

Policy Brief

Using national inventors' associations to accelerate the adoption of technology and innovation in Africa

Summary

Based on the experiences of the Researchers, Inventors and Innovators Association of Ethiopia (RIIA-E) and the Desert Locust Control Organization of Eastern Africa (DLCO-EA), whose support increased the potential of technology and innovation adoption, this policy brief proposes that collaborating with national associations of inventors is an important policy options in efforts to accelerate the adoption of technologies and innovations in the manufacturing and service sectors.

Background

The recent economic growth experienced by many African countries is mainly being driven by commodities and factor accumulation, and is primarily extensive rather than intensive. Continued expansion of African economies will, sooner than later, encounter constraints due to continued weak performances (inefficiencies) that plague most national innovation systems. The paucity of successfully absorbed endogenous technologies in the manufacturing and service sectors is central to such inefficiencies. Policy interventions are needed to promote the use of endogenous technologies in manufacturing by tackling such issues as functional insufficiencies and the irrelevance of most technologies to manufacturers' needs.

Undoubtedly, while this phenomenon has been witnessed in other developing regions, African countries are affected the most by it, perhaps due to their limited technical capabilities. Promoting the adoption and use of technologies in the manufacturing and service sectors is essential in achieving the sustainable development goals that have been unanimously and strongly endorsed by the United Nations member States.

The mandate of this policy brief arises from the outcome document of the United Nations Conference on Sustainable Development, "The future we want", in which the pivotal role of technology development and transfer as a key vehicle for transitioning is outlined. This is further reinforced in the ongoing work of the African Union towards its AU Vision 2063. It is pursuant to the new vision of the Economic Commission for Africa (ECA), which emphasizes the deliberate deployment of science, technology and innovation (STI) to advance the African transformation agenda.

This policy brief proposes that collaborating with national associations of inventors is an important policy options in efforts to accelerate the adoption of technologies and innovations in the manufacturing and service sectors in African countries. The brief outlines the comparative advantages of the associations and proposes

realistic actions governments, civil society and development partners can implement to promote and increase the rate of adoption of technologies in the manufacturing and service sectors, improve national innovation efficiencies and sustain intensive growth.

The brief draws on the experiences of ECA in sponsoring two organizations in Ethiopia, RIIA-E and DLCO-EA. The former is providing support to upgrade, manufacture and commercialize food supplements for diabetes control, as well as support for other technical inventions of RIIA-E members drawn from business, academic and other informal settings. The latter has filed patent applications on its biopesticide inventions with the African Regional Intellectual Property Organization (ARIPO). Comprised of eight East African countries, Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, Uganda and the United Republic of Tanzania, and headquartered in Addis Ababa, the organization tracks the movement and impact of desert locusts and carries out research on environmentally friendly methods for controlling various threats to agriculture and food security.

Policies instruments to accelerate the use of technologies and innovations

A review of national STI policies and strategies of developed and developing countries, including those of African countries, has revealed the profound importance of planning for resources to sustain technology transfer offices, technology licensing offices and science and technology parks as a panacea for the aforementioned inefficiencies. These instruments have registered some successes in select countries, but remain costly and less likely to support the recent upsurge in unconventional innovations taking place outside academia, such as hidden innovation, innovation in a garage, as in the case of Apple, innovation in agriculture extension, service innovations and social innovations. Less emphasis is given to national, federal and international associations of innovators and inventors, yet they are low-cost, multipurpose and have had intrinsic value in spurring innovation efficiencies in several countries.

Results

The RIIA-E experience

In Ethiopia, RIIA-E is using a model that has enabled and increased the alignment of the patented technologies to make prototypes with manufacturers' requirements and lines of operations to facilitate the large-scale production and availability of the products. This was undertaken with the support of the association's (about) 240 members, some of whom are shareholders in manufacturing businesses. Plans for joint research and development among the association's inventors and specialized centres, including universities and research councils, to improve the safety and quality of the food supplements are ongoing.

The DLCO-EA experience

DLCO-EA, whose researchers work is carried out in close association with RIIA-E, has filed patent applications for their biopesticides inventions with ARIPO. These biopesticides are essential for achieving sustainable agriculture and food security in the region and have market potential on the African continent and beyond. They are environmental friendly and are very likely to be used as substitutes for chemical pesticides worldwide, which are associated with high levels of toxicity. Plans to mass-produce and commercialize related products through a joint venture with relevant manufacturers are under way.

Based on the evidence from the experiences of DLCO-EA and RIIA-E, associations of inventors successfully support national innovation systems by:

- Mentoring inventors and researchers to develop inventions and products that anchor both the quality and timeliness that unequivocally match the needs of targeted manufacturers and market segments;
- Rekindling, developing, promoting, valuing and branding the culture of inventions among young people;

- Collaborating with other national associations and funding bodies to mobilize the necessary resources needed for further development of promising inventions;
- Identifying business opportunities and partners for promising inventions/inventors and facilitating cooperation between the latter and enterprises, the association and funding bodies;
- Acting as interest groups that elevate the concerns and agendas of inventors and innovators in such things as national STI policies and strategies, tax policy and competition policy; Acting as repositories for both conventional and unconventional (hidden) innovations.

Recommendations

a. Actions for governments

- Provide technical leadership and financial support to national associations of inventors:
 - To promote and popularize technologies, inventions and innovations among young people;
 - To support the development and commercialization of inventions that would otherwise be ignored with greater leveraging of innovative investment;
 - To externalize developer's knowledge and inventions by communicating them to the markets in which manufacturers might be better equipped to exploit them;
- Extend technical support and use the associations as platforms to collect statistics on inventions, innovations and other economic activities from both the informal and formal sectors;
- Develop the associations along important technical or industrial clusters' lines of specialization to support the corresponding industries.

b. Actions for development partners

- Obtain funding through national associations of invention, fairs, awards, prizes and competition programmes to promote, honour and stimulate scientists, inventors, innovators;
- Facilitate associations/inventors-manufacturers joint ventures;
- Fund partnership/collaborative programmes between national associations of inventors through the international federation of inventors associations to exchange know-how and other resources;
- Use the associations to increase the pool of statistics on inventions: conventional, hidden and social innovations

c. Actions for national associations of inventors

- Recruit seasoned professionals from the business sector, specialized research centres, and industries to support partnerships between the public and the private sectors;
- Strengthen linkages among intellectual property offices, academia, regulatory bodies and media to elevate the profiles of the associations.

d. Actions for civil society

- Advocate programmes that promote national associations of inventors within national STI and industrial policies and strategies;
- Engage in dialogue with the associations to better understand their concerns and grasp their potential for socioeconomic progress.

This policy brief was contributed by Mr. Louis M Lubango with support from Ms. Tsega Belai under the supervision of Mr. Kasirim Nwuke, Chief, NTIS

Contact

Further information on ECA's programme on Technology and Innovation can be obtained from Mr. Kasirim Nwuke, Chief, New Technologies and Innovation Section/Special Initiatives Division, Telephone: +251-11-544-3375, Office Fax: +251-11- 551-0512, email: Knwuke@uneca.org.

Ordering information

To order copies of *Using national inventors' associations to accelerate the adoption of technology and innovation in Africa* Policy brief by Economic Commission for Africa;

Please contact

Publications, Economic Commission for Africa,
P.O. Box 3001, Addis Ababa, Ethiopia,
Tel: +251 11 544-9900, Fax: +251 11 551-4416,
E-mail: ecainfo@uneca.org

Web: www.uneca.org