



SCIENTIFIC COOPERATION GRANT INITIATIVE FOR EASTERN AFRICA

Cooperation Grant Initiative (CGI)

First Open Call for Proposals

1.0 Summary

Theme: Manufacturing Sector in East African Community (EAC)

Focus: Regional Processing

Grant Category: Research Grant

Eligible applicants: Scientists, researchers and innovators from Kenya, Rwanda, Tanzania and Uganda.

Partners per project: Four (4) researchers from the four participating countries (one researcher per country).

Grant period: Up to 18 months (2018-2019)

Grant amount per project: Maximum of USD 120,000.00

Deadline for Submission of Proposals: July 22nd 2018

Publication of award for successful proposals: Mid-August 2018

2.0 Background

The East African Science and Technology Commission (EASTECO), Uganda National Council for Science and Technology (UNCST), National Research Fund, Kenya (NRF), the National Council of Science and Technology, Rwanda (NCST), Tanzania Commission for Science and Technology (COSTECH), the African Centre for Technology Studies (ACTS) and the Science, Technology and Innovation Policy Research Organization (STIPRO) are collaborating under the Science Granting Councils Initiative (SGCI) in sub-Saharan Africa to fund research in Kenya, Rwanda, Tanzania and Uganda. The initiative is jointly funded by the United Kingdom's Department for International Development (DFID), Canada's International Development Research Centre (IDRC), and South Africa's National Research Foundation (NRF). The Initiative hereby announces call for research proposal under theme of manufacturing, processing sub-sector.

submission

2.1 Manufacturing sector outlook in the East African region

The contribution of manufacturing to GDP in the East African region is small, diversification is limited, and the level of technological development is low. Much of the activity still consists of minimal processing of agricultural and mineral resources. The potential competitive advantage that the East African countries have in several manufacturing sub-sectors such as agro-processing, textiles, leather, wood products and niche pharmaceuticals which represent the nucleus for industrialization has not been fully harnessed. This is due to a number of structural and policy constraints, including limited access to



finance, electricity, transport infrastructure and ICT networks. These challenges constrain the potential of the manufacturing sector to significantly contribute to regional trade and industrialization. Besides, there is low investment in research and development by the business sector across all the EAC member states (GERD < 0.5). The level of technology adoption by firms is relatively medium within the region, implying that much of the technology adopted by firms is transferred from abroad other than the regional R&D efforts, which results in technology trade imbalances.

The contribution of manufacturing to GDP and regional growth has remained below 12 percent per annum and on a decline since 2008. The sector's contribution to GDP had declined to 6.9 percent in 2015 due to several factors, including the recent global recession that affected the macroeconomic fundamentals worldwide. Manufacturing that depends on imported raw materials was adversely impacted by exchange rate volatility leading to high production costs and declining output or contribution to GDP.

The McKinsey Global Institute conceptualizes manufacturing as comprising five (5) sub-sectors. These sub sectors can be thought of as complete manufacturing domains or complementary domains depending on their level of dependency on other domains. The African Development Bank further elaborated the characteristics and investment potential of the domains in the East African region as follows:

2.1.1. Technology innovation for global markets

This includes computers and office machinery, semiconductors and electronics, and medical, precision, and optical equipment. This sub-sector is characterised by (a) high R&D, services and value-added; (b) trade intensity; and (c) relatively capital intensive. This is a sub-sector with future development potential for Eastern Africa based on prior development of innovation systems and capabilities.

2.1.2. Global innovation for local markets

This sub-sector includes chemicals and pharmaceuticals, transport equipment and automotive, machinery, electrical equipment, and appliances. The sub-sector is characterised by (a) High R&D, services and value-added; trade intensity; relatively capital intensive; (b) FDI-dependent and with some existing scope for regional mandates in Eastern Africa (e.g., auto or cell phone assembly) as well as some niche supply chain entry points for firms graduating from Eastern African innovation system incubators.

2.1.3. Resource-based commodities

This sub-sector includes: wood products, pulp & paper, basic metals, minerals-based products, and refined petroleum. The sub-sector is characterized by (a) low R&D intensity, moderate services inputs, high capital & energy intensity, limited job content; (b) good upstream linkages to basic resource industries good downstream linkages thus enabling other industrial development. Scope for regional development depends heavily on resource endowments and capacity to mobilize capital. Basic knowledge requirements probably require FDI as a major component and considerable investment in supporting local infrastructure.

2.1.4. Regional processing

This sub-sector includes: printing & publishing, food processing & beverages, fabricated metals, rubber & plastics. The sub-sector is characterised by (a) low R&D and trade intensity, moderate services inputs and varying degrees of capital intensity; (b) large and stable sector that is responsive to local tastes, with good upstream linkages to agriculture and basic resource industries, good downstream linkages thus enabling other industrial development, and relatively labour intensive thus providing jobs; (c) significant scope for regional supply to develop in tandem with regional demand and the least demanding type of activity in terms of local industrial capabilities and in terms of requirements for infant industry support.

2.1.5. Labour-intensive tradable goods

This sub-sector includes textiles & apparel, leather, furniture, jewelry, toys and miscellaneous manufactures. The sub-sector is characterized by (a) low R&D, services and capital intensity but high trade intensity and high job content; (b) good upstream linkages to basic resource industries; (c) considerable scope for export-oriented manufacturing development in Eastern Africa as this activity migrates from the more advanced developing economies.

2.3 Regional priorities in manufacturing in East African region

Prioritization of the manufacturing sector in this call is informed by a number of considerations, including:

2.3.1 Contribution of manufacturing sector to development

Manufacturing plays a key role in socioeconomic transformation and development of nations. Traditionally, the transition from an agrarian to an industrial economy is associated with a rising share of manufacturing in GDP. The global interest in manufacturing reflects the recognition of important linkages between manufacturing and other activities vital to economic success. Manufacturing accounts for about 70% of global trade and about 80% of global business R&D and remains a driver of economic prosperity in advanced economies. Manufacturing anchors local innovation activity that is critical to future economic performance. The sector is associated with accelerated technological development because of learning-by-doing or skill intensity, or productivity gains because of economies of scale. The sector anchors a substantially larger share of economic activity, including high-end services, than its direct share of GDP would suggest. To compete in services, advanced countries are sensing the need to maintain a viable manufacturing base. The process of industrialization in Eastern Africa could benefit from the lessons learned from the comparative success of the developmental models that proved to be successful when applied in Asia and most recently by the BRICS.

2.3.2 Policy frameworks for the manufacturing sector

Based on the individual country and shared aspiration for regional industrialization and development, the East African Community (EAC) member states are at various stages of developing policies that priorities manufacturing sector growth. While promoting industrialization, these policy frameworks acknowledge the linkages and interdependencies between agriculture and industry and therefore provide for agricultural-led industrialization. They also set medium and long-term performance milestones to be achieved by member states in order for the contribution of the manufacturing sector to gross domestic product (GDP) in Eastern Africa to increase. The SGCI regional research collaboration initiative facilitates the implementation of the identified industrialization policies and strategies.

The theme for this call is manufacturing, and the focus is on Regional Processing, which has been identified as a regional research priority for the joint research grants. It is expected that products should result from the funded research.

3.0 Goal and objectives of the Initiative

The goal of regional scientific collaboration Cooperation Grant Initiative call is to stimulate growth in manufacturing sector, focusing on regional processing, through collaborative research that leads to development of products for enhanced economic development of the region.

The objectives of the initiative are:

- i. To support knowledge exchange between research institutions and private sector;
- ii. To strengthen partnerships between Science Granting Councils and other science system actors.



4.0 Design of the Initiative

This is a multi-sector, multi-disciplinary and regionally inclusive research collaboration. Scientists, researchers and innovators resident in any of the eastern African countries of Kenya, Rwanda, Tanzania and Uganda are eligible. Members of project consortium shall comprise representatives of the academia, research institutions and industry. It is the responsibility of researchers to find partners from each of the collaborating countries without which a proposal will not be considered.

5.0 Guidelines for application

5.1 Thematic focus

The theme of this call is manufacturing, and the focus is on regional processing. This include agro processing and value addition in key crop value chains; food processing and beverages; fabricated metals; and rubber & plastics in the region.

5.2 Format/Structure of the Proposal

Response to this shall be through submission of a research proposal. The proposal shall have the following sections:

- Cover page (with title, names of team members, institutions of affiliation and contact addresses including e-mails and telephones);
- Executive Summary; (max 1page)
- Background to the Study; (max 1.5 pages)
- Research Problem; (max 1page)
- Justification/Significance of the Study; (max 1page)
- Conceptual Framework; (max 1.5 pages)
- Literature Review; (max 5pages)
- Aim and Objectives; (max 2pages)
- Research Questions or Hypotheses; (max 2pages)
- Methods of Data Collection and Analyses; (max 2pages)
- Gender, equity and inclusion in the research (max 1page)
- References. (max 2pages)
- Logical frame;
- Work Plan and Budget (Use attached templates)

The proposal must not exceed 20 pages at single line spacing using Times New Roman font size 12, **excluding** Logical framework, workplan and budget [click here](#), which should be included as Annexes. In addition, a one-page resume of the Principal Investigator and each team member, indicating expertise, experiences and key relevance features must be annexed.

Each member of the team must be affiliated to a legally registered R&D or higher learning institution of the participating country.

5.3 Key features of the application

The proposal should clearly include the following key features, which will also be used as the basis for selection and evaluation:

- Scientific Quality (originality, innovativeness, relevance and probity)
- Resource allocation and responsibility of members of the team (appropriateness, clarity, consistency, efficiency and completeness)
- Gender and Regional inclusivity
- Research ethics and environmental concerns
- Expected output including publications, commercialization of products and IPR potential

5.4 The Review Process

Each proposals shall be reviewed by three (3) experts and successful applicants will be notified by mid-August 2018. The successful projects will be funded by September 2018.

5.5 Funding Level and Duration

Successful projects will be funded for a duration of 18months. Each project will receive up to one hundred and twenty Thousand dollars (USD 120,000), which shall be disbursed quarterly subject to satisfactory progress and attainment of the project milestones.

6.0 How to apply

The full proposal should be submitted electronically to the email: cgi@easteco.org. All applications must be submitted not later than 22nd July 2018 at 17.00 hour, with the subject heading '**Full proposal - joint EAC collaboration in research and innovation in Manufacturing**' clearly specified.

7.0 Next Steps

Proposals received will be screened for completeness and eligibility requirements. Incomplete proposals and those that fail the eligibility check will be disqualified at this stage. Each full proposal will be reviewed by three independent experts, and comments from experts will be used to select to be funded. Announcement of successful proposals will be in late Mid-August 2018.

8.0 Further information

For further information, please contact:

Executive Secretary

East African Science and Technology Commission

Email: cgi@easteco.org



