

# THE 6<sup>TH</sup> HIGHER EDUCATION FORUM: HIGHER EDUCATION BEYOND 2015 MILLENNIUM DEVELOPMENT GOALS (MDGs).

## WHAT NEXT?

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**Keynote to Sub-theme 1:** *“SKILLS DEVELOPMENT FOR REALISING THE ECONOMIC  
POTENTIAL IN TANZANIA: ROLE OF HIGHER EDUCATION INSTITUTIONS”*

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### Introduction

**Distinguished participants:** first I would like to thank those who decided to invite us to this important forum to deliver this address to the organising committee of the 6<sup>th</sup> Higher Education Forum 2014, with sub-title *“Skills development for realising the economic potential in Tanzania: Role of Higher Education Institutions”*.

**Distinguished participants:** *“Skills Development”* entails the nurturing of competencies and knowledge of the labour force for the purpose of improving productivity and competitiveness. As such, skills development taps into the entire education system, including technical and vocational training, apprenticeships, local knowledge etc. in all disciplines and trades, with emphasis on the practical, applications attributes. To higher education institutions, this would entail delivery of the teaching and research programmes in ways that help the graduates to “transit” easily to work, and

demonstrably well. And we believe it should be counted as part of a ceaseless process of *human capital* development.

To turn the economic potentials into wealth and prosperity, human capital plays a leading role: it organises the rest of the resources in the processes of production and exchange of goods and services. Nations have long realised that it is the innovative capabilities due to quality human capital that contribute a large share of the wealth of the nation. Mere abundance of natural resources may not help the country if the country's own level of human capital is low.

### **Importance of Higher Education**

**Distinguished participants:** Education is a leading instrument for human capital development. The education system enables man to develop knowledge and skills to perform duties more efficiently. And so, being at the apex of knowledge creation, higher education contributes to economic growth by generating new concepts, new products, and new ways of organising production and by supporting innovation through research and knowledge exchange. However, higher education institutions have a duty to ensure that the new knowledge is applicable in solving the societal problems within their environment.

Thus the social returns to higher education are remarkable: the returns to higher education are not limited to private returns as previously believed by some development paradigms such as the "basic needs" and "structural adjustment" which tended to favour primary and secondary levels as the most effective ways of addressing massive poverty and inequalities.

Neither should higher education be seen as contesting with primary and secondary education for policy attention because all levels are complementary content-wise, if well sequenced, except perhaps, inevitably as far as financial resources are concerned.

In the meantime, we acknowledge the private benefits to graduates such as better employment prospects, higher salaries and a greater ability to save and to invest; but these should be seen as incentives ideally for the graduates to work more productively, contributing to economic growth. Society expects the few who receive higher education to be conscious of their responsibility to give something back in return.

### **Deploying Higher Education for Economic growth**

**Distinguished participants:** Higher education contributes to economic growth and innovation in at least two important ways:

First, the graduates' *educational value-added* is deployed at places of work, as employees and as potential stand-alone entrepreneurs. The graduates are in better position to discover or apply new methods and technologies. Their knowledge can also improve the skills and productivity of non-graduate co-workers.

Further, with the know-how gained through advanced schooling, the graduates should have more confidence in initiating their own enterprises and become job creators. The training programmes, including fieldwork and research attachments should be geared towards enabling the graduates to accomplish this –with some institutional support where necessary.

**Distinguished participants:** the second way in which higher education contributes to innovation is through the “higher education-government” and “higher education-industry” linkages. The teaching and research units of the institutions of higher education often link up with the Research and Development (R&D) departments of firms (industry) or Planning and Policy Departments of government institutions through some form of research and consultancy memoranda. The linkages involve science, engineering and social science disciplines strategically seeking to improve or develop new systems and technological capabilities for firms or government departments to use. The higher education institutions may engage in direct commercialization of the results of their research output and arrangements for patents and/or intellectual property rights. In advanced countries, a number of leading academic institutions have been active in knowledge-intensive clusters (e.g. science parks). Clusters and other forms of partnerships between higher education institutions, small and medium enterprises (SMEs) and large companies can “convert” research into innovations towards new or improved products, services and systems.

**Distinguished participants:** In addition to innovations, the three “parties”, that is, higher education institutions, government and industry, benefit from mutual assessments and feedback. It happens in many other ways including student field attachments and staff sabbaticals. Representation on college or company boards is another way through which the parties exchange evaluations. Government departments and firms assess or at least form impressions on the appropriateness of the training programmes basing on the performance of the graduates, interns or staff and “relay” the feedback to *higher education* institutions to influence curricula and character formation for

the students (e.g. the shaping of attitudes to work, ethics). The government, industry and society at large are “testing grounds” for the relevance of the new knowledge to the local environment. The experiences in turn influence the way training and research programmes are conducted.

### **Urgency for Tanzania’s Growth**

**Distinguished participants:** the economy of Tanzania has been showing a good trend, with GDP growing at an average rate of about 7.0 percent between 2005 and 2013. In 2013, the population growth was projected to reach 44.8 million people and the trend shows that it has been growing at 2.7 percent. Nevertheless Tanzania, which remains listed as one of the poorest countries, has an abundance of natural resources, including the recently discovered offshore reserves of natural gas in the southern part of the country.

**Distinguished participants:** the list of the many economic challenges is not new and we need not repeat them here. However, of most concern include the limited capacity to add value to our primary products in agriculture and natural resources, low local technological capacity in manufacturing and in service sectors such health, education, trade, finance, etc.

To exploit these resources fully, the country needs to augment its own “stock of human capital” by raising the number of well-educated and skilful labour force. As situations demand, allocation of more financial resources towards raising competencies towards the exploitation of natural resources especially mining (now in the advent of natural gas) and related fields would be strategic. Teaming up with the local private sector and government the higher education institutions can plan to gradually reduce dependency on a range of

imported machines, devices, and parts, and self-sufficiency for some levels of skills, for instance. They need not start with many or sophisticated equipment. In other words, apart from the increase in the number of scientists, engineers, technicians, financial, legal and commerce experts specialised in (say) the mining, oil and gas, international trade sectors etc., we would long to see, as indicators of progress, new patents or new copy rights, new brands and new products, adaptations etc. associated with higher education institutions and/or R&D departments of local companies.

**Distinguished participants:** a recent study by the POPC shows that there are skill gaps that ought to be filled by 2025 if Tanzania should attain the Vision 2025 objectives. It is shown that for this to happen *high skills occupations* (managers, professionals, associate professionals and technicians) need to be increased by about five folds while *medium skills occupations* (including clerks, service workers, crafts and trade workers and skilled agricultural workers) need to be increased by three times on average. Overwhelmingly, however, other research findings identify the problem as *quantity* skills gaps in the fields of science, engineering, medicine, agriculture and fields related to industrialisation. This is fairly indicative of where higher education institutions would need to place emphasis in terms of teaching and research in order to support other technical and vocational institutions.

Closer partnerships between higher education institutions, government and industry (private sector) should help pin down and sharpen a national research agenda around the socio-economic challenges and, above all, provide room for the higher education institutions to develop frontier solutions. What is important is to have adequately funded teaching and research programmes

at the higher learning institutions in order to enable them to produce quality graduates and technologies that match government and private sector/society demands.

### **Challenges facing Higher Education Institutions**

**Distinguished participants:** A number of issues face the higher education in Tanzania. It is not possible to articulate them all in this note. However, we may note just a few:

First, although enrolment in higher education institutions has risen rapidly in recent years, reflecting shifting demographics and significant increases in primary and secondary education enrolments, higher education gross enrolment ratio is still amongst the lowest in the world. However, as we strive to raise enrolments still further, and especially in the fields that circumstances now demand more of, we need to array growing public perceptions of a declining quality of education through strong enforcement of quality control measures.

Second, funding for public universities and other higher learning institutions largely depends on government subvention, which in most cases is inadequate. The Higher Education Students Loan Board (HESLB) is a students' loan scheme, primarily intended to facilitate access to higher education by students whose parents cannot afford to pay for them. Arrangements to sustain the scheme need the support of all beneficiaries. But that is one aspect. Another aspect is how to raise more financial resources to ensure adequate and quality "hard infrastructure" dedicated to higher education and research

as well as competitive incentives to the higher education workforce that delivers the programmes.

Third, gender equity still stands as a constraint in Tanzania's higher education, more so in science and technology-related academic programmes. Of course, there has also been a general decline in interest by the applicants for science, engineering and technology courses. More efforts are needed to create mass maths/science enrolment through, for instance, targeted incentives to induce interest and effort of students and higher priority in resource allocation to the teaching of these subjects at all levels of education. Where some of these measures have been attempted, then it would serve to assess how much of the desired impact the measures are creating and what improvements need to be carried out.

Fourth, the research capacity is still limited in terms of the R&D institutions, science parks, number of publications etc. We need to develop our researchers and research centres. More budgetary resources ought to be mobilised and directed to applied research. The development of the national research agenda should be backed by readiness to provide adequate financial and institutional support. Although the country does not have many national, large corporations with strongly funded Research and Development (R&D) departments, continued engagement with the private local and foreign investors will raise support to student research and possibly larger research programmes for the institutions. Research funding from international organisations and development partners is so greatly acknowledged.

### **Concluding remarks**

**Distinguished participants:** Tanzania's policy with respect to higher education remains focused on expanding enrolments, quality control, institutionalizing cost-sharing and bridging the gender gap. It also encourages private higher education institutions as well as private sector funding through scholarships and support for research. However, in the current situation and with more of the natural resources untapped, allocation of more incentives and resources towards the teaching of maths and science subjects stands out as a possible way of creating a mass of technical skills, not only in the upcoming natural gas sub-sector but also for value-addition innovations in all other sectors. This should go along with the efforts by government and other development stakeholders to improve the availability and application of Information and Communication Technologies (ICTs) in our entire education sector.

**Distinguished participants:** having highly qualified skills that can compete in a free labour market is not an easy task. Proper plans have to ensure the skills produced match with the job demand. This is where the partnerships amongst higher education institutions, government and industry (as well as society) matter. However, since the higher education builds on the primary and secondary education levels, complementarities of the levels of education and training programmes should be borne in mind especially as regards quality at all successive levels. The teaching and learning environments, especially hard infrastructure and facilities, demand that expanded enrolment be carefully planned in order to avoid slippages in quality.

Finally, research can be very expensive, but so high is the value of new knowledge to the country's competitiveness and economic growth. This is why many governments set aside a substantial share of budgetary resources

for research. Although the corporate sector is still small in Tanzania, private financing to support researchers in higher education institutions will supplement the little that government provides for research. What the private sector, society and government want in return are relevant and applicable solutions.

**Distinguished participants:** as the country strives to resolve the challenges that face higher education institutions, the task ahead is to increase both the quantity and quality of educated people sufficiently equipped with the requisite knowledge and skills to solve the society's problems and meet the challenges posed by regional and global competition. We are mindful of the resource constraint at the national level and within the education sector, and we need to work together to set priorities and "priorities within priorities".

Thank you for your kind attention