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### Key points

- Agricultural development in the global South is widely seen as central to achieving a number of development goals. However, the kind of “developed agriculture” to pursue has become a contested issue; between a path favouring large-scale industrial agriculture and one seeking to preserve predominantly small-scale farming systems while at the same time enhancing their productivity and sustainability.
- Agricultural research, education and extension occupy a central role in both conceptions of agricultural development. However, such knowledge is highly dependent on the preferred agricultural development path and the influence of prevailing economic and scientific discourse.
- Neoliberal conceptions about agriculture, agricultural research, education and extension have gained a foothold in many countries in the South. The policies targeting these sectors have shifted accordingly, marking a change from a state-led to a market-led development approach.
- As a case, Uganda embarked on the neoliberal project in the late 1980s under pressure and advice from the Bretton Woods organisations. However, the transformation of higher education and research, as well as the agricultural sector, in line with neoliberal conceptions, has not produced the projected outcome in terms of agricultural development.
- Instead, evidence shows that the shift to market-led agricultural research, education and extension does not support agricultural progress to any significant degree. It seems that the current arrangement has completely delinked from the agricultural base, unable to intervene in or promote any kind agricultural development path, large scale or small scale.

## AGRICULTURAL DEVELOPMENT, THE STATE, AND THE ROLE OF KNOWLEDGE

by Reidar Øygaard

### Introduction

Given the predominant agrarian societies in most of the countries in the global South, as in Sub-Saharan Africa where 60-80% of the populations relies upon subsistence agriculture for their livelihood (AGRA, 2017), it is commonly assumed in academic and policy-making circles (e.g. FAO, WTO, World Bank, IMF) that this base needs to be transformed, both as a condition for further societal development and as a prerequisite for addressing pressing issues such as poverty, social inequality and environmental threats. Furthermore, such transformations are being dealt with within an increasingly entrenched neoliberal framework.

There is also a widely held view that scientific knowledge and science-based education forms a crucial part in agricultural development. Science and education (SE) is commonly assumed to constitute an important driving force in transforming subsistence agriculture into market-led agriculture, which in turn is assumed to alleviate poverty, reduce social inequality and strengthen environmentally sustainable agricultural practices.

In other words, the organization and management of SE is of crucial importance to agricultural development. Different ways of organizing SE will have different outcomes in terms of development. This brief will look at the combined issue of agricultural development and the role of knowledge, and will present findings from a case study (Uganda), including the impact of neoliberalism.

### Contested models of agricultural development

The consensus about the need for agricultural development in the global South, both as an end in itself and as a means for other sought-after results, breaks down once different models for such development are

considered. Just as there are “varieties of capitalism” (Hall & Soskice, 2001), there are varieties of agricultural development, both historically and in the present day. The current contention revolves around two different (ideal) models; first, a development model that favours large-scale, highly industrialised agriculture oriented toward global markets; second, one that seeks to maintain the existing small-scale nature of farming that is less capital and input intensive, while at the same time strengthening the farmers’ productive capacity in order to serve local markets to achieve local or national food security (e.g. see Desmarais, 2007; Weis, 2007; Harwood, 2012; McKeon, 2015). Depending on the preferred and chosen model, very different roles are assigned to the involved actors, i.e. the state and local governments, the private sector, individuals and civil society. Furthermore, the two different strategies will require different sets of agricultural policies, private and public, at all levels from the global to the local (McKeon, 2015). The SE roles associated with these two models are also very different from one another.

### Development and agricultural SE

In the early phase of capitalist development in Europe, agricultural colleges and (lower) vocational schools, agricultural research stations, and the so-called (agricultural) extension service were established in most western countries in an effort to “catch up” with the combined agricultural and industrial revolution taking place in the UK. Aimed at spurring economic progress and enlightenment, this agronomic education-research-dissemination model was also imported to the USA, and then Japan (cf. Ruttan, 1982: 66); i.e. to the countries experiencing “The Great Transformation” (cf. Polanyi, 1957). Wherever it was adopted, it became a public responsibility, in most cases shared between national and local governments.

Whereas the model was well instituted in the North by the onset of The Great War, it took another world war before it was extended further. In the 1960s, in the context of decolonisation, the model was introduced (in the form of aid programmes) in former colonies in a concerted effort to replicate the agricultural transformation in the global South (Ruttan, 1982). It caught on quickly in some Asian countries and became known as the “Green Revolution”, whereas the outcome was mixed in other places. By the 1970s, the effort had produced meagre results for most of Africa (Weis, 2007: 100; Tauger, 2011: 152-155), and the model crumbled under new conditions emerging in the early 1980s.

The late 1970s marked the end of an era that was “... dominated by state-led programmes of agricultural modernization that had largely defined the economic and institutional (political) relationships between science and agricultural production in industrialized and developing economies alike.” (Sumberg et al,

2012: 2). State-led agricultural development came to an end and was replaced by neoliberal conceptions of the state’s role, development and agriculture itself. In the global South this change was introduced in the form of structural adjustment programmes (i.e. the World Bank, IMF), which resulted in the partial dismantling of the public education-research-dissemination model. It also led to neoliberal-informed policy changes relating to the agricultural sector (Sumberg et al, 2012: 5; Harwood, 2012: 157-161). The state-led model has thus been replaced by a private or market-led model for agricultural development, at least in principle and rhetorically, whereby civil society is assumed a central role.

Thus, the historical experience in the North based on a state-led agricultural development is now seen to be following a different path in the global South. The principal driving force for transforming predominately-agrarian societies into “modern” societies and economies is assumed to be the private sector and civil society, i.e. the same sets of actors that are being “transformed” in the first place. This sea change in the politics and policy of agricultural development, including agricultural SE, has evolved at the same time as environmental threats have become a major challenge within the context of intensified globalisation. A number of questions arise from this situation: What are the consequences for the shaping of agricultural SE? What does it mean for the role of knowledge in agricultural development? Finally, what type of agriculture is thus being promoted?

### A case study: the Ugandan experience

Uganda is a suitable case to investigate such questions, as the country’s political regime embarked on the neoliberal project from the late 1980s. Evidence from my ongoing study of the Ugandan agronomic profession, the group of professionals constituting the main part of the agronomic model of research, education and dissemination of science-based agricultural knowledge, indicates that the interaction between the reshaped SE system and the agricultural sector plays out very differently from the assumptions and predictions made within the neoliberal framework. Here are four research findings relating to the Ugandan agronomic education-research-dissemination model:

1. Formally, the Ugandan state has an agricultural research agenda for agricultural development. In reality, however, a lack of funding means that the national agenda is not implemented. This means that agricultural research is overwhelmingly donor driven and funded. The (foreign) donors operate with their own, separate research agendas, without any links or coordination with national strategies for knowledge generation serving agricultural development.

2. Deregulation of tertiary education has led to the former technical schools in agriculture taking part in a race to become universities. As a result, more practically oriented tertiary education in agriculture has vanished. This “theoretical drift” in agricultural education has led to a vacuum in relation to the occupational structure in agriculture, as there is no longer any adequate education that seeks to fill the mediating role between the academics on the one hand, and farmers and other users of knowledge on the other. Furthermore, Makerere University, until recently the only university offering a university degree in agriculture, is now competing in a market for fee-paying students specialising in agriculture. The introduction of demand-driven curricula development has further emphasised the preferences of the NGOs (as employers of these candidates) and solvent students as the premises for curricula formation. Makerere University has thus transformed from a “developmental” to a “market-led” university (Mamdani, 2007). From having an external, supportive role for a transforming economy, the university has itself become a part of the economy, governed by the logic of the market. Curricula formation is no longer carried out with a view to fulfilling the needs of Ugandan agriculture, but with regard to what pays off in terms of student numbers and income generation for the university.
3. Also in line with the neoliberal project, the public agricultural extension service has been partially

privatised (contract system) and responsibility transferred from the central (state) to the district level. As a result, the NGOs have emerged as dominant actors providing extension services to Ugandan farmers and as employers of agricultural professionals. The extension service is intended to serve rural communities with science-based guidance on farming, as well as to implement national agricultural policies in the districts. However, privatisation and decentralisation have severely weakened the extension service’s links both to the academic community, which according to this model is supposed to be the knowledge basis for the extension service, and to the central state level, which is supposed to guide agricultural development.

These reforms have been implemented at the same time as the agricultural sector has been subject to policies aimed at “liberalising” the sector, again under pressure and advice from the Bretton Wood organisations. Such measures have been justified on the grounds that they will incentivise farmers to engage in market exchange, thus moving from subsistence to commercial agriculture. The results, however, are quite different. Long-term progress in Ugandan agriculture has been uneven and modest at best. An inescapable lesson is that neoliberal policies have failed to mobilise farmers in transforming Ugandan agriculture.



## Conclusions

The long-held view that agricultural research, education and extension belong to the public domain has been undermined since the late 1970s and replaced by a neoliberal conception of the role and functioning of such agents in the agricultural development process. However, the actual results of these reforms deviate strongly from the projected outcome in terms of sector progress.

The failing of the current policy regime is clearly linked to the current state of affairs in the research-education-dissemination complex. Privatised, demand-driven agricultural SE has led to a de-linking of the three components of agricultural SE, education, research and extension. This is accompanied by a lack of coherency and coordination between the agricultural SE and national programmes and policies for agricultural development. In this sense, the introduction of market-led agricultural SE has seen the fall of the development paradigm. Insofar as the current

set-up of the agricultural SE contributes to agricultural progress, it tends to favour the large scale model and farmers already integrated in the market economy, as subsistence farmers do not possess the means required to participate in such exchanges. The situation leaves the agronomic profession in a state of frustration and even resignation as their working conditions deteriorate and their interventions are not perceived to make any significant impact on transforming the agricultural base.

The final outcome of this situation is unlikely to contribute to the goals of reduced poverty and inequality, to social justice, and sustainable agricultural practices. On the contrary, it will probably lead to the opposite scenario.

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