

KEY HIGHLIGHTS

Tanzania Country Study June 2017

1. About Tanzania

Tanzania is in East Africa on the Indian Ocean (1,424km coastline) and borders Kenya and Uganda to the north, Mozambique to the South and Malawi, Zambia, the Democratic Republic of Congo, Burundi and Rwanda on the East. The country shares access to all three major East African lakes – Lake Victoria, Lake Tanganyika and Lake Malawi. Tanzania covers a total of 885,800 km² and includes the islands of Mafia, Pemba and Zanzibar. It has 30 administrative regions.



The United Republic of Tanzania (Tanzania) was formed by the merging of Tanganyika and Zanzibar in 1964, shortly after both areas gained independence from Britain in 1961. The first multi-party democratic elections were held in Tanzania in 1995. In 2015 John Magufuli was elected president with 58.5% of the vote and the country is generally stable and peaceful.



**6.37° S,
34.89° E**



52,482,726



\$150.96B (PPP)

How is Tanzania doing in terms of Information, Communication Technology, Education, Science Technology and Innovation which are the pillars of the African Leadership in ICT and Knowledge Society Development (ALICT) course?

2. Information Communication Technology

Tanzania has laid out policy frameworks which will be leverage to achieve various goals. The guiding document for Tanzania's development is the Tanzania Development Vision 2025. This document specifically mentions ICT as part of the section on promoting competence and competitiveness. Tanzania aims to leverage are the specific details contained in the latest version of the National Information and Communications Technology Policy (2016) which states the following main objective –
“To accelerate socio-economic development with potentials to transform Tanzania into ICT driven middle-income economy and society.

Key strategic objectives in ICT

- To develop and enhance human capital that is capable of championing ICT in the creation of Tanzania's knowledge society;
- To enhance public participation and understanding of potentials of ICT for effective transformation towards a knowledge based society;
- To strengthen strategic ICT leadership at all levels to effectively champion exploitation of ICT in all sectors of economy;

ICT Infrastructure is another key area in integration of ICTs. Tanzania is connected to both the SEACOM and EASSY submarine cable systems via landing stations in Dar es Salaam. These cable connections have largely replaced satellite systems as the main conduits of international bandwidth. Efforts are currently underway to connect Dar es Salaam to The East African Marine System (TEAMS) via Mombasa to bring great competition, flexibility, affordability and capacity redundancy to Tanzania.



The 7,560km National ICT Broadband Backbone (NICTBB) extends this connectivity to the rest of the country as well as providing regional connectivity with neighbouring countries: Kenya, Uganda, Rwanda, Burundi, Zambia, Malawi, Mozambique and DRC. The NICTBB and the submarine cables have reportedly reduced the cost of backhaul transport bandwidth by 99%.

Despite this progress, thousands are still unable to access the internet

In as much Tanzania is doing well in ICT integration, there are issues that need to be addressed. The World Bank estimated that in 2015, only 5.355% of the population used the Internet and there were 106,000 broadband connections country-wide. These apparent contradictions indicate that, while approximately 40% of the population have access to the internet, only a small fraction of these people make regular use thereof.

According to the World Bank, Tanzania's overall use of the internet remains low even when compared to the rest of the East African region. In Kenya, for example, the percentage of internet users is more than 45% while it is 19% in Uganda and 18% in Rwanda. Mobile penetration, however, is greater than in Uganda and Rwanda but not as high as in Kenya. The NICTP 2016 concedes this point when it says that "despite the above-mentioned achievements, most citizens still cannot access broadband services.

2. Education

Tanzania education system follows a 7-4-2-3 system of education (although some tertiary qualifications require four or five years), preceded by largely optional pre-primary education. The medium of instruction to all government primary schools is Kiswahili, the national language, with English taught as a subject from standard III to VII in the primary phase. The Ministry of Education, Science, Technology and Vocational Training (MoESTVT), through several divisions and units, is responsible for all education in Tanzania from pre-primary to higher education. It is supported in this role by the following key institutions.

The Education Sector Development Programme (ESDP) 2008 – 2017 is an overarching strategic plan for the entire education sector in Tanzania and specifies specific targets for each of the various sub-sectors. These are grouped according to the following major cluster outcomes:

- Capabilities and Values;
- Conducive Teaching and Learning Environment;
- Micro-Macro Efficient Management, and
- Education Provision in order to increase enrolment at all levels.



The ESDP notes that it will promote “effective and cost efficient provision of educational infrastructure and ICT. The changes, reforms and interventions will be properly focused on improving learning outputs and outcomes, on teacher capability improvements, and on promoting a better teaching and learning environment resulting in increased achievement and competences by learners and teachers.”

The electrification targets for primary and secondary education, while relatively modest, reflect intentions to leverage ICTs in basic education. The percentage of primary and secondary schools targeted for electrification by 2026 is 50% and 90% respectively.

There has also been a relatively large increase in secondary school enrolments between 2008 and 2015 – from 432,599 to 1,804,057 represents a 400% increase. This is a truly exceptional achievement for a developing country.

ICT Training Programme

This is one of the Tanzania Beyond Tomorrow initiative programmes. It is a MoESTVT project that has been running since 2010 to train secondary school Mathematics and Science teachers to integrate ICT into their teaching practice. The project focusses on building basic ICT skills (including hardware and software maintenance) as well as the effective use of ICT in teaching and learning.

The 21st Century Basic Education Programme

This project is supported by USAID and Creative Associates International and aims to improve the education provided to children in 900 lower primary schools in the Mtwara region and the islands of Pemba and Unguja in Zanzibar, by enabling teachers to teach reading, math and science more effectively.

Challenges facing the education sector in Tanzania

50% Primary School Leaving Examination PASS RATE!

(meaning that half of primary school students are not even permitted to continue to secondary education), lower secondary pass rates fell from a high of 90% in 2007 to 58.3% in 2013 and upper secondary pass rates remain over 93% but are down from previous highs of 98%.

It was also noted that the transition rates from Lower to Advanced Secondary dropped from 29.8% to 10.6% over the same period. Such decreases in the number of students able to eventually access university education will constrain the development of the Knowledge Society in Tanzania

Most institutions (especially schools and TVET institutions) lack any meaningful access to ICT facilities and Internet connections. Even in institutions which do have access to such, they are primarily used for administrative rather than teaching and learning purposes.

Despite early and large-scale investments into integrating ICT into pre-service teacher education, there still appears to be a general lack of pedagogical awareness, knowledge and confidence among most teachers which prevent even those that do have access to ICT from using them for teaching and learning. In addition, some reports indicate negative perceptions of the use of ICT among some teachers and lecturers.

This research indicates that even though there is a large disparity between ICT availability in public and private schools, even in private schools, access to and use of ICT for teaching and learning is severely limited. This view is supported by research into the use of computers in some Tanzanian secondary schools conducted by Sedoyeka and Gafufen in 2013. They found that of ten secondary schools, which benefitted from a Rotary Club (UK) sponsored project to supply computers, only 60% had used the computers at all after six months

3. Science, Technology, and Innovation (STI)

Since 2008, the ministry primarily responsible for Science, Technology and Innovation (STI) in Tanzania is the Ministry of Education, Science, Technology and Vocational Training (MoESTVT). This mandate was previously the responsibility of the Ministry of Communications, Science and Technology.

Most of the responsibility for managing the STI sector, however, falls to the Tanzania Commission for Science and Technology (COSTECH). COSTECH, established by the Act of Parliament in 1986, is the principal advisory organ to the Government on all matters relating to innovation, scientific research and technology development. It is also responsible for the administration of research grants, maintenance of a national research registry and science information services, setting research policy, and creating incentives for invention and innovation, popularizing STI and promoting regional and international STI cooperation.

The [Tanzania Development Vision 2025](#), the [NFYDP](#), the [NSGRP II](#) and the [National Research and Development Policy \(NRDP\)](#) all speak directly to the essential need for STI for Tanzania to reach its goal of becoming a middle income country.

The Tanzania Development Vision 2025 points out that the economy has remained primarily agricultural and thus remains vulnerable to climate and market fluctuations, both of which tend to be increasing. It goes on to note that available domestic resources have been insufficiently utilised to promote sustainable development and productivity largely attributable to low levels of scientific and technological innovations. It calls for high levels of investment in both STI capacity and education and enabling technologies, including ICT to create a strong, sustainable and resilient economy.

The STI sector in the country is yet to pick up.

Here are some critical aspects to address:

- 1 A lack of public budget allocation
- 2 A lack of private budget allocation
- 3 A lack of understanding of the benefits of STI investments in the private sector
- 4 Lack of incentives for private sector funding
- 5 High costs of imported technologies
- 6 Restrictive and ill-developed patent protections
- 7 Weak leadership and multi-stakeholder partnerships and collaborations within the STI sector

KEY Actors/Players

- ⇒ Ministry of Works, Transport and Communication
- ⇒ e-Government Agency
- ⇒ Tanzania Communications Regulatory Authority
- ⇒ Universal Communications Services Access Fund
- ⇒ National ICT Broadband Backbone
- ⇒ Tanzania Telecommunications Company Limited
- ⇒ Tanzania Institute of Education
- ⇒ National Examination Council of Tanzania
- ⇒ Vocational Education and Training Authority
- ⇒ Tanzania Commission for Universities
- ⇒ Ministry of Education, Science, Technology and Vocational Training
- ⇒ Tanzania Commission for Science and Technology
- ⇒ STIPRO
- ⇒ National Institute for Medical Research
- ⇒ Sokoine University of Agriculture
- ⇒ Tanzania Food and Nutrition Center
- ⇒ Ifakata Health Institute
- ⇒ Muhimbili University of Health and Allied Sciences
- ⇒ Tanzania Food and Drugs Authority

Knowledge Society

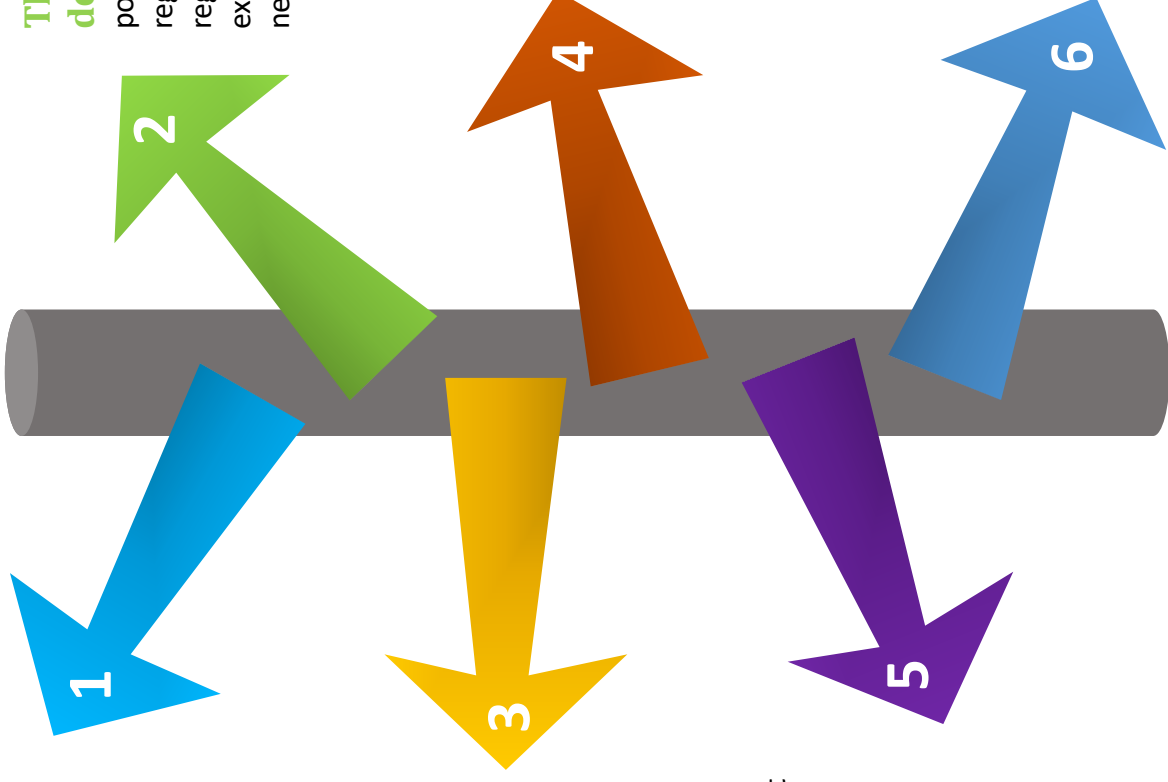
The development of the Knowledge Society in Tanzania has shown some progress over the past decade. Gross domestic product continues to grow steadily, averaging approximately 7% over the past decade.

Gross National Income

doubled from US\$410 in 2005 to US\$920 in 2015.

Mobile penetration

rates continue to climb reaching almost 76% in 2015. Fixed broadband subscriptions and the percentage of the population using the internet are on upward trajectories.



The NICTBB is a very significant development for the country and positions Tanzania to become a power regional ICT hub by connecting to the region's submarine cable infrastructure and extending access to this to its landlocked neighbours

Most of Tanzanian websites, especially government **websites are available in both English and Kiswahili.** This is an indication of some effort to generate and promote local digital content.

This is a small part of the government's eGovernment efforts which are starting to yield fruit.

There has been an **increase of over 400% in secondary enrolments.** However, universal primary education seems to have slipped in the past few years, falling to just over 81% in 2015. As is the case in many developing countries, large improvements in access have not been accompanied by improvements in quality and Tanzania is no different.

INTERESTING FACTS ABOUT KS DEVELOPMENT IN TANZANIA

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