

# The African Knowledge Transfer Partnership (AKTP): Challenges and Achievements.

Dr. Emmanuel Awuor,  
School of Management and Leadership, Management University of Africa,  
PO BOX 29677 -00100. NAIROBI, KENYA.

## Abstract

Industry–Government–University linkages or otherwise known as the triple helix has never been crucial as it is today in Kenya as a pillar for socio- economic development. The objective of the paper is to highlight the current situation in Kenya with regard to adoption of the triple helix concept. The African knowledge transfer partnership has as its key objectives: partnerships in which all benefits, industry access knowledge for competitiveness, associate capability built to become future business leaders and university access future projects and consultancies. The study is mainly based on desk research coupled with interviews focusing on significant players in the Africa knowledge transfer partnership model of linkage. Analysis of data was done using statistical tools to be able to determine the levels of significance with regard to barriers to industry-government-university linkages. Eligible projects for Africa knowledge transfer partnerships at the moment are those in science and technology fields such as: development of new products; improving efficiency; identifying alternative sources of raw materials; introducing new or improved quality systems; and introducing new or improved technologies. The paper highlights current AKTP Kenya projects and concludes by pointing out that the triple helix approach based on the AKTP model can have major impact on economic and social development of a country if the government provides an enabling environment and strategies are put in place to

**KEY WORDS:** KNOWLEDGE TRANSFER, TRIPLE HELIX

## 1.0 Introduction

African knowledge transfer partnership, otherwise known as AKTP, provides a key link between industry and academia. It helps businesses improve their competitiveness or productivity through knowledge, technology and skills available in higher education institutions ([www. Tomogada2012.com](http://www.Tomogada2012.com)). The AKTP is a relationship between a company and academic institutions (“knowledge base”) facilitating the transfer of knowledge which the company partner currently has.

## 2.0 The AKTP process

The partnership process involves first industry identifying a problem. AKTP then identifies the possible knowledge partner, the two are then brought together to prepare a proposal through facilitation by AKTP. If the proposal is approved for funding then the agreement is signed by three parties; British council, company and the knowledge partner. The three parties will then jointly recruit the associates ([www.britishcouncil.org](http://www.britishcouncil.org)).

The main objective of the approved projects is to facilitate transfer of knowledge and the spread of technical and business skills, through innovative projects undertaken by high calibre recently qualified graduates with the joint supervision of the company and university ([www. Kepsa.or.ke](http://www.Kepsa.or.ke)). These provide company- based training to fresh graduates in order to enhance their business and specialist skills within the context of the project. The partnership also increases the extent of interaction by businesses with the university and their awareness of the contribution of higher education institutions can lead to business development and growth ([www. East-sym.org](http://www.East-sym.org)).

The partnership is initiated by a company’s need to address a problem of strategic importance. This may be a need for improvement of product quality, new product innovations, or a need to improve a production process. The company employs a recent graduate (“associate”) who works in the company to implement the project transferring knowledge from higher education institution in the company ([www.tomogada2012.com](http://www.tomogada2012.com)).

Currently the projects eligible for AKTP are those in science and technology fields such as: development of new products or services; improving efficiency; identifying alternative sources of raw materials; introducing new or improved quality systems; and introducing new or improved technologies ([www.britishcouncil.org](http://www.britishcouncil.org)). Some AKTP projects in Kenya includes: i) MEA limited and University of Nairobi (2008); ii) Verve Kenya Limited and Jomo Kenyatta University of Agriculture and Technology (2008); iii) Booth extrusion limited and University of Nairobi (2008); East African Growers and Egerton University (2010); and Sunripe Limited and Jomo Kenyatta University of Agriculture and Technology.

## 2.1 Channels of knowledge transfer

In his research, Odhiambo ( [www.strathmore.edu/pdf/univ\\_industry](http://www.strathmore.edu/pdf/univ_industry)) has grouped types of university interactions into four categories: i) Educating People: Training skilled undergraduates, graduates and postdocs, ii) Increasing the stock of ‘codified’ useful knowledge: Publications; patents; prototypes, iii) Problem-solving: Contract research; cooperative research with industry; technology licensing; faculty consulting; providing access to specialised instrumentation and equipment; incubation services, iv) Providing public space: Forming and accessing networks; stimulating social interaction; influencing the direction of research processes among users and suppliers of technology and fundamental researchers; meetings and conferences; hosting standard-setting forums; establishing entrepreneurship centres; and promoting alumni networks and personnel exchanges (internships, faculty exchanges, etc) as well as joint industry-academia visiting committees and collaboration on curriculum development.

In their study, Munyoki *et al.* ( 2011) established that local government research institutions are the main source of technology transfer for manufacturing firms in Kenya, although the firms still indicated local universities as their priority number one as a source of technology. The local government research institutions act as training ground for the organisation by providing trained manpower to young graduates who later find jobs among the manufacturing firms, or by providing training opportunities to people working in the industry who are either sponsored by their employers or are self sponsored to update their technical and/or managerial skills while still on employment ([www.kepsa.or.ke](http://www.kepsa.or.ke)).

The fact that local public universities were still rated the highest is an indication of opportunities in the industry that are not being harnessed. It shows that manufacturing firms still rate universities highly as a source of technology, and perhaps the problem is that universities are not utilising this favourable rating to strengthen the linkage between themselves and the industry (Munyoki *et al.* 2011).

Promoting start-ups makes universities increase the likelihood of effectively localising the economic benefits of technology transfer. Other research institutions include Kenya Agricultural Research Institute (KARI), Kenya Forestry Research institute (KEFRI), Kenya Medical Research Institute (KEMRI), and Kenya Industrial Research and Development Institute (KIRDI) (Awuor, 2011). Study findings by the Commission for higher education reveal that, there has been little if any attempt to understand university-industry linkage in Kenya (Commission for Higher Education, 2000). If there are any such linkages, the extent of such a linkage is expected to be weak. This study sought to establish the extent of the university – industry linkage in Kenya through the AKTP programme.

### **3.0 Research methodology**

The study made use of the descriptive design approach of the cross sectional nature. This is because the study attempts to describe the success of knowledge transfer from the local universities, hence make specific predictions. The study is cross – sectional in the sense that the relevant data was collected at one point in time, that is each respondent filled only one questionnaire during the data collection period without filling the questionnaires at some other time in the future. A similar approach was used by Munyoki *et al* (2011), in their paper titled: *Extent to which university- industry linkage exists in Kenya: A study of medium and large manufacturing firms in selected industries in Kenya*

### **4.0 Findings and results**

Knowledge which is available in our universities can be used by industry to improve the methods of production and quality of the products and services. While universities continue to conduct basic applied research, university-industry interaction will enable universities to undertake research relevant to industry. This will in turn improve the quality of education offered in the universities. To promote the transfer of this knowledge from the university to industry, the university should make information available through conferences, publications, industrial internships, employment of graduates, student projects involving real industry problems.

The most successful knowledge transfer programmes were found to be: i) demand led - Knowledge pulled, not pushed, ii) engaging and developing top quality human capital iii) teamwork – using collaborative modalities, iv) programmes that provide business solutions.

**Table 1.0: Barriers to university- industry linkages (Mean responses)**

<b>Impediments to interactions</b>	<b>University (n=12)</b>	<b>Industry (n=16)</b>
The orientation of the university's research towards basic research is a mismatch with industry's needs for new improved products.	2.53(3)	2.53(2)
The need for the university to publish research results is in conflict with the industry's need for protection of its trade secrets.	3.35 (7)	3.44(9)
Research performed by universities is generally more expensive than in-house research.	3.65(9)	3.44(9)
The universities often do not understand what industry needs in the way of product-oriented research or industry's need to maximise profits as return on investment.	3.29 (5)	2.39(1)
National industry property policies hamper relationships.	3.82(11)	4.06(12)
Collaborations could affect the normal research environment and process.	4.35(12)	3.97(11)
Industry lacks its own in-house research capabilities.	3.06(4)	2.83(4)
Attitudinal factors create a generalised culture gap and lack of understanding	2.41(2)	2.83(3)
Distance is a factor – some activities depend on close proximity between collaborators.	3.29(5)	3.36(8)

*Source: (International Development Research Centre, 2010)*

The table 1.0 above shows that a value of 1.49 or less implies that the impediment to interaction is dominant; 1.50 to 2.49 refers to very significant; 2.50 to 3.49 is significant ; 3.50 to 4.49 is occasionally significant; and 4.50 or over is insignificant ( Awuor, 2011). This shows that national industry property policies are seen as insignificant by industry as a barrier to university – industry linkages whereas it is occasionally significant to the universities. Both universities and industry consider significant as a barrier to linkages the fact that the orientation of research at the university is geared towards basic research which is a mismatch to industry's needs for new and improved products.

## **5.0 Conclusion**

The role of the British council and National Council for Science and Technology is to Work with Kenyan higher education sector to help companies network with potential Knowledge Base partners. They also coordinate overall AKTP projects; approve proposals; facilitate access to UK Knowledge Base; provide and supports AKTP adviser; provide training for associates and supervisors; develop and issue guidelines; and fund the cost of the knowledge transfer.

The benefits to companies include finding an innovative solution to help the business grow; increased competitive advantage; access to high calibre graduates to spearhead new projects; access to experts who can take the business forward; link to resources unavailable in a company; defined project with agreed milestones and deliverables – tangible benefits; transfer of expertise and embedding of innovative culture.

Benefits to knowledge base on the other hand will be to gain relevant and improved understanding of the challenges encountered by industry, which in turn stimulates business relevant teaching material and new research themes; develop teaching curriculum that becomes relevant to the economy; lead rewarding

collaborations with innovative businesses and assist strategic change in businesses; publish high quality research papers. Finally the benefits to associates includes: Work on high profile projects with innovative companies; Cut teeth on real projects; Gain business-related experience and personal development opportunities including training programmes; Accelerated career progression in many cases; 80% offered employment by company at the end of the project.

The most outstanding challenge is that both universities and industry consider that the orientation of research at the university is geared towards basic research which is a mismatch to industry's needs for new and improved products.

## 6.0 References

- Awuor, E (2011). The role of research and findings dissemination in industry development: A case of the floriculture industry in Kenya. *Published as conference proceedings in the Management Digest*. Vol.3. ISSN 2074-4730
- Commission for Higher Education (2000). *University - Industry Linkage: Linking University and Industry for enhanced industry growth*. A report of a workshop held in Nairobi, Kenya.
- International Development Research Centre (2010). The impact of university research on industrial innovations: Empirical evidence from Kenya. *Science for Humanity*. Canada.
- Munyoki J, Kibera F, and Ogutu, M (2011). Extent to which university- industry linkage exists in Kenya: A study of medium and large manufacturing firms in selected industries in Kenya. *Business Administration and Management Journal*. Vol. 1(4), pp 163 – 169
- [www. Britishcouncil.org/es/Africa](http://www.Britishcouncil.org/es/Africa). Accessed on 20<sup>th</sup> August 2012.
- [www. East-sym.org](http://www. East-sym.org), accessed on 15<sup>th</sup> August , 2012
- [www. Kepsa.or.ke](http://www. Kepsa.or.ke), accessed on 1<sup>st</sup> August, 2012
- [www. Strathmore.edu/pdf/univ\\_industry.pdf](http://www. Strathmore.edu/pdf/univ_industry.pdf). Accessed on 25<sup>th</sup> August 2012.
- [www. Tomogada2012.com](http://www. Tomogada2012.com), accessed on 15<sup>th</sup> August, 2012

This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage:

<http://www.iiste.org>

## CALL FOR PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <http://www.iiste.org/Journals/>

The IISTE editorial team promises to review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

### IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

