimulate innovation and technology development at KsTU.

Policy Prescriptions

- i. Ownership:** Rights in research and technology products and services, created in the Perspective of teaching and research activities as stipulated in the Intellectual Property Rights and Commercialisation Policy (IPRCP).
- ii. Contributions:** All contributors to the research and technology works (products/services/processes) should receive appropriate recognition for their contributions. Depending on the nature of a contribution, appropriate recognition can take, but is not limited to, recognition through an acknowledgement

or citation. KsTU, because of its capability as a nurturer, facilitator and/or supporter of research and technology works, should be recognized for its contributions to teaching and research activities.

iii. Sharing of Proceeds: In the event of commercial utilisation of research and technology product, all intellectual contributors to that work shall be entitled to share in the proceeds in proportion to their contributions, unless the entitlement to a share has been willingly waived through informed consent. A share in the proceeds could also be granted to other parties such as the financial sponsors and support staff, as agreed by all parties.

iv. Disclosure: Members of KsTU who have developed research and technology works and intend to pursue commercialisation or other opportunities, must inform the appropriate authority in the University, of the nature of the commercialisation, including pricing and target customers.

3.0 Infrastructure and Equipment for Science and Technology Research

Policy Objective

To increase infrastructure and equipment for science and technology research.

Policy Prescription

KsTU will:

- i. re-equip the laboratories and workshops of departments and units with appropriate modern equipment, facilities and infrastructure needed for private sector research;

- ii. increase budget allocation for provision of technology equipment and infrastructure; and
- iii. support any staff member, department, and production unit that intends to procure available technology and equipment that could be utilised to develop and diffuse innovative solutions required by the private sector.

4.0 Recruitment, Manpower Development and Training of Staff

4.1 Entrepreneurial and Managerial Skills

Policy Objective

To increase the number of staff with improved quality of entrepreneurial and managerial skills.

Policy Prescription

KsTU will:

- i. encourage investments in the training of staff of the faculties on private sector and entrepreneurial skills;
- ii. strengthen the existing faculties, schools, institutes or directorates to deliver entrepreneurship and management training programmes that meet the current and future needs of the private sector;
- iii. encourage and support the training of private sector workers by competent staff with entrepreneurial skills; and
- iv. provide incentives in terms of staff promotion for private sector demand driven research, technology and innovation for the units.

4.2 Technical Skills in Specialized Areas

Policy Objective

To ensure the availability of the requisite skilled technical manpower for specialised areas on a sustainable basis.

Policy Prescriptions

KsTU will:

- i. Develop programmes to support the training of more technical manpower in the specialised areas;
- ii. Establish facilities and equipment for the requisite manpower development and training on a regular sustainable basis; and
- iii. Provide special incentives for the development of training programmes for specialised areas of the private sector.

4.3 Other Private Sector Skilled Staff

Policy Objectives

To develop a pool of private sector staff for the current and future needs of industry.

Policy Prescriptions

KsTU shall:

- i. commit resources to all departments for technical, vocational, commercial, and apprenticeship training programmes for its staff; and collaborate with industry to develop a pool of expert manpower for the training of the private sector staff in areas of critical needs; and

- ii. promote and support staff to collaborate with industry and train in cutting edge technologies relative to private sector development and productivity.

4.4 Recruitment Method for Research Staff

Policy Objective

To provide a recruitment guideline to help increase the human capital base of departments and units in private sector research, technology and innovation.

Policy Prescriptions

- i. The Centre for Research and Development for technology innovation (CRDTI) should make their requests for requisite staff through the appropriate recruitment channels of KsTU.
- ii. The centre should provide appropriate and regular training programmes for staff, as well as develop a performance management system to align employees' skills and expertise to project objectives.

5.0 Compensation for Staff and General Staff Welfare

Policy Objective

To provide incentive packages and grant support to any staff who develops private sector research and technology, as well as engagement with the private sector.

Policy Prescriptions

i. KsTU through the CRDTI shall:

- (a) help identify the industries and their needs, as well as funding opportunities. This information will be disseminated to potential researchers.
- (b) ensure training programmes for staff. Consultants will from time to time be brought in to take staff through proposal writing, data analysis and budget preparation among others.
- (c) review research proposals before submission and ensure that the proposals conform to KsTU's policies and the sponsors' requirements.
- (d) prepare proposals/applications to be submitted within the required time frame.
- (e) ensure that the interests of KsTU and researchers are protected in contractual relationships, grants, awards and reports.
- (f) ensure that a separate project account is established.

ii. Financial Reward

KsTU will provide appropriate rewards to any staff member who wins a research grant for KsTU.

iii. Project Vehicle

After the end of the project work if a vehicle was part of the grant, that vehicle shall be added to the pool with priority use by the Unit of the lead researcher.

iv. Flexible Schedule

KsTU must ensure that researchers working on private sector research projects are given flexible schedules for data collection and report development.

v. Intellectual Property

The copyright or patent of all innovations, technologies and solutions shall be in accordance with the provisions in the IPRCP.

vi. Promotion

- (a) Winners of research grants and private sector researchers should be credited with extra weights in terms of promotion assessments.
- (b) KsTU will ensure that staff who develop private sector, demand-driven technology and innovation solutions, are credited with appropriate weights for promotion.