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Digitalisation of african agriculture report

Tsan, Michael; Untlapally, Swetha; Hailu, Michael; Addom, Benjamin K. 2019. The Digitisation of African Agricultural Report 2018–2019. Wageningen, the Netherlands: CTA/Dalberg Advisors

Permanent link to quote or share this item: [An inclusive, digitally enabled agricultural transformation can help achieve meaningful livelihood improvements for Africa's small-farmers and pastoralists. This can drive greater involvement in the agriculture of women and youth and create jobs along the value chain. At CTA we have a claim on this power of digitization to transform agriculture early. Digitization, focusing on not individual ICTs, but applying these technologies to entire value chains, is a theme that cuts across all our work. In youth entrepreneurship, we promote a new breed of young ICT 'agripreneurs'. In climate-smart agriculture, various projects provide information that can help build resilience for small farmers. And in women empowerment, we support digital platforms to drive greater inclusion for women entrepreneurs in agricultural value chains. Subjects AGRICULTURE; DIGITIZATION; ICT; Technology, as we have seen in other sectors, is critical to influential influencing change and management development. It brings countries closer together, reduces barriers to trade and offers a window of opportunity to 'digital indigenous' youth entrepreneurs when vanguard of innovation applied to different economic sectors. In agriculture, digitalization can be a game-changer in promoting productivity, profitability and resilience to climate change. An inclusive, digitally enabled agricultural transformation can help achieve meaningful livelihood improvements for Africa's small-farmers and pastoralists. This can drive greater involvement in the agriculture of women and youth and create jobs along the value chain. Over the past ten years there has been significant growth in digitalisation for agriculture \(D4Ag\). In 2019 both the European Union Union's Task Force Rural Africa Report \(TFRA\) and the Communiqué of the Global Forum for Food and Agriculture \(GFFA\) emphasised the power of digitization in transformation of agriculture. However, despite growth, progress to D4Ag was somewhat slow to serve the smallholdings that produce 80% of Africa's agricultural outputs. Nevertheless, the opportunity is there. Agriculture is expected to be a trillion dollar market by 2030, ripe for innovation that will drive greater efficiency, sustainable increases in productivity, yield and revenue. At CTA we have a claim on this power of digitization to transform agriculture early. Digitization, focusing on not individual ICTs, but applying these technologies to entire value chains, is a theme that cuts across all our work. In youth entrepreneurship, we promote a new breed of young 'agripreneurs'. In climate-smart agriculture, various projects provide information that can help build resilience for small farmers. And in women empowerment, we support digital platforms to drive greater inclusion for women entrepreneurs in agricultural value chains. In other words, at CTA, we know and understand the power to digitise African agriculture. But we also understand that the evidence that will attract targeted investments to further develop D4Ag on the continent is lacking. Otros autos: Dalberg Swetha Totapally, Dalberg Michael Hailu - CTA, Benjamin K Addom - CTA Organización: The Technical Centre for Agriculture and Rural Cooperation \(CTA\) Cobertura geográfica: África Idioma utilizado para los contenidos: English Clique aquí In September 2019, CTA and Dalberg Advisors The Digitalization of African Reporting 2018-2019 – a first-of-its-kind market survey of agricultural related digital tools and services across Africa. One of the co-authors, Ben Addom, describes some of the most important trends in the sector, as highlighted by this landmark report. The D4Ag report took an approach that differs from traditional technology reports. The report was built around the understanding that digitization could be a game change in the agricultural transformation process across the continent. Africa is a net importer of food, which costs billions annually; each year 12 million young people enter the workforce in Africa, only a quarter find a job; and by 2050, climate change yield losses of 22 percent in Sub-Saharan Africa will cause yield losses of 22 percent in Sub-Saharan Africa. Over the past decade, to catalyze agricultural transformation in Africa, the digital application sector has promoted, facilitated an enabling environment to encourage their survey and provide capacity building in digital literacy. In the next era, digitisation for agriculture \(D4Ag\) will be more business-driven. The solutions that will survive will have to incorporate Big Data and analytical capabilities for precision agriculture. As presented in the report, D4Ag can be applied to various challenges in Africa, including climate change, declining returns, low income, limited access to financing, exclusion of women, men and youth, and unemployment. And according to our findings outlined in the report, D4Ag innovations are already helping to increase small-farmers yields by up to 70 percent and revenue by up to 40 percent. For a continent where 80 percent of food is produced by small farmers, these solutions – and their survey – are regarded as a game changer in the transformation of African agriculture. More than 33 million small farmers and pastoralists have already been registered with digital solutions across Africa, and the sector is developing rapidly – with a growth rate of about 45 percent a year since 2012. Nearly two-thirds of the solutions identified in the report are either advice or market linking solutions. The Agricultural market in Africa is highly concentrated and uneven with a handful of countries responsible for the vast majority of the reach width figures, while many countries have seen few deployments. A shift to customised services In terms of productivity highlighted a clear trend in the report on the rise of increased agricultural data availability and accessibility. As a result, D4Ag solutions seem to be moving away from traditional and general SMS/text-based communication to a more targeted approach based on a geolaitation. Based on location-specific information regarding weather forecasts/pests and disease crop prices, it is much more useful for farmers to increase precision agriculture and reduce production risks. These dating-driven services, which include advanced technologies, such as artificial intelligence and internet of things, are also expected to bring in more businesses in the sector due to their ability to retain users in long term. D4Ag enables the D4Ag market to expand rapidly, especially as connectivity continues to improve across Africa. We expect most farmers to have access to a mobile phone by 2030 and that the cost of data will continue to decline. An improved environment that includes connectivity, as well as digital capables and business ecosystems will also fuel substantial D4Ag expansion, while continued growth in access to digital payments will pave the way for D4Ag enterprises to become involved with small farmers in a more cost-effective way. An improved start-up scene will also likely lead to greater talent. Increased investment donors, the private sector and major tech companies are expected to invest more in the increasingly lucrative opportunities in the D4Ag space to capitalize on a US\\$1 trillion-dollar market. Approximately US\\$50M was estimated to be flowing into the D4Ag sector in 2018. This figure represents a tenfold increase over 2016 figures and represents approximately 20 percent of all investments flowing into technology start-up in Africa in 2018. And while the amount of private sector capital flowing to D4Ag businesses remains small, it is becoming smaller than donor funding, and all foundations, development banks and multilateral agencies have suggested they are likely to increase their D4Ag investments in the coming years. There is also a shift starting after ecosystem building and investing in public goods such as databases, entrepreneurial ecosystem elements, AgTech incubation and partnerships. Although relatively new, we believe this is a critical area for future focus. Issues of scale on the other hand, the D4Ag sector still faces several challenges in terms of its sustainability and actual use of the solutions and services. While a significant number, 33 million farmers represent just 10 percent of the D4Ag market potential; only 25 percent of users found to be women and 75 percent are youths - despite the average average Parent. And while nearly 400 separate digital enterprises were identified in sub-Saharan Africa, only 15 of these registered 1 million users or more. Those who have achieved this have mostly found success in bundled a number of services – indeed the report found that, bundled financial access, advisory services and market linkages can increase revenue by more than 57 percent and yields by more than 168 percent. The limited scale of impact through digital solutions to agriculture is likely due to the nature of investment in the sector, which has so far been uncoordinated, distributed and short-term. As a result, there is a lack of clear business models to encourage the private sector to step in and drive growth in D4Ag. Without viable business models behind the solutions, it is also difficult to ensure sustained use by farmers and other intermediaries. A D4Ag alliance There is no doubt that donors, foundations, and governments should be recognized for laying foundations over the past decade to help create an enabling environment for digital entrepreneurship and start-ups, and in displaying the potential of technology through evidence-of-concept examples. But a vibrant digital agricultural ecosystem that supports small farmers' agricultural value chains with universal reach and use of high impact innovations – an ecosystem supported by reliable digital infrastructure that provides timely advice, input, market access and finance to agricultural stakeholders is necessary. However, if the true potential of the sector needs to be realised, it will be critical to improve the level of coordinated investment and project scale to avoid duplicated efforts by these actors. There is also a need for clear collaboration between key stakeholders, including farmers, agri businesses, major technology partners and donors to support the sector as it grows, and to establish a long-term agenda for a consolidated and shared vision of D4Ag for the future. Finally, there is a need for D4Ag knowledge and innovation hub with a distinctive sector data and insights, ecosystem-building and coordination services, technology and business model innovation support, and technical advice. Council.](#)