



Extension in Motion

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Agricultural extension has a significant role to play in rural development. Yet, ‘extension’ itself is also developing and so is its role in development. How extension is understood, coordinated, financed and implemented has evolved over time. While agricultural extension used to be almost exclusively publicly funded and implemented in a top-down manner to increase productivity and transfer new technologies to small-scale farmers, since the late 1980s and 1990s the private sector has gradually become engaged in different ways and extension has evolved to being more participatory and holistic, at least in rhetoric. Many observers now prefer to speak of ‘advisory services’ rather than extension to allude to the broadened scope of services that farmers need as agriculture is becoming increasingly knowledge-intensive. Apart from having a new term, what can we learn from the evolution of extension over the past few decades? What can we expect for the near future? We asked eight renowned experts in the field of extension to guide us on a narrative journey through the intricacies of agricultural extension.

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Extension Services for Everybody

Daniel Coulibaly, former technician at the state cotton company CMDT (Compagnie Malienne de Développement des Textiles) in Mali still remembers when times were prosperous. 'As 'chef du zone', working for the state cotton company, I was based in a small village. From there I assisted and supervised all cotton producers in the zone. Once in a while I received training on agricultural practices, such as the newest fertilizers and post-harvest practices, together with my colleagues, 'chefs' from other zones. In 1974 the company launched an all-encompassing rural development program. As part of this program we encouraged farmers to diversify their livelihoods. We promoted crops like maize, millet and sorghum and we subsidized veterinary services. The company also financed pharmacies and health centers at village level; *'a producer in good shape leads to cotton in good shape'*, was our slogan. The company took responsibility for maintaining infrastructure and equipment. By employing local blacksmiths, carpenters and repairmen the rural economy got a boost. Moreover, everyone had access to alphabetization and basic education', tells Coulibaly. 'From 2002 onwards the company instructed us to focus only on cotton. The government told us: 'infrastructure is not your core business; health is not your core business; transport is not your core business; your expertise is in cotton.' Together with 800 other extension officers I was laid off', he sighs.

Coulibaly was technician in the heydays of extension. Early in the 1970s the World Bank introduced a new model to technology 'delivery', the training and visit (T&V) model of extension, which was replicated by governments worldwide. The main objective of this new approach was to fight widespread food insecurity by assuring a broad application of new technologies developed by agricultural research. The model included a hierarchically organized extension system with experts and researchers at the top and a significant number of technicians as 'intermediaries' at the field level, responsible for monitoring and assisting farmers in adopting the new technologies. Advisory services concentrated on the most important crops and low cost improved practices. About eighty countries utilized some form of T&V extension during the period between 1974 and 1999.

The Victory March of Privatization

The Malian state cotton company maintained its extension model that included a T&V approach until the early 2000s. Elsewhere the first debates on the impact and efficiency of the T&V model had already arisen by the end of the 1980s. Not only in Africa but also in many other developing countries, agricultural extension had little to show for and agriculture remained a far cry from achieving its potential as an engine of rural development. As public extension systems seemed increasingly outdated, donors withdrew their support, leaving

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the governments of developing countries with oftentimes large but poorly performing and financially unsustainable extension systems. These developments triggered a change in thinking about extension delivery and many actors, most prominently the World Bank sought refuge in market-based solutions and the privatization of extension. From the 1990s onwards governments worldwide welcomed private parties to provide competitive advisory services to farmers. However, apart from supporting highly specialized lucrative export commodities, companies did not see much profit in supporting general extension services for small farmers. In most countries, extension services became dormant, waiting for the next funded project.

Unfulfilled Promises

In the course of the victory march of privatization some countries completely withdrew all funding from agricultural advisory services. Other countries used public money to contract private parties to provide specific services in the hope that they would be more efficient than the previous public providers. Dr. Sulaiman, Director of the Centre for Research



on Innovation and Science Policy (CRISP) in India, closely witnessed the privatization process in India. He was involved in a study on the advantages and disadvantages of privatizing agricultural extension. He explains that 'this study revealed to me the absence of relationships between the different agencies involved in service provision. Although the government at the time encouraged in its policy framework private and community-led service provision, it did not create the necessary environment for private service providers to function properly. Different perceptions of who had to play what role were circulating. The government, for example, perceived NGOs as entities that could be contracted to deliver services, while the NGOs themselves saw their role as mobilizing farmers to express demands and have a voice in extension services. Private sector service providers worked in complete isolation'.

Case studies show that instead of replacing inefficient and ineffective public extension with competitive services, privatization in many cases left farmers without access to any services at all. Private service provision proved to be heavily biased towards the financially better off farmers located in easily accessible areas with better infrastructure. Joyce Mulila Mitti, who works as an extension specialist for the Food and Agriculture Organization (FAO) of the United Nations confirms: 'To some extent the private sector has been successful, especially in cases of contract farming. There are good examples of companies employing excellent extension officers. However, the private sector is interested only in specific crops. Moreover, small farmers living dispersed and in isolated villages are excluded. The transaction costs for private companies are just too high to work with them.'

Investing public money to encourage private sector advisory services did not appear to be a recipe for success, either. 'Uganda experimented with using public funds to finance private service provision. This experiment, I can say has failed', says Paul Kibwika, Associate Professor at Makerere University in Kampala. 'The reason is that it was based on false assumptions. First, the intention was to make the extension system demand-driven: farmers would express their needs and subsequently service providers would respond to these. But articulating demand is difficult. Farmers often do not know what they need, let alone that they know how to formulate and channel their demand. The ability to request services requires organizational capacity. Second, it was assumed that there would be a responsive private sector. In practice, however, only few of the service providers present were competent to cater to the needs of farmers. Even worse, given the opportunity to apply for public subsidies, completely incompetent people created service provision enterprises', explains Kibwika. Yet, he considers the lack of competency not to be limited to the private (commercial) sector: 'NGOs are not any better, they tend to be very localized and limited in outreach.'

Extension experts share the opinion that governments have to play a role in extension. If only for the fact that some services

are very difficult to privatize – for instance, where services deliver public goods or where farmers are not able to pay for the services received. According to Dr. Julio Berdegué, researcher at RIMISP, the Latin American Center for Rural Development in Chile, the government has two main roles to play: 'The most important role of the government is to establish an extension policy that gives guidance to all other actors in the system; with regard to responsibilities and way of working. Its second role is to fund those services which are impossible to privatize and which farmers cannot afford.'

Experience shows that public and private service provision are not interchangeable. The shift from public to private extension has taught the world the failures but also the value of both. The potential for complementarities is expressed in the increasingly popular call for pluralistic extension systems. However, as Paper 1 of the KIT Series on Agricultural Advisory Services underscores, the governance of pluralistic extension services entails a number of challenges.

Increasing Pluralism

The idea that a combination of public and private services is necessary to increase the outreach of extension is also supported by the increasing diversity in farmers and farming systems. Globalization, but also urbanization and a growing middleclass have resulted in changing consumption habits and purchasing behaviour in most developing countries. All major cities, for example, have witnessed the expansion of supermarkets. These changes have urged farmers to comply with quality standards and to diversify agriculture towards high value commodities, such as fruits, vegetables and livestock products. The landscape of farming systems and the farming population have become more heterogeneous than ever before.

Researchers and extension officers acknowledge that plurality of services and delivery approaches is required to be able to respond to the needs of the wide variety of farmers. As Sulaiman says: 'extension systems should reform their strategies and delivery architecture to better meet the needs of the large number of clients representing varied resource base and risk bearing capacity.' Each situation requires a unique, 'best fit' combination of public and private services. Kibwika agrees: 'The size of the farm, the farming system and the kind of crop the farmers are producing should determine which service provider targets them. The same holds for the approaches used. In some cases Farmer Field Schools might be a good method, in other situations it is better to work with lead farmers.'

Plurality has become the ideal in service provision. In practice, however, pluralistic extension systems have not yet proven to be more effective or efficient than systems in which services are exclusively publicly provided. Kibwika

remarks: ‘Conceptually pluralistic extension is an excellent idea. However, it presumes that there are competent service providers. In developing countries this is often not the case. Moreover pluralistic service provision works best in contexts where there is commercialized farming and where farmers are really seeking knowledge and advice.’ Sulaiman mentions that even when different service providers are present, access to such providers is not guaranteed. ‘In a national survey in India which included 51,770 households, 60 percent of the households did not have access to any information at all. The remaining 40 percent named other (progressive) farmers, input dealers, and radio and TV as the main sources of information. Only 5.7 percent of households included public sector extension workers in their list of information sources, and private and NGO extension services were only accessed by a marginal 0.6 percent of households.’



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Coordination in Pluralistic Extension Systems

Rather than pluralistic service provision many countries now operate extension systems that in the literature are referred to as fuzzy or fragmented systems. Country case studies show that different providers promote different service models and approaches based on a diversity of normative ideas of how agricultural development should be achieved and on the arbitrary availability of project funding. Rarely are the diverse interventions harmonized. The need to coordinate between the different providers is strongly prevalent, but the models for achieving this remain surprisingly absent. How to coordinate the variety of service providers? At which administrative levels? And who has the capacity, resources and willingness to take charge of coordination?

Sulaiman is a proponent of assigning farmer organizations a role in coordination. ‘Addressing many of these complex issues requires solutions which are beyond the decision-making capacity of individual farmers. The number and diversity of organizations involved in extension and advisory services have increased over the past few years and extension should also play an increasingly important intermediation and facilitation role to support the application of new knowledge, including technical knowledge.’

Mulila Mitti sees more prospects in arrangements specifically established to play this coordination role: ‘There has to be a forum’, she argues, ‘where government and the private sector discuss each other’s responsibilities. In my view, the government has a responsibility for food crops and research, and should engage with research centers that do not have a commercial interest’. Cees Leeuwis, Professor of Knowledge, Technology and Innovation at Wageningen University, has observed that coordination rarely happens naturally, as organizations either do not see it as their role or do not have the legitimacy to perform such a role. He refers to an example of a successful coordination arrangement from his country: ‘In the Netherlands we used to have an innovation network called *Reinventing Agribusiness and Rural Areas*, involving agribusiness, local governments, nature organizations and research. This network was in charge of identifying research questions that were shared by the different stakeholders, and it raised funds to investigate and solve the shared problems. Moreover, it provided a platform to discuss contested issues.’

From Top-down to Bottom-up Services

In the current paradigm extension is assumed to be most effective when farmers are in the driving seat to steer what type of advice is delivered and how. Yet, a number of challenges remain. Leeuwis explains: ‘The idea is that farmers are entrepreneurs who seek and pay for services. However, in practice the latter is problematic, especially in developing countries, as farmers do not know in advance what benefits

the service will bring them.’ Kibwika adds: ‘In the majority of contexts farmers are waiting for the services to be brought to them rather than actively asking for services. In such a situation it is difficult for the providers to know what services farmers need.’

Farmers are not only given a role in deciding what knowledge should be provided, but also in co-developing new knowledge. The role of extension over time has shifted from informing farmers of new ideas developed by research to achieving change through interaction and generating knowledge together. Co-creation is the new buzzword. For instance, in Innovation Platforms, where stakeholders are brought together and through collaboration can generate new ideas and new practices for agricultural development.

Andrea Bohn, Associate Director Integrating Gender and Nutrition in Agricultural Extension Service at the University of Illinois, mentions that in practice this ideal is not lived up to: ‘Instead of developing services *with* farmers, we develop services *for* farmers. Ultimately the NGOs that implement the projects aim to please their donors. It is all about the number of farmers served, but not about the impact of the services.’ The literature confirms her observation. In most cases providers still push for a particular technology to increase farm productivity rather than addressing farmers’ expressed needs. Although farmers work in groups, providers do not seek to strengthen these to enable active interaction and to link them to input and output markets.

Rewarding Extension Agents

Recognized as the backbone of any extension system, in practice extension agents are often the actors least remunerated of the whole system. Paper 6 of the KIT Series on Agricultural Advisory Services describes several monetary and non-monetary rewards used to incentivize extension staff for improved performance in their respective tasks, but the paper also remarks that most public extension systems in developing countries are characterized by poor reward systems.

Extension agents deserve more appreciation, our eight experts agree in unison. Paul Kibwika sees this as integral to establishing well-functioning extension services: ‘It is not enough to merely design an extension system, but the management of processes is equally important to achieve results. It is all about interaction and understanding how farmers work. How do they resolve problems? How do they interact? And how do they set goals together?’ He continues that ‘we need to support extension delivery in terms of resources but also in terms of capacity.’ Berdegué agrees with Kibwika’s statement: ‘If one would ask me how to improve extension systems I would definitely say: spend all the resources you have on providing better incentives to extension staff; better salary, more training. Investments are often done at the level

of the government, at the conceptual and methodological level. This is a waste of money and time. Encourage field technicians – most of the time they do a good job.’

Monitoring System Performance

Monitoring and evaluation play an increasingly important role in the design of development interventions. Nevertheless, with regard to extension, evidence shows that systematic data collection and monitoring is either absent or problematic, and the criteria used to evaluate are futile.

Niels Röling, Professor Emeritus of Innovation and Communication Studies at Wageningen University in the Netherlands, is critical of the current practice of evaluating extension services: ‘The criteria used to measure output are often *adoption*, *yield* and *income*. The focus is always on change at the individual level as result of technology transfer. Development is generally approached as an aggregate of individual behaviors. In social science terms we would refer to this perspective as ‘methodological individualism’, in which the individual is central in explaining social phenomena. The weakness of this approach is that it neglects institutions. More attention should be paid to how people solve problems and how they collaborate. It should be possible to develop criteria that enable us to measure changes in institutions.’ Leeuwis concurs: ‘It is always about the individual farmer who has to change something. But most farmers cannot change when others in their near environment do not change.’ He explains that ‘change and innovation are dependent on networks of farmers and organizations that together move in a particular direction. If the focus is solely on the farmer and the technical message and no attention is paid to the types of organizations needed, to the conflicts that remain to be solved and to the informal institutions in place, impact will not be realized.’ Kibwika firmly agrees with this: ‘Instead of counting the number of farmers that have received training, we should design a system that is able to measure what has happened with the farmers.’

But rarely are the results of evaluations used to stimulate change in the extension system. A missed opportunity for learning, clearly.

How to Foster System Change?

Thinking about ways to enhance the performance of extension services brings one immediately to the role of donors. What could they contribute? Kibwika is skeptical about donors aiming to change extension systems: ‘Donors think they change the system by providing money and attaching conditions to their support. This is not a sustainable way of changing systems.’ Berdegué is even more outspoken and argues that ‘donors should stay as far away as possible.’



Dr. Ian Christoplos, owner of Glemminge Development Research and Sweden's leading expert in extension, holds the view that more attention should be paid to the institutional context: 'The most important lesson that has been acknowledged but not acted upon is that we have to look at what already exists on the ground. Development interventions are often too normatively driven by what we want people to do. There has been a failure in anchoring our interventions in a sound understanding of how the institutional structures we support create the necessary conditions for extension to perform. Before talking about what models might work, we need to take an empirical look at reality. Is there a private sector to build upon? What are the interests of this private sector?' He continues 'I believe the private sector is definitely taking on

a bigger share in extension, but we have been naive on what they might need to be motivated to engage with small-scale farmers.' Christoplos illustrates this by way of an example: 'We have a lot of recommendations on what extension agents should do, without really looking at the extension system itself and how its institutions shape the activities of extension agents. But then in practice we get confronted with the reality and, hey, extension agents turn out to be busy doing other things.' He laughs: 'They are not going to change way of working because an expert says them to do so.'

Röling agrees with Christoplos that more attention should be given to institutions: 'One of the things history shows us is that the phenomenal growth in agricultural output in OECD

countries has always been preceded by investments in agricultural institutional development years before the productivity boom. If you study the history of Dutch agriculture, for example, the seed for the take-off of productivity in the 1960s was planted 70 years earlier. Around 1880, Dutch farming was in depression because of the imports of cheap wheat from the USA. A specific state committee was established to revive the sector. It decided that priority should be given to creating the conditions that enable agricultural development. One of its initiatives was education for women. Another was a land tenure law that made it rational for tenants to invest in land improvement. Laws and mechanisms to control quality were put in place. These institutional changes were all key for the growth in productivity years later. However, many development interventions still assume that technology drives agricultural productivity, although the key focus should be on institutions. And not only institutions that concern a specific value chain, but also institutions such as land tenure and corruption.’ Leeuwis complements this perspective: ‘Change is controversial. Systems do not change without pressure. There has to be an (artificial) crisis, for example a foreseen risk. Without pressure people won’t move. At the same time you need room to experiment with different options. The latter can be the role of external actors. They are the ones that can introduce experiments. Experiments with technology, new techniques and methods. But also with new institutions, new ways of collaborating, new rules.’ At the same time, change needs to be driven by internal actors. ‘You need people who are legitimized by their community and who are capable of mobilizing others. External actors should identify these champions and work with them,’ Leeuwis emphasizes.

The Role of ICT

The array of methods for disseminating and sharing knowledge has been enlarged by ICT-based methods. The spread of mobile phones, also to rural areas, has skyrocketed in only ten years and increasingly remote areas are being connected to digital technologies. Paper 4 of the KIT Series on Agricultural Advisory Services reviews a variety of different ICT tools and concludes that it is critical to identify in each intervention which tool is appropriate. Leeuwis agrees: ‘I think ICT can play different roles. Not only in disseminating information, it can also be used to do crowd-sourcing of data. Or as a tool that farmers can use to warn others of diseases they identified. Nevertheless, ICT is a technology that requires an organisation supporting it. It requires constant updating of news and messages.’ Christoplos agrees: ‘I think the challenge with ICT is to put it in the broader perspective. How is this data going to be used? How do people read text messages? How do all these messages come together? Are people able to understand the probabilities behind what they get in an SMS or not? We should try to understand that.’ Indeed, ICT has its limits, Kibwika underlines: ‘ICT can help to solve problems of weak performance; however, it is a

just a tool. It is not going to change the system. Case studies show that in many development interventions far too much attention has been paid to high-tech ICT tools and apps, and too little attention to basic telephone connections for people in rural areas to benefit from the promise of ICTs. Moreover the messages sent by ICT use are often too generic; neglecting the fact that women, youth and other minorities need different types of information.’

Two Cents Worth at the End

Extension has received renewed interest over recent years, especially by the international donor community. High time to learn from past lessons and make extension fit for the future. Many efforts and resources have gone into different forms of public and private extension, but results have remained far below expectations. Too much emphasis has been placed on transferring technology without addressing other constraints impacting on farmers. Extension in isolation is often very ineffective but if it is combined with other instruments that focus on creating an enabling environment, if services are more demand-driven and responsive to the dynamics and diversity of rural farming systems – well, then, extension is in motion and can set rural development in motion.

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