

UPSCALING OF PARTICIPATORY APPROACHES: An overview of some recent research findings

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The PAU programme

The Technology & Agrarian Development Group, Wageningen University is investigating the achievements of participatory approaches to agrarian development and rural poverty alleviation, with a view to identifying the potential for and limitations to upscaling or out-scaling such approaches. One of its programmes, the programme on Participatory Approaches and Up-scaling (PAU), focuses on PhD level research, and is funded by the Rockefeller Foundation. There are 24 PhD researchers working in the programme; all are from Africa, Asia or Latin America. Most are seconded from, or have work experience with, employers engaged in the implementation of agrarian participatory development approaches. The first eight PhD theses have now been successfully defended (i.e. one third of the total cohort). Six are focused on Africa, and one each on Thailand and Mexico. We now have a sufficient spread of results to begin to draw some lessons on participatory approaches with policy relevance.

The issues

Supervised learning?

Formal extension (e.g. Training & Visit) can be seen as a form of supervised learning. Innovations are developed and debugged on the research station and rolled out to farmers through demonstrations and (supervised) use of new inputs. The process is organizationally complex, expensive (e.g. in personnel, training, and vehicles). Many innovations turn out not to be fully appropriate in farmer conditions (due to non-availability of key inputs, or unanticipated genotype-environment interactions). The findings from field studies in our programme show pilot projects with interesting results of ‘participation’ on first sight. But deeper analysis learns that participation is partial at best and an up-scaled practice that still is the same supervised form of technology construction and application of before.

Unsupervised learning?

An alternative are approaches based on “unsupervised learning”, e.g. producers figuring it out for themselves (experiential learning), selecting from a portfolio of technology elements, stimulated by market signals. Innovations will then spread (it is hoped) like “wild fire”. But this alternative has many bottlenecks as well. Market signals fail to get through, or arrive distorted, and key elements of marketing infrastructure are missing (e.g. a network of local merchants to market increased output or sell inputs such as seed or fertilizer).

Innovation systems?

The donors (e.g. the World Bank) now favour the language of “innovation systems” since this brings out the fact that more is needed to transform the farms of the poor than good on-station

research. The role of local markets, roads, merchants, quality control, etc becomes visible. But better mapped innovation systems still do not “do the business”, since it is by no means clear how to add the missing elements, nor what precisely are the missing elements. A vicious circle often prevails. No innovations to increase productivity, no merchants: no merchants, no innovations to increase productivity. In short, there is no clear idea about what makes some systems cohere and others fail to appear. We lack information on drivers of change (i.e. causal mechanisms).

Learning the lessons of innovation under adversity

One finding of importance from studies of agriculture in adversity (e.g. drought and war) in recent decades is that rural populations continue to invent to stay alive. This inventiveness has been ignored because it does not show up as an increase in output (only a lesser decline than might otherwise have been the case). For example, many more rural people stayed alive and relatively healthy in the break-away Biafra (1968-71) than predicted because hitherto neglected food sources were adopted (e.g. cassava leaves as a source of vegetable protein). Evidence of this sort has been a boost to proponents of “indigenous development”. Adversity as a context or driver of unsupervised learning is often apparently independent of market forces (i.e. it has a subsistence dynamic); it suggests an escape from the vicious circle associated with market-driven innovation chains.

Scope for participation?

Participation has been seen as a way of linking up with the local knowledge and expanding the scope of survival-driven “innovation-from-below”. A variety of approaches has been tried. One is to retain the focus on science, but to modify the existing working practices of scientists, e.g. through devising joint experiments with farmers (participatory plant improvement, co-experimentation in fertilizer use, and so forth). Another is to focus on farmer political empowerment, e.g. enhancing capacity of local producer groups to demand inputs from research systems and other (state) service providers, or to form marketing cooperatives, etc. A third involves direct capacity building among farmers to enhance innovation or resource management skills (e.g. farmer field schools, first developed in relation to integrated pest management, but now used much more widely). Results often appear promising at the pilot stage, but problems appear when agencies “go-to-scale”. The main focus of the PAU project is to understand these problems.

Policy-relevant findings for Africa

Upstream issues: competences of professionals

Appropriately enough, the first PhD candidate in the PAU group to graduate (Dr Paul Kibwika) addressed key up-stream issues in fostering the participatory approach – the training of personnel to operate local-external interfaces in a participatory development context. Drawing on an ongoing experiment at Makerere University (Uganda), Kibwika (2006) analysed how the African job market has changed since the end of the colonial period (increase in graduates, reduction in formal bureaucratic posts) and specifies what is now needed to re-align the curriculum to meet rural development challenges. Graduates for participatory work with farmers need new professional and inter-personal skills, to elucidate the needs or interests of farmers, and to devise action frameworks within which cooperative solutions can be explored. Considerable mental agility is needed to facilitate successful participation when so many of the existing structures of African governance remain top-down and hierarchical. University curricula and teaching methods are (in effect) “unfit for the purpose”, he concludes, and major reform of higher education is now needed. A pilot project in Makerere University was successful, but up-scaling is not yet an achieved goal and needs to

be led by local “champions”. Our own experiences with the PAU PhD programme leads to similar conclusions

Upstream issues: institutional culture and agendas

The ways in which universities, scientific institutes and government bureaucracies do business are durable. The language of participation is readily adopted, but top-down (supervised) practices quickly reassert themselves. This is well-documented in the thesis of Isubikalu on Farmer Field Schools in Uganda (Isubikalu, 2007). Lip service was paid to farmer exploratory learning, but in the end facilitators steered the farmer groups towards the innovations their organizations were set up to supply. Sometimes, this was a result of mandate constraints or donor priorities. In other cases, personnel were “not listening” (e.g. they lacked competence to deal with the manifold problems farmers presented). This related to the training issue already mentioned (facilitators need to be “general practitioners” not “specialists”). In other cases, researchers were constrained by what “made sense” in terms of results they could publish. This last constraint might be eased by developing career assessment criteria linked to competence in working with farmers, or setting up an international journal of cooperative agricultural research. But other problems were more difficult to resolve, since they reflected general cultural factors, e.g. the status gap between elites and rural peasants, and “the Big Man knows best” syndrome. Farmer Field Schools, Isubikalu implies, lack the “institutional” or “cultural” capital to permit the kind of rapid expansion currently being attempted in Africa. More investment is needed in resolving cultural and institutional issues.

Participation as practice: farmer misrepresentation?

Kiptot (2007) looked at the process of participation as it affected uptake of agro-forestry innovations in Kenya. She carefully examined who was likely to participate, bringing out the costs and benefits of participation for both village elites and the rural poor. Often the poor were too constrained by lack of land, labour or time to involve themselves in agro-forestry innovation groups. Groups tended to be led by persons with a long history of group leadership. The topic was irrelevant. Local elites took part in running groups of all kinds because this brought tangible benefits (e.g. network connections that could be turned to political advantage). The poor might take part only because they were in some way obligated to leaders. Members of groups were in general reticent in evaluating unsuitable technology negatively for fear that the village might lose some as yet unspecified benefit. Only contextual analysis makes clear that proposed innovations were often rather poorly adapted to local conditions and the needs of the poorest. Participation needs to get beyond discourse (e.g. opinions expressed in focus groups) if it is to have a real impact.

Participation as practice: farmer misinterpretation?

Misiko (2007) examined participatory research into fertilizer use in Western Kenya, close to Kiptot’s study, thus generating some important confirmatory support for her rather negative conclusions about group performance under participation. Misiko’s thesis shows that it is possible to design and implement fertilizer experiments with farmer participation and generate scientifically valid results (as demonstrated by publication in international peer reviewed journals). But he also shows that there was a “gap” between objectives of scientists and the objectives of farmers. Scientists were focused closely on mechanisms of soil fertility, and faded out contextual issues and practical applications (outcomes). Farmers, by contrast, tended to “fade out” mechanisms, concentrating most on context (poverty, land shortage, shortage of inputs) and outcomes (results in terms of increased food). As a result, soil fertility issues were merged into a more general set of concerns about lack of land, food and money.

Misiko diagnoses some degree of lack of fit, or miscommunication, about the purpose of agro-technology interventions. Again, it is concluded that when villagers participate they may do so for different reasons, and under different sets of assumptions, to scientists, thus potentially affecting the quality of observations and the kinds of inferences drawn from experiments. Participation should not be up-scaled without ongoing attention to cognitive and epistemological issues in participatory research.

Participation as practice: farmers as model makers?

Hailemichael took a modelling approach to village poultry systems in Ethiopia. Initially “participation” consisted of consulting with villages to obtain data for the model. Subsequently, the methodology was expanded to the point where villagers suggested technology improvement scenarios for the model to test, and took a hands-on part in evaluating outcomes. It proved fairly easy to construct a culturally-appropriate communication process allowing villagers with no prior familiarity with computers to interact with a software model, and model scenarios of their own devising. The work was sensitive to the needs of women and the group of poorer farmers, and seems a promising approach to expand to other areas and to apply to other livestock management processes.

Participation in practice: working with what is already there?

Kamau evaluated the Kenyan Agricultural Research Institute’s (KARI) experience with participatory technology improvement, basing his thesis not only on how KARI handled participation, but on a careful examination of how farmers handled innovation processes beyond the KARI remit (he examined rice farming beyond the limits of a formal scheme and resolution of technology problems among growers of a semi-legal crop, khat). Various recommendations were made to strengthen and extend the KARI approach. On the basis of a detailed case study undertaken for the thesis, Kamau argues that agricultural researchers might find a fruitful field for participation by linking up with schools. Children are naturally curious and make good experimenters. Many basic skills of numeracy, literacy and scientific inference can be taught through maintaining and monitoring a school experimental plot. Kamau’s own school initiative “took off” when different stakeholders discovered they could gain distinct sets of advantages from participation; a KARI researcher got publishable results, the children gained skills, parents were happy when children came home with the results of the experiment in the form of food and began to look to the school as a source of more regular planting material supply, school principals saw that they could make money for the school fund from multiplying and selling sweet potato seedlings (the subject of the experiment), etc. Above all, there is no need to form groups. Apparently, the school system is ready (and seems willing) to be incorporated into a larger scheme of technology innovation, for which Kamau is now seeking funds.

Conclusion

The picture is mixed. It still seems reasonable to continue to expect that farmer-participatory technology generation will offer a way of escaping the extreme agrarian poverty-market failure trap found in many parts of Africa. But in some cases up-scaling is going too fast, with insufficient attention paid to “up-stream” problems of institutional reform and capacity building, or to evident problems of group performance. The whims of donors also represent a major stumbling block.

In other words, the participatory approaches are part of a paradigm that offers ample space for the potential benefits of unsupervised learning. However, when moving beyond the pilot

project scale, the local dynamics lead to biased participation and institutional context tends to transform the approach again in supervised forms of learning.

There is need for continued support over a long period, but at a level Africa is capable of absorbing. A huge release of new funds linked to the MDGs risks bringing old and failed modalities of technological improvement back into play, only lightly disguised as “participation”. Apparent rapid progress can be “bought”, but at the price that nothing sustainable is achieved nor learnt.

We offer four main points for policy debate, as follows:

- Participation on any scale will only be feasible if African university and research institutions reform to match the requirements of the approach (participation needs “distributed networks of excellence” not “ivory towers”)
- Participation is time-intensive and working with the poorest and most needy groups (who have little of anything to spare, including time) represents a major challenge; bias in participation towards workshops and discursive approaches should be reduced in favour of informal and spontaneous networking processes
- Out-scaling should also be attempted by embedding the participatory approach within existing institutions that at first sight do not seem part of the innovation system, e.g. the rural secondary school system
- Participation needs “smart” research support. Promising new approaches include action research, participatory production-systems modelling, and exploring contexts and drivers of “unsupervised learning”, for example by using artificial neural network modelling

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