



Briefing Paper

Agro-processing: Will Digitalisation make it more Attractive to East African Youth?

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Summary

This briefing paper looks into the state of play on digitalisation in the East African Community (EAC) agricultural value chains, primarily how it can be utilised to increase youth involvement in the sector. The paper explores existing opportunities and corresponding barriers while making recommendations on how the youth can better leverage digitalisation when it comes to agriculture and agro-processing.

Background

The exodus of the rural population to the cities combined with limited arable land, climate change, weather fluctuation, and food losses are posing significant challenges to the future of food supply.¹ Involving the youth in agriculture and agro-processing is viewed as one of the solutions to this challenge while enhancing employment creation, alleviation of rural poverty and food security.

The agricultural value chain presents enormous opportunities for youth involvement including processing, packaging, transportation, distribution, marketing and financial services.² According to projections by the World Bank, the sector is poised to be a trillion-dollar business in Africa by 2030.³

Within the East African Community (EAC), the youth represent about 45 percent (48 million) of the total Partner States' population. Over the next 20 years, this number is expected to grow to about 82 million and will constitute about 75 percent of the total population by 2030.⁴ As a result of urbanisation, many of these young people move to the cities in search of employment. However, with the limited job opportunities, they remain disgruntled and going back to the rural areas to practice agriculture is largely not the favoured option.

Digitalisation can help address this gap by creating more attractive livelihoods for the youth while addressing key challenges in the sector such as climate vagaries. With existing digital technologies, EAC youth can exploit information technology for

various value-addition ventures in agri-business. They can be involved in the new methods of production brought about by digital technologies, including those enabling climate adaptation and mitigation. They can ride on the rising continental wave of entrepreneurship related to technology, information technology (IT) and innovation.⁵

Digitalisation is already revolutionising Africa's agricultural sector. The rampancy of agricultural technology, popularly known as AgTech, is quite evident from the use of aerial images, weather forecasts and soil sensors to utilisation of digital payment systems, credit platforms and digital insurance.⁶ These technologies are magnified through mobile technology whose penetration in Africa is ever-rising. The result is networked value chains that have helped increase productivity at farm level, facilitated access to markets and also created cost-effective value chains.⁷

A major ensuing impact of these technologies is the peaked interest of youth towards agriculture. Technology has transformed a conventionally unexciting area like agriculture to a viable option for them. Harnessing opportunities in agribusiness entrepreneurship and innovations, including in ICT-related, along the value chains, contributes to improving the sector's image, increases productivity and returns to investment and provides new employment opportunities, hence attracting more young people.⁸

¹ https://ypard.net/sites/default/files/resources/august_farmletter.pdf

² <http://www.fao.org/africa/news/detail-news/en/c/1151258/>

³ <https://www.standardmedia.co.ke/article/2001296287/youth-are-key-to-transforming-kenya-s-agriculture-sector>

⁴ <http://www.fao.org/africa/news/detail-news/en/c/1151258/>

⁵ <https://www.standardmedia.co.ke/article/2001296287/youth-are-key-to-transforming-kenya-s-agriculture-sector>

⁶ <https://hbr.org/2017/05/how-digital-technology-is-changing-farming-in-africa>

⁷ <http://sokodirectory.com/2016/09/rise-digital-agriculture-africa/>

⁸ http://www.fao.org/fileadmin/user_upload/raf/uploads/files/15Aug_Concept_note_Annotated_Agenda.pdf

State of Play in the EAC

There are no official estimates of youth involved in agro-processing within the East African region. However, there are steps towards ensuring their enhanced integration within the value chain. The EAC Partner States committed, through the 2014 Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods, to create job opportunities for at least 30% of the youth in agricultural value chains. It also has in place the EAC Youth Policy which requires states to train and encourage youth to take up agricultural production and promote the benefits of modern ICT to gain access to existing new markets.⁹

In this regard, the Community, in conjunction with the Food and Agriculture Organisation of the United Nations (FAO), is implementing a project that seeks to promote youth employment in the agricultural sector. In the 12th meeting of the project's EAC Sectoral Council on Agriculture and Food Security held in December 2018, Partner States were directed to consider adoption of hands-on incubation training in agribusiness and sustainable agro-ecological practices in order to out-scale the EAC – FAO initiative.¹⁰ Practical training through incubation centres will incentivise youth and empower them with requisite skills and knowledge on issues like certification and development of quality products.

In 2017, the EAC Partner States and Secretariat signed a pact with the Inter University Council for

East Africa (IUCEA), the East African Farmers Federation (EAFF) and the East African Business Council (EABC) to ensure that agricultural value chain development is inclusive of women and youth.

When it comes to AgTech, the EAC is advancing with the average age of AgTech company owners ranging between 29 and 32, which suggests that enterprising and innovative youth are creating new tech-savvy value chains.¹¹ Further, AgTech has elicited investors' interest with increased individual and private equity coming in to fund the youth who are largely the pioneers of these technologies.¹² In the period between 2015 and 2017, these sources invested approximately USD 425 million in the sector in East Africa.¹³

Some EAC Partner States like Kenya have developed key policies, such as the 'Kenya Youth Agribusiness Strategy 2017 -2021' which seeks to address the challenges that hamper sustainable youth participation in agri-business through strategic objectives such as utilisation of modern technologies.¹⁴ The implementation of this strategy has been funded to a tune of KES 22 Billion for the five years period.¹⁵ The country also created a Youth Enterprise Fund that provides credit to young people venturing into or expanding agricultural businesses.¹⁶

Digitalisation Opportunities for Youth in Agriculture and Agro-processing

The EAC secretariat has identified a number

⁹ <http://meac.go.ke/wp-content/uploads/2017/03/EAC-Youth-Policy.pdf>

¹⁰ <https://www.eac.int/press-releases/141-agriculture-food-security/1318-12th-meeting-of-the-sectoral-council-on-agriculture-on-agriculture-and-food-security-concludes-in-arusha>

¹¹ <https://www.odi.org/comment/10693-how-agtech-changing-east-african-economies>

¹² <https://www.odi.org/comment/10693-how-agtech-changing-east-african-economies>

¹³ <https://www.odi.org/comment/10693-how-agtech-changing-east-african-economies>

¹⁴ <http://extwprlegs1.fao.org/docs/pdf/ken171450.pdf>

¹⁵ <http://extwprlegs1.fao.org/docs/pdf/ken171450.pdf>

¹⁶ <http://www.youthfund.go.ke/agri-biz-loan/>

investment opportunities within the agribusiness sector particularly in relation to: Apiculture, Coffee, Cotton, Forestry products, Fruits, Grains, Nuts and Oil seeds, Livestock, Poultry, Sisal, Sugar, Tea and Tobacco.¹⁷ These opportunities are stretched throughout the value chain including at processing level. The EAC youth can leverage from these through utilisation of digital technologies.

Digital technology and the use of mobile phones has become a vital element of African youth lives. They are attracted to everything which has to do with digitalization.¹⁸ The adoption rate for new technologies is high among the youth, who increasingly use it including in areas such as precision agriculture. For example, unmanned aerial system-based companies are using drones and sensors to collect and analyse data, which agronomists then use to advise farmers on crop health and fertiliser options for higher yields and better-quality produce.¹⁹ Growing numbers of youth working in this sector are helping to raise incomes and create jobs for other young people.²⁰

This reliance on technology is also aiding with the fight against climate change due to utilisation of ICT and real-time information to credibly inform on weather patterns and dictate planting seasons. The young people are obviously better suited to accessing and making use of such knowledge.²¹ This is where they can have a comparative advantage in engaging in or supporting agricultural activities.²²

The youth's interaction with digital technologies is greatly enabled by the high rate of mobile penetration in Africa. In 2016, two thirds of the population in Sub-Sahara Africa had a mobile phone. With regards to the number of smartphone connections, the biggest growth is expected to be in Africa. There were 226 million connections in 2015 and it is expected that there will be more than 700 million in 2020. Besides this, Africa has seen the fastest growth rates in internet penetration, with the number of internet users across the continent increasing by more than 20% compared to 2017.²³

The enhanced mobile and internet penetration have seen increased innovations in Partner States like Kenya where mobile solutions such as *iShamba* are offering the ability to disseminate timely and relevant information regarding production, input supplies, weather updates and market price information.²⁴

Barriers to youth leveraging digitalisation in agriculture and agro-processing

Despite the potential of agriculture and agro-processing to create employment, the youth in East Africa is turning away from the sectors and rural areas due to the poor remuneration associated with low-productivity agriculture.²⁵ Some of the factors contributing to this situation are described below.

¹⁷ <https://www.trademarka.com/news/eac-news/funding-agriculture-in-east-africa-key-to-unlocking-sectors-potential/>

¹⁸ <https://www.icco-cooperation.org/en/blogpost/can-africas-digital-revolution-attract-youth-for-agriculture>

¹⁹ <https://www.cta.int/en/youth/article/youth-the-springboard-for-digital-agribusiness-in-acp-countries-sid06fc10125-b87f-406b-8a8a-3c41396b8b4d>

²⁰ <https://www.cta.int/en/youth/article/youth-the-springboard-for-digital-agribusiness-in-acp-countries-sid06fc10125-b87f-406b-8a8a-3c41396b8b4d>

²¹ <https://www.cta.int/en/youth/article/youth-the-springboard-for-digital-agribusiness-in-acp-countries-sid06fc10125-b87f-406b-8a8a-3c41396b8b4d>

²² <https://www.cta.int/en/youth/article/youth-the-springboard-for-digital-agribusiness-in-acp-countries-sid06fc10125-b87f-406b-8a8a-3c41396b8b4d>

²³ <https://www.cta.int/en/youth/article/youth-the-springboard-for-digital-agribusiness-in-acp-countries-sid06fc10125-b87f-406b-8a8a-3c41396b8b4d>

²⁴

https://ypard.net/sites/default/files/resources/august_farmletter.pdf

²⁵

http://www.fao.org/fileadmin/user_upload/raf/uploads/files/15Aug_Concept_note_Annotated_Agenda.pdf

Inadequate information

Due to contemporary societal preferences for white collar jobs and the confinement of agriculture and related sectors mainly to rural settings, there is limited knowledge about the opportunities available in the agricultural industry that can be equally economically viable and interesting for young people.²⁶

Limited access to finance

Access to credit is critical for establishment and growth of youth-led Micro, Small and Medium-sized Enterprises (MSME) in rural areas, and in particular in the agricultural sector. However, these MSMEs are typically deemed too risky to warrant credit facilities and more often than not do not have the requisite collateral.²⁷

Poor agri-business skills

The young people are often devoid of experience especially when it comes to business aspects of agricultural or agro-processing activities. This includes management of resources such as finance, assets and workforce as well as procedural and legal knowledge on certification schemes and standards. This is further compounded by minimal mentorship or peer-to-peer learning opportunities.

Low digital inclusion

While there is generally a promising rate of mobile and internet penetration within Africa, youth from the rural areas are largely excluded due to poor enabling infrastructure, low incomes as well as smartphone user capabilities. These challenges deny them a platform to access information, employment

and agri-business advisory services.

Negative perceptions of agricultural value chains

The reputation of agriculture and related value chains has been marred with aspects of low production, low incomes and involving low skills. Agribusiness, with all that pertains to the enterprise element, has traditionally not been promoted thus disincentivising the youth who are interested in monetary gains.

Recommendations

It is apparent that digitalisation can promote youth involvement in agriculture and agro-processing through opportunities in agribusiness entrepreneurialships and ICT-driven innovations. However, in order for the youth to ably maximise on these opportunities, there is need for:

- Detailed research to enhance understanding on the implications of digitalisation in agriculture and agro-processing (*both positive and negative*) as well as existing opportunities for youth;
- Government and relevant stakeholders to raise awareness on the significance of digital technologies and encourage more youths to adopt the same. They can also establish mentorship and peer learning forums meant to enlighten them on existing technical assistance, finance, training and education opportunities related to agriculture and agro-processing;
- Government to introduce relevant policy

²⁶

https://ypard.net/sites/default/files/resources/august_farmletter.pdf

²⁷

http://www.fao.org/fileadmin/user_upload/raf/uploads/files/15Aug_Concept_note_Annotated_Agenda.pdf

- reforms that will result into improved environment for ICT in agriculture and agro-processing, especially for youth-centred solutions;
- Government and private sector to ensure further access to cheaper and reliable ICT devices and internet connectivity for the rural youth;
 - Financial service providers to tailor-make financial products that are well suited for specific needs, strengths and constraints of rural youth involved in agriculture and agro-processing. Existing funding mechanisms should also incorporate risk cover for young entrepreneurs;
 - Institutions of learning to provide advisory services for young entrepreneurs who may not have a background in agriculture or agribusiness;
 - Development of digital incubation hubs to support innovative ideas coming from youth with interests in agriculture and agro-processing;
 - Documentation of successful agribusiness models for youth involvement in the agricultural sector and creating platforms for sharing of these best practices between various youth groups.



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The PACT EAC2 project builds capacities of East African stakeholders for climate-aware, trade-driven and food security-enhancing agro-processing in their region. Web: www.cuts-geneva.org/pactec2



The PACT EAC2 project is undertaken with funding support from the Swedish International Development Cooperation Agency (Sida).