INNOVATION FOR SUSTAINABLE INDUSTRIAL DEVELOPMENT IN TANZANIA; DO WE HAVE ADEQUATE HUMAN CAPITAL?

Concept notes for a Roundtable Discussion

1. Background

Tanzania is rightly currently pursuing industrialization agenda as one way to achieve its development vision – Vision 2025, which envisions Tanzania by the year 2025 to be a semi industrialized and middle income country, with incidences of poverty radically reduced.

In general (in national accounts) the industrial sector refers to three subsectors of mining, manufacturing and construction. Manufacturing is about value addition; in other words, it is any business that uses components, parts or raw materials to make finished goods. The concept of industrial development or industrialization largely refers to the manufacturing sector, defined as the process in which a society or country (or world) transforms itself from a primarily agricultural society into one based on the manufacturing of goods and services. This process, popularly known as *structural transformation* starts with rapid productivity increase in agriculture and thereby provides food, labour, and even savings to the process of urbanization and industrialization; and as economies move up the ladder of development, high value and knowledge intensive services sectors would gain importance (Timmer 2007).

Very important in the process of industrialization (structural transformation) is innovation and technological capabilities. The fact that innovation is a corner stone for industrialization – especially during this era of globalization and free market – is not debatable: Innovation puts in the market new products and services, and improves the quality of existing products and services. It also makes production process more efficient. These two qualities of innovation are indispensable for competitiveness - both in the local and export markets.

The importance of industrialization and innovation in development and poverty alleviation is also recognized in the Sustainable Development Goals (SDGs). For instance, it is clearly stated in goal 9 that "without technology and innovation, industrialization will not happen, and without industrialization, development will not happen'' (UN, 2016).

There are a number of factors that facilitate innovative activities both at the firm and national levels in any country. While the major driving factor is a good national systems of innovation consisting of a number of actors interacting and learning from each other to effect innovation, there are two major driving forces for innovation at the firm level: demand for innovative goods and services from the society in general on the one hand, and the availability of competent and skilled manpower, on the other hand. Skilled and competent manpower in this case refers to people with capabilities of generating knowledge; people who understand how things work and how ideas or technologies can be improved or applied for industrialization (OECD, 2011).

Although demand and market signals normally take an upper hand in triggering innovation, for innovation to actually happen there has to be knowledgeable and skilled human power. But while Tanzania is aggressively pursuing the industrialization agenda, the issues of availability of knowledgeable and skilled manpower seems to be in the dark, bringing to the fore some questions that beg immediate answers. For instance, while there is some general laments floating in the air that graduates - including of technical nature - cannot find employment in the country, the private sector is complaining about the inadequacy of skilled manpower. At a more practical level, two of the work that STIPRO was involved in actually confirms these laments. The first is UNIDO work on "The Tanzania Manufacturing Systems of Innovation (TMSI)", in which STIPRO was involved; and second is "The Diffusion of Innovations in Low Income Countries (DILIC)", which was carried out in collaboration with the University of Oxford in the UK, and the Science and Technology Policy Research Institute (STEPRI) of Ghana. Under the TMSI project some of the public R&D and training institutions that were surveyed complained that private firms preferred to hire professional technicians from outside the country rather than the local ones; seemingly not understanding why. Similarly, in the DILIC project, the manufacturing firms in the sample complained that training institutions in Tanzania do not

produce the required skilled people; as a result they are forced to hire foreign technical professionals to do most of the skilled work.

From the above two studies it appears that there is a glaring knowledge gap on the adequacy and appropriateness of skills to successfully and efficiently pursue the current industrialization agenda. Consequently, STIPRO, has decided to bring together important stakeholders (the private sector, training and research institutions, and the government (policy makers)) in the form of a round table to brainstorm on these crucial skills issue and come up with the way forward in the short, medium and long term.

2. Specific objectives of the roundtable discussions

The purpose of the roundtable is to have a national debate on the current level of availability and adequacy of skilled manpower and future needs to meet the requirements of the envisaged successful and efficient industrial development in Tanzania. It is intended to discuss the roles and contributions of the three major actors: the government in terms of policies and guidance, training and research institutions, and the private sector in the development of adequate and appropriate knowledgeable and skilled manpower for industrial development, and to chart the way forward.

3. Methodology

The discussions will be structured around sub-themes, with each sub-theme discussion preceded by a short presentation. In terms of timing, presentation will take 20 minutes and 40 minutes allocated to general discussion, which make an hour for one sub-theme. The tentative sub-themes chosen are as follows:

i) Conceptual and practical issues around the role of human capital in innovation and industrialization;

ii) Identification of the skills gap for innovation and successful industrial development in Tanzania;

iii) Challenges facing training institutions in the production of adequate and appropriate human capital for industrial development in Tanzania; and

iv) Existence and implementation of policies on skills development in Tanzania

4. References

1. OECD, (2011), Skills for Innovation and Research

2. United Nations (2016), Sustainable Development Goals: 17 Goals to Transform our World

3. Timmer, P. (2007). The Structural Transformation and the Changing Role of Agriculture in Economic Development. Wendt Lecture, American Enterprise Institute.