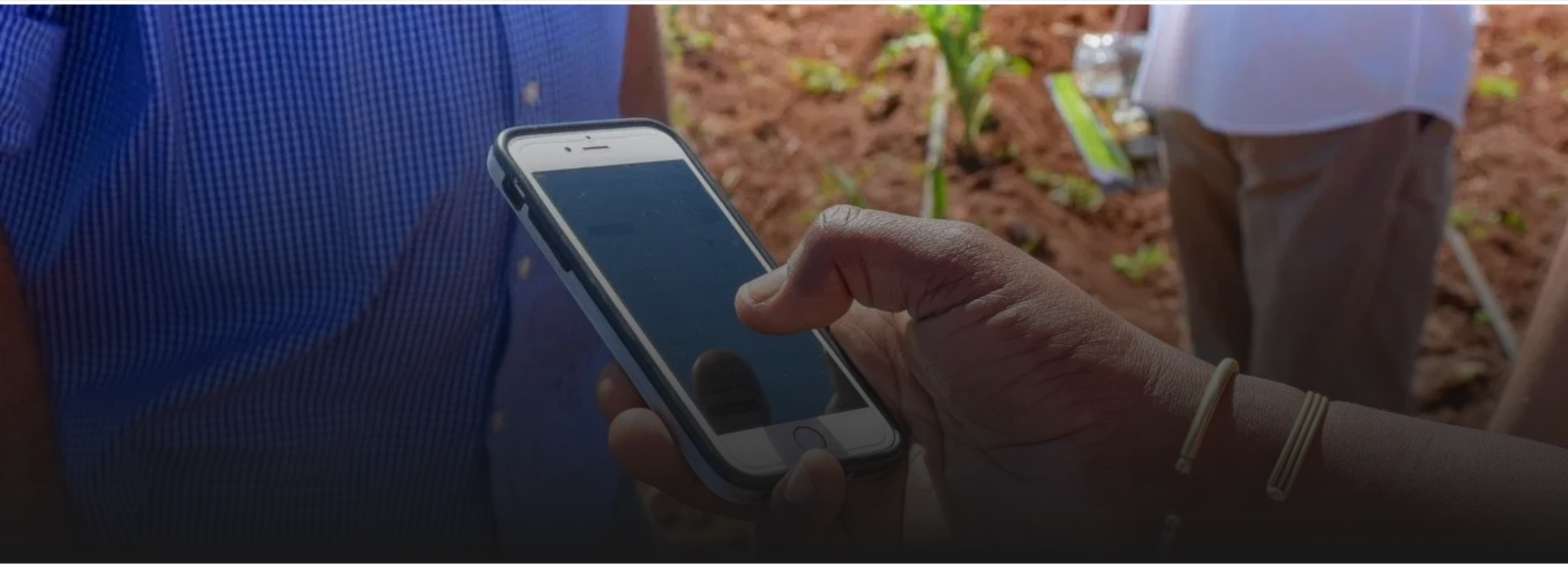

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The platformisation of rural Kenya is reshaping the balance of power within agricultural production networks

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In recent years, digital developers have shifted away from stand-alone apps towards more integrated and centralised platforms. Focussed on Kenya, LSE's Dr Laura Mann draws on new research to explain why policy-makers should take notice of profound re-organisations taking place in global agriculture networks, and the balance of power between public and private actors.

This is the second of four posts presenting key insights from the research project 'A Tale of Two Green Valleys' at the LSE Firoz Lalji Centre for Africa, which examines data-driven agro-innovation in California's Central Valley and Kenya's Rift Valley.

As an observer and interviewer of tech firms in Kenya's Silicon Savannah over the past ten years, I have seen many firms come and go, with new entrants often trying to replicate the functionalities and business models of their predecessors. The hard reality is that it is extremely difficult to scale up a stand-alone app, independent of larger institutional actors or social networks. It is even more challenging when your app is aimed at farmers, who are often older, more rural and less wealthy than your typical Nairobi or San Franciscan urbanite. Spreading the word – and then getting farmers to understand and embed your app within their growing and business activities – is a hugely challenging undertaking.

Over the past few years, we have thus observed a shift in the aspirations of digital developers to move away from stand-alone applications towards a new strategy of platformisation, or the roll-out of an integrated, consolidated platform upon which individual apps can integrate and scale.

As other scholars have described, platforms have both potential positive and negative attributes, depending on your perspective. On the one hand, the platform architecture offers 'openness' and 'interoperability' thereby allowing smaller players to scale up and avoid replication. On the other hand, 'platformisation' also produces network effects as it allows one dominant platform operator to capitalise on the innovation of others and strengthen its overall market share in the process. Additionally, as scholars such as Nick Srnicek and Jonas Andersson Schwartz have argued, platforms also 'embody a politics' as operators control the terms of market entry and participation, and are able to reshape economic relationships and rationalities in the process.

In rural Kenya, Safaricom, the globally known mobile money leader, is at the forefront of this platformisation of the agricultural sector. It converted its existing Corporate Social Responsibility initiative, M-Agri, into a commercial operation in 2017 to launch Digifarm, a platform that it hopes will integrate a whole suite of applications including Arifu, an agronomic advice platform; Farmdrive, a fintech that uses M-Pesa activity to derive credit scores and eligibility for loans in the form of vouchers for agricultural inputs; and iProcure, an input supplier that redeems those vouchers. Through these partnerships and others, Safaricom hopes to offer farmers credit and insurance tied to specific inputs and designated buyers for their goods. It seeks to scale and encourage adoption through a mix of mobile phones and a physical network of Digifarm Village Advisors (DVA) and Digisoko points. The latter are hubs that provide proprietary inputs and recruit labourers in key farming areas and the former includes 'last mile' agents, paid on commission, and who advise farmers on Digifarm services, providing, in the words of Digifarm's executive, 'an extension service that people can see'.

The aspiration for integration and consolidation is partly shaped by frustrations with past failures of replication mentioned above, but it is also linked to the emergence of new approaches within economics, such as those emphasising behavioural change or favouring randomised control trials as a gold standard for development evidence and policy-making. In essence, the realisation of a centralised and widely used platform would allow platform operators – and the economists with whom they work – to create a kind of neural network through which they could carry out experiments and learn about farmers, farming and Kenyan producers and consumers more generally.

A series of partner field days held in Kenya, September 2018 allowed non-profit CIMMYT to share the latest developments in maize and wheat research. Photographer: Jerome Bossuet/CIMMYT (CC BY-NC 2.0).

In many ways, these aspirations for top-down control and legibility are similar to those of the colonial and independence eras, in that they seek to lock farmers into legible systems through which they can ensure the repayment of debts, reduce the risks of investment and provide stable and predictable demand and supply for input providers and aggregators. For example, in the 1960s, colonial policy-makers used cooperatives and marketing boards to impose extensive farm plans, which specified which crops could be grown and which methods should be used. They empowered these marketing boards or preferred agro-processers to act as monopsonies, automatically deducting the costs of inputs and loan repayments from sales transactions and using the proceeds to finance public goods such as extension officers and research (for an overview of this period, see here and here).

In this way, platformisation appears to be sending rural Kenya 'back to the future'. However, there are a number of important differences between contemporary coercive systems and those of the past, which are worth highlighting for scholars and observers of development theory and practice.

First, these systems are obviously being built within the private sector, rather than the public sector. While it is too early to know how these systems will evolve, we might anticipate that such private control will likely gear regulatory oversight and governance goals towards the interests of private actors and shareholders and powerful donors, and away from broader public interest concerns.

Second, platform operators are currently embedded within a scholarly community that seeks to perform – and effectively coerce – behaviour according to micro-economic theories of development rather than the *structural* development economics of the 1950s-1970s. In their view, financial resources are not to be mobilised collectively or strategically; rather, gains should flow directly to the farmers who produce them.

Indeed, many of our interviewees quietly acknowledged that platformisation might lead to more pronounced rural differentiation through which the most productive farmers would drive out less productive farmers, and thus create larger, more commercially viable farms and farmers. In this way, platformisation is not just changing behaviour and economic flows of value but changing the context in which debates around economic theory and policy-making are being contested and 'performed'.

Finally, the Digifram infrastructure differs markedly from traditional marketing boards and public extension services in that DVAs and Digisoko agents are not public employees whose qualifications provide bargaining power within an industrial relation and who accumulate knowledge and expertise through their work. Rather, these agents function primarily as social infrastructures that will connect farmers with the propriety knowledge embedded within the platform itself.

In this way, these platforms reflect broader tendencies within digitisation and globalisation to restructure production in ways that re-organise production for the benefit of capital, transferring mental processes away from workers onto non-human platforms and more centralised pockets of private expertise. In the context of rural Kenya, developers hope platformisation will obviate the need for distributed investment into training and thus reduce the risks of industrial action and/or politicisation of extension. This quality makes platformisation attractive to donors who may perceive government programs to be inefficient and prone to mismanagement, and who are keen to find ways of delivering services like agricultural extension and healthcare to remote communities more cheaply (interestingly, our wider study uncovered similar desires by US technologists to digitize University of

California extension amidst similar budgetary constraints). At the same time, it may deepen international divisions of labour between agricultural producing regions and those producing the expertise and innovation deployed within agriculture.

Thus, while public commentators on platforms and digital apps typically focus on the benefits in terms of efficiency gains and reductions in transaction costs, observers and policy-makers should be aware of these more profound re-organisations taking place in the background; shifts in the balance of power between public and private actors, and re-organisations in the division of knowledge and power within agricultural global production networks more generally. By integrating market governance into single platforms, there is a growing danger of monopoly power and control over market entry and participation.

Read the full series based on research findings from the project A Tale of Two Valleys.

Photo: Close-up to SeedAssure App testing in the field Kiboko. Credit: Photographer: Jerome Bossuet/CIMMYT. Licensed under CC BY-NC 2.0.

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