**ACCELERATING GROWTH AND DEVELOPMENT IN AFRICA: THE ROLE OF TECHNOLOGY AND INNOVATION**

African growth performance remains relatively magnificent. An excellent example of technological innovation is in Kenya. They are leading in adapting the use of the mobile phone to meet their financial services. Lately, a higher percent of Kenyan has access to mobile phones. This development gave room to the introduction of “M-Pesa (a mobile money platform) in 2007,” which has as we speak expanded to other neighboring countries such as Tanzania, Ghana, and Egypt, among others. About 96% - 98% of Kenyan households use this platform to buy anything imaginable and to purchase their needs and wants.

Gone are those days, where people were brainwashed with the theory of impossibilities. The advent of technological world and innovation has made everyone believe that anything can be done and achieved. They are making imagination become a reality.

Technology has propelled solutions to major development issues in the world entirely. They are taking Africa as a case study. Across the continent, scientist, engineers, and entrepreneurs are using their technological knowledge to innovate devices that make life easy and drive well-grounded growth.

Research has shown that technological innovation influence the growth and development of a nation in different sectors. In other words, technological innovation is not just about creating new technologies. Instead, it’s often the realization of existing technology to a specified local need and restriction. Innovations focus on solutions depending on the ability of an innovator to recognize issues or challenges, develop a deep understanding of its causes and opportunities, study the local landscape, search the globe for best practices, and design a creative, implementable methodology that is relevant, adaptable and scalable.

All the innovations we have experience within this region (Africa) were done to solve a recognized problem. For example, POS (point of sale) is now vastly developing in Nigeria, and it eases the stress of going to the bank to join the queue at any automated teller machine station (ATM). Access to credit remains low in sub-Saharan Africa, where just one-third of the adult population has a bank account. Hence, the rise of mobile banking offers a lot of promises. In 2011, 42 percent of Kenyans had access to bank accounts, but by 2014, 85 percent were using mobile money transfers. Other innovations are the M-Kopa in energy (Kenya), Twiga in agriculture, and food inclusion (Kenya), among others. To be more detail: M-Pesa/POS did not invent banking,

M-Kopa did not divine solar energy, and Twiga did not create three-wheelers to cut out intermediaries by delivering produce directly from smallholder farmers to urban merchants. Instead, these companies and the innovators behind them see opportunities, taking advantage of existing technology to develop and adapt business models. That provided solutions to local problems and which also in return, yield growth to the economy of Africa at large.

Africa has experienced a series of innovation and technological development varying from different sectors, ranging from the educational sector to the agricultural sector and industrial sectors. Technology has improved our education system through the use of a tech device. This is possible with the use of projectors, and access to the internet also makes studies so easier. One of the most recent developments in this sector is the rising of distance learning, which makes it comfortable for an individual to study from the comfort of their home.

During the recent outbreak of pandemic (COVID 19), schools within Africa have engaged their students in studying using an app such as **Zoom**, **Google class,** among others, to pass lectures to students. Students also engage themselves in learning a different skill online and also study to explore knowledge online, which makes learning easier for them during the lockdown. Industries and countries exercise the use of the above named app-based technologies to carry on seminars and conferences in other to maintain balance in their activities.

Africa have also witnessed numerous growth in the health sectors where the use and implementation of digital health are employed. Some major health projects in Africa includes Telemedicine Network for Francophone African Countries (RAFT), HINARI access to research in health programme, E-portuguese Network and Pan Africa E-Network project. Digital health also uses of mobile phone to support the delivery of health care awareness and awareness education. They are able to communicate treatment to patient, reporting and responding to disease outbreaks and emergencies. During the 2014-2015 Ebola crisis in West Africa, the whatsapp system allowd the BBC to use its platform to share lifesaving health information with people in the rural part and the quarantined areas.

One of the fast-growing technological countries in the continent is Rwanda. The country has been moving to transform itself into a digital hub, with several notable initiatives, including **Irembo**. A government to the citizen services e-portal, high mobile account usage, expanded 4G coverage across the country. And they improved digital skills. Rwanda’s Mara Group also became the first manufacturers of a smartphone made entirely in Africa. For example, 90% of Rwandans are within 5 km of a financial access point, due to the Umurenge SACCOs (USACCOs), established in 2008. To boost rural savings and to provide livelihood enhancing loans to Rwandans. Also, Rwanda is has played a pioneering role in the region in exploring several critical emerging technologies such as drones use to deliver critical supplies to inaccessible areas or considering a central bank-issued digital currency.

We cannot undermine the impressive economic growth. Rwanda today has the strength and resilience to weather the global financial crisis and the threat of regional instability. A recently developed public-private partnership in which the government provides office space and internet support for up-and-coming information technology businesses, targeting to help Rwanda achieve its goal of becoming the modern, dynamic ICT hub for East Africa, which is also a development based on the investment in technological innovation.

Also, let take a look at the impact of technology on our agricultural sector. Entrepreneurs in Africa have adopted mechanized farming, which has increased their yield and gives smooth access to market places. Investors also sense the potentials of Africa’s agricultural industry because of its vast potential to reach a significant market. Technological evolution in agriculture provides the broad potential for farmers, entrepreneurs, and investors to enhance the productivity and efficiency of agriculture in Africa at a time when numerous factors, such as population growth and climate change, threaten food security. Technology is making farming interesting for young people. As they realize that developing mobile apps alone cannot feed Africa, many will turn to the farm as a business.

The rapid extension of agric-tech business in Africa is denoted by the increase of over 13 million in funding since 2015, where funding was $50,000. Much of the funding in 2017 went to Twiga Foods, which raised $10.3 million. Launched in 2014, Twiga Foods uses technology to integrate the broken purchasing power of urban retailers, by delivering better quality and better-priced stock. Here is a comment from the chief executive officer (CEO) of Twiga Foods ***“Agriculture is one the largest and most untapped by technology, sectors of the economy. I think investors are targeting agriculture because it’s a huge market that touches just about everyone”.***

Finally, technology has also made its impact on our politics in Africa. There has been an increase in the percentage of people across the continent who have access to social media. But this percentage has made good use of it—Nigeria, for instance, Africa’s most populous country. During the 2012 Occupy Nigeria protest over the subsidy removed by the federal government, the social media users demonstrated how effectively social media could capture social discontent and channel it into real action. Also, in 2015, the Bring Back Our Girls campaign went viral and brought Nigerian insurgency to the global forefront. But social media’s most significant contribution to African political life is in ensuring that democracy functions as advertised. History has it that African elections have been “hijack” according to the old principle that it is not who votes that count but who counts the votes. As a result of the 2015 general election in Nigeria, some volunteers at the polling units tweeted unofficial vote counts under then tag “Nigeria Decides” handle, helping ensure transparency throughout the vote-tabulation process. Power was transferred peacefully to Muhammad Buhari, the first opposition candidate to win a free and fair presidential election in Nigeria.

**REFERENCES**

[Climate Action:](climateaction.org.news) *New technology is transforming Africa’s agricultural industry in march 2018.*

Joseph Atta-Mensah: *The role of Science, Technology, and Innovation in Africa’s Growth.*

Ndubuisi Ekekwe- *how digital technology is changing farming in Africa. May 18, 2017.*

**Technology and Development in Africa:** *Innovation for Sustainable Growth October 2017, conference transcript.*

*Wikipedia.com.*

[GBC Health’s news](gbchealth.com): *Healthcare and economic growth in Africa: Digital health.*