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RESEARCH AND RURAL DEVELOPMENT

A Selective Discussion

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Background and Purpose

Over the past decade many factors have induced African governments to attach a higher priority to rural development. Some of these have long been familiar: the high proportions of populations living in rural areas, and the anticipated rises in their absolute numbers for many years to come; the school-leaver problem and the drift to the towns; the slowness of the shift from primary product exports towards the export of processed and manufactured goods; the disappointing rates of growth in urban employment associated as it usually is with relatively high wages and relatively capital-intensive technology; the changed perceptions of economists all over the world concerning the position of agriculture and food production in the most appropriate development strategies for many developing countries. Other factors may be at least as important casually, though less conspicuous internationally, including the political process, for instance in Kenya and Tanzania where Members of Parliament are liable to rejection after five years by their dissatisfied rural constitutents if they cannot point to improved rural conditions; security considerations which require that concentrations of urban unemployed be avoided; and in East Africa at least, the fact that most politicians and senior civil servants own land and look on themselves as having a stake in the farming world. Whatever the reasons, however, (and these are by no means all), rural development receives more emphasis in Government policies now than in the past, and there is no reason to suppose that this emphasis will diminish.

The purpose of this paper is to explore some of the implications for research of this priority accorded by Governments to rural development. The experience drawn on comes mainly from the three East African countries, although evidence from West and Central Africa is also used. As a preliminary focus and example, the Kenya Government's Special Rural Development Programme is discussed, but the generalisations which follow are frequently derived from other sources.

The Special Rural Development Programme

The Kenya Government's Special Rural Development Programme (SRDP) originated in the conference held at Kericho, Kenya, in 1966, on education, employment and rural development.[1] Following the conference, a series of initiatives led to the selection, for an experimental programme, of 14 divisions (sub-districts) in six of the seven provinces of Kenya. Selection was designed to ensure that the areas chosen represented the range of small-farming and to a lesser extent pastoral conditions. In 1968 the University College, Nairobi, in conjunction with the Ministry of Economic Planning and Development, carried out district inventory and farm-level surveys, the preliminary findings and recommendations from which are shortly to be published.[2] Six of the fourteen areas were chosen for planning in a first phase, implementation of which was to begin in July 1970. In the meantime, planning for some of the remaining second phase areas has been begun.

The objectives of the programme are to raise rural incomes and employment opportunities using as far as possible the existing machinery of Government and concentrating on programmes which are replicable elsewhere. It is also intended through the programme to improve the developmental capacity of Kenyan Government officials. The preparation of the first phase plans has been carried out in various combinations, but in all cases there has been involvement of central government, provincial, district, and divisional-level officials in several departments, particularly the Provincial Administration, the Ministry of Economic Planning and Development, the Ministry of Agriculture, and the Department of Community Development. The area plans incorporate many components which are intended to fit together as a strategy to overcome the particular constraints and to realise the particular

1. The papers of the conference were published as James R. Sheffield, ed. Education, Employment and Rural Development, Nairobi, East African Publishing House, 1967.

2. As J. Heyer, Dr. Ireri and J. Moris, Rural Development in Kenya, Nairobi, East African Publishing House, 1970.

opportunities of the area concerned. These components include land registration and consolidation, road construction and improvement, water supplies, credit, crop and livestock programmes, supplies of agricultural inputs, village polytechnics, rural industrial development centres, self-help projects, cooperative reform and improved marketing. The main initial thrust in each area is towards increasing production and incomes.

The programme is experimental. To some extent, innovative component programmes have been incorporated. The main initial examples are village polytechnics, two major experiments in agricultural extension, a new approach to young farmers' clubs, and rural industrial development centres. In addition, there are some indications that Ministries are perceiving the programme increasingly as an opportunity to try out new ideas. At the request of Government, these experiments are being monitored and evaluated by the Institute for Development Studies in the University of Nairobi, and it is hoped that the lessons of the experience can be spread much more widely in other areas. In addition, the evaluation exercise will encompass some more conventional programmes, for instance rural water supplies, and hopefully increase understanding of the effects and appropriateness of these programmes in different conditions and of their complementary relationships with other programmes, as well as affecting their future design and implementation. Present indications are, however, that the main innovation of the programme, and the main impact of evaluation, will centre around the planning and implementation process itself. Integrated area-based planning is a new departure in Kenya. The first steps with the first phase SRDP areas have been breaking new ground and many lessons are being learnt. A major question arises whether area-based planning is feasible on a wide scale, using, within the terms of reference of the programme, the existing machinery of Government. If it does prove feasible, it might have application in other countries, and prove to be a most important innovation. If it does not prove feasible, there will nonetheless be much experience to be garnered from the attempt, and many sectoral programmes (roads, water, etc) will have been affected by the evaluation process.

The Public Administration Bottleneck

The insistence of the Kenya Government on planning and implementing the SRDP through the existing machinery of Government has had the intended effect of throwing into relief problems in public administration which might otherwise have remained largely unnoticed. The level of effectiveness of

field administration in Kenya is well above the average for African countries, and it has been because of this that it has been possible for the planning operation for the first phase SRDP areas to be carried out at all. The problems thrown up have their counterparts in other countries, but they are most clearly seen when there is a concerted programme, like SRDP in Kenya, or the extension saturation project in Uganda, or perhaps the ujamaa vijijini programme in Tanzania, which seeks to achieve more using largely the existing organisation of Government in rural areas.

The general importance of public administration is accentuated by the widespread assumption in Africa that the primary driving and supporting force in rural development will be direct Government intervention through field administration. There are, of course, indirect ways in which rural development can be and is influenced by Governments - pricing policies, encouraging private investment, subsidies for inputs, fiscal protection, legal controls of marketing arrangements, land policies, and so forth; but major hope tends to be attached to the direct execution through field agencies of policies designed to promote rural development. It is also usual for Harambee self-help, socialist self-reliance, or their equivalent, to be stressed as a vital contribution, as indeed they may often be. But official thinking in East Africa usually starts from the premiss that accelerated rural development must be brought about primarily through Government administration. In Uganda, this is illustrated by the new emphasis on District Team Planning Committees. In Tanzania, the priority attached to the creation of ujamaa entities is associated with the formation of regional specialist teams to provide them with assistance and services. In Kenya, as we have seen, the SRDP deliberately sets out to use the existing machinery of Government rather than to create a new organisation. Moreover, in Kenya the reliance on central Government has been increased with the take-over from local authorities of responsibility for the three main services of roads, education and health. In these various circumstances, the structure and functioning of the hierarchies of Government field agencies become more critical for the effectiveness of development strategies.

In this context, there is a danger in the tendency of planners to regard executive capacity - the capability of getting things done - as an elastic resource. Where more is demanded of an organisation, their response is to modify procedures, to increase staff, to train, to import technical assistance. These approaches are useful to varying

degrees, but the complementary approach of rationing demands on organisations also deserves attention. Administrative overloads can be dysfunctional by leading to the neglect of tasks, poor performance, inaccurate or reduced communication and low morale. To avoid such overloads, a high priority would seem to be operations research on the functioning of field agencies, and devising demands and procedures which are compatible with their executive capacity. The research implications of such an approach go far wider than public administration; indeed they affect those natural and social sciences which impinge on rural development policies. whenever their research findings requre direct Government action. Some of the issues raised are discussed below.

(i) Generating Usable Information and Resources

Generating information or resources which cannot be made use of is pointless. It may seem strange that such an obvious statement should seem worth making, until one looks at the mass of survey and data-collection work which is conducted both by Governments and by private researchers, the high proportion of the data which is never processed, and the perhaps equally high proportion which, when processed, is not made use of. Similarly, the structures so often levelled at agricultural research stations[1] in East Africa - that their experiments are carried out in unrepresentative conditions, that they take little account of labour and input supply constraints, that they concentrate on returns to land rather than labour, that their recommendations are often of limited applicability because of ecological variations in the areas they serve, that communications with extension staff are poor - these have been no less justified for having been so obvious. Strict self-discipline is needed on the part of those engaged on research - whether Government or individual - for rural development, to ensure that before experiments are carried out or data is collected, the whole process right through to the use of the fully processed results has been explored so that there is a high certainty that the research investment will have practical benefits, and not just result in survey schedules collecting dust in a trunk or a neat little articles in a professional journal.

A possible benefit from SRDP evaluation may be the findings of experiments to ascertain the extent to which local-level staff can be

1. There are several most honourable exceptions. The Maize Research Unit at Kitale in Kenya, for instance, has made a major contribution through its development of hybrid maizes, and is now differentiating hybrid varieties for a range of ecological conditions.

trained to make use of data in planning. The range of information - aerial photographs, topographical, soil, geological and vegetation maps, rainfall data, census information, agricultural survey findings, and so forth - available for an area are being assembled and processed and provided for district and divisional-level staff. The early indications are that less of this sort of information is used by staff in analysing the development situation and prescribing programmes than the research staff supposed would be the case.

The implication is that all who are engaged on research relevant to rural development should closely examine the utilisation and implementation process which is to follow their findings, and make sure that they are not, as has so often been the case, indulging in over-detailed work. When the constraints of implementation are taken into account, true sophistication in research may often be found in simplicity.

(ii) Restraining Demands on Administration

If executive capacity is regarded as a scarce resource, then returns on its use should be maximised. However, it can be argued that the imposition of tasks, particularly when clearly defined and with close supervision, increases the output of organisations. An example is the performance of the Kenya Tea Development Authority which has specific, routinised roles for its staff and strict technical imperatives governing its operation. But with agricultural extension organisations, for instance, the range of functions is broader and there is a probability of competing demands on the time and effort of staff. Some programmes such as agricultural credit or the introduction of tractor services are administration-intensive compared with others like the introduction of a new seed which does not require annual renewal. Other programmes, such as long-term credit, are administration-persistent, requiring continual attention over a long period. The more intensive or persistent the demands, the less time and effort are potentially available for other purposes, and the more future options for staff use are pre-empted.

Some demands on time and effort are made at the local level. In Tanzania in particular, there is evidence of a cult of meetings, taking as much as half of the time of extension agents, in which many non-agricultural matters are discussed. Visits by important persons and senior officers are some times similarly disruptive. Other demands, for instance for data-collection, originate from the centre, and the results easily become dysfunctional. In Uganda, for example, under pressure to increase cotton acreages, agricultural staff reported unreal increases which generated an

impression of dropping yields at a time when with better husbandry methods, yields were probably rising.

The implication is that research choices and designs should be biased towards those with probable outcomes which make low administrative demands. For example, a seed breeding programme which concentrates on disease resistance may have a more favourable outcome, when it comes to implementation through an extension programme, than a similar programme which produces a higher yielding seed which requires extension staff to persuade farmers to spray. Equally, a prophylactic pill is to be preferred to a course of innoculations. The implications do, indeed, go even further, to the point of recruiting staff. A research station which recruits a plant pathologist may ten years later be recommending an administration-intensive plant protection programme. Had the station recruited a plant-breeder, it might have been recommending an administration - sparing one shot seed distribution programme. As with data-collection, what is required is an exercise of imagination and self-discipline to think out the probable effects of early research decisions right through to the process of implementation by field staff. [1]

(iii) Communicating with and within Government

The literature of development is now well-seasoned with contributions analysing and emphasising the communication process between change agent and person who is to change, but little attention is sometimes paid to the content of the message or to the communication process within the organisation.[2] As already discussed, information is no use unless it is usable, and the problem of extension workers in some parts of East Africa is primarily that they have nothing much worth communicating. This poses a challenge to the professional research organisations and stations. In addition, communication within Government organisations is an important focus for research. There is scattered evidence that it is generally poor, and that both upwards and downwards it is restricted and selectively filtered, whether through deliberate decision, lack of opportunity for contact, deference or low motivatiion. It is extremely rare, for example, for

1. Farm-level, social and marketing constraints should, of course, also be taken account of; but they are more part of the received wisdom than the administrative constraint being emphasised here.

2. The reference here is to the school of Everett Rogers based on Michigan State University.

national survey reports ever to percolate down to the district, let alone the sub-district level. A special problem may exist between sub-district level staff (who typically are transferable outside a district) and their immediate subordinates, (who typically come from the district in question). At all levels there may be less inclination to pass on and to exchange information than is desirable.

In these circumstances much of the onus must rest with the researcher to make his findings communicable and to communicate them. So often in rural research, students have come, explored, probed, surveyed, carted off their data, and never been heard of again. This is discourteous, exploitative, and prejudicial to future work. The policy being attempted with SRDP research is to insist that students' timetables and survey designs make data-processing and analysis and a preliminary write-up possible before they move on to other commitments. It is then intended that the resulting reports, which will not be polished and final, but rough, practical and dirty, shall be duplicated and distributed to the staff concerned. Numbers of copies produced may make a considerable difference: indeed Gestetner and Roneo may have a far greater contribution to make to rural development than more obvious candidates like Massey-Ferguson and Ford. A second approach is for researchers to hold inforamtion and discussion meetings with local-level staff. Both these methods might well be pursued by those working in technical research stations.

Public Administration Research and Administrative Reform

These three related suggestions place the burden on natural science and social science researchers to design and follow through their work so that it can be effective through the existing administrative system. There is also, of course, the possibility, indeed probability, of progressive administrative change and improvement. Observations are commonly made about various "needs" - to relieve technical officers of much of their administrative burden so that they can concentrate more on their functional tasks; to provide better transport facilities and more petrol for junior staff; to ensure greater continuity of staff in rural postings; to train staff to perform more complex tasks. The Kenya Government, at least, is actively engaged on considering problems such as these. One of the main benefits of the SRDP, and of similar programmes in other countries, may be

that the increased demands made by the programme, and the facilities for research and evaluation built into it, will help to bring administrative problems into focus, and make it easier to experiment with solutions to them. The style of research and of its output do, however, need to be very different from that of the so-called "development administration movement", with its straining for originality in neologisms. As in any organisation, it is O and M and straight advice on procedures and management that is needed, not an obfuscation of new words.

Any such research and advice must be based upon sympathetic understanding of the problems which staff face. It may nowadays be an exaggeration to describe the lowest Government servants as "forgotten men", since a good deal of research has been carried out on agricultural extension workers in the past three years, both in West and East Africa. It is those men on the bottom rungs of the Government hierarchy on whom most of the burden rests for the implementation of rural development programmes, such as for health, family planning, livestock, crop production, literacy or community development. Many agricultural extension workers have been overtaken by the rate of development, and while farmers are now requiring sophisticated farm management advice, are only capable of simple routine and regulatory tasks. The Kenya Government has had a working party concerned with agricultural extension, and is likely to tackle this problem vigorously. But questions of motivation, terms of service, career prospects, relationships with superiors and with the local community, training, transport and housing are likely to remain important and to deserve further investigation and understanding. Social science research has raised the small farmer from being misunderstood as an ignorant, stubborn, conservative peasant to the status of a rational being worthy of the Englightenment. It might now perhaps perform the same service for the junior official.

The Practical Need for Theory

While the emphasis above has been on public administration as a primary bottleneck, and therefore as a main focus for research, this is not meant to be at the cost of other disciplines. Rural development is an inter-disciplinary area *par excellence*. Among the ideas being considered for the extension of the area-based planning approach of SRDP is the creation of a multi-disciplinary "planning commando" which would provide services for the local-level staff who would do much of the planning and all of the work of implementation. The tasks of such a commando would include identifying local constraints and resources, data-collection, processing and analysis, and advice. They would also bring to the planning process

some of the experience gained elsewhere in similar areas, and some knowledge of complementarities between programmes.

For all the emphasis in this paper on practicality, prescription in the field of rural development suffers from a lack of organising theory. There is no accepted body of ideas about optimal sequences of Government inputs to stimulate the processes of rural development, nor perhaps about types of rural situation. Some such sets of ideas may be generated by the research at present planned by Guy Hunter in India, Malaysia, East Africa and elsewhere, and some may emerge from the comparative experience of the different SRDP areas. On the other hand, the variables may be so complex and disparate that there can be no such ordered set of ideas. Certain precepts about sequence (for instance, land registration before introduction of tree crops) can be postulated, and may provide a basis for a systematic ordering of prescriptions. It would certainly simplify area-based planning if a realistic framework could be formed to describe types of rural situation and their stages of development, (and how these can be identified), optimal sequences of inputs appropriate to these, and complementarities between programmes. Let us hope that our present confusion with a mass of disjointed evidence is a sign that we are near a break through.

Motivation and Choice in Research

In practice choices of research priorities and topics are often strongly influenced by personal inclinations, whether of individual workers or of directors of institutions. Research resources may tend to be disproportionately directed towards urban and industrial rather than rural and agricultural research. The relative ease (and therefore the relatively high returns in terms of research output and recognition for the researcher) of urban as compared with rural research may contribute to this. Urban populations are more accessible for survey research; expatriate researchers with wives, or local researchers with academic ambitions, may for their different reasons strongly prefer to live in capital cities rather than in the countryside: it may be only in large towns that the infrastructure of information a researcher considers necessary (cost of living indices, large-scale maps, mortality statistics, and so on) is immediately available; and the research concerns and techniques developed in industrialised societies and imported into Africa may carry with them an urban bias. Moreover, the health, social, economic and political problems of cities and towns, besides being more easily studied, are also more conspicuous to potential researchers than those of rural areas. They may also have a more clearly defined and manageable reference literature. In short, just as in the past there was an overemphasis on industrial and urban development, so still there is a danger of an overemphasis on industrial and urban-oriented research.

Another bias - in research design - may render work much less useful than it might be. Agricultural research stations have tended to attempt to maximise returns to land, as in developed countries, when there is continuing evidence that even in areas of dense population in Africa, labour at peak periods is a prime constraint. Professionals, isolated on their research stations, may be more inclined to design their work towards the requirements of an acceptable publication directed towards an international reference group rather than towards the much less well understood (and from a career point of view less important) rural environment which surrounds them. Like junior officials of Government these men deserve to be understood, and are doubtless acting as rationally as the peasants who reject their recommendations. Perhaps it is not too much to hope for a continuing shift in professional values away from what is long-term, pure, certain and inapplicable towards what is quick, dirty, approximate and practical.

Ordering Research Priorities

The foregoing arguments may appear to make a case for Government direction of research priorities. This, of course, already happens with research carried out by Governments, usually in the applied natural sciences. In Uganda and Tanzania, however, social science research is also formally controlled. In Uganda, the setting up of a National Research Council was announced in July this year. The Council was reported to be intended as "an all-embracing body for the control and direction of all forms of research in Uganda", and would have as its task "to co-ordinate research programmes to ensure the most effective utilisation of scarce resources of manpower, money and equipment in the interest of national development", and was to decide what research needed to be carried out in each field, to reduce these to a definite order of priority, and to allocate responsibility for carrying them out.[1] In Tanzania there is a system of joint University and Government committees for performing similar functions. In Kenya, there is a more flexible and less time-consuming set of procedures involving informal liaison between University staff and researchers on the one hand and the relevant ministries and inter-ministerial committees on the other. While it is difficult to generalise, both Tanzania and Uganda appear in danger of discouraging and driving away potential research resources through the introduction of ponderous procedures. A case is known where it took over

1. Daily Nation (Nairobi) 11.7.70

six months for clearance to be received for research on a non-sensitive technical subject which had been officially requested by a Government department. In contrast, the less rigid arrangements in Kenya at present allow more rapid decision and utilisation of research resources.

At least as serious, in the context of rural development, is the danger that a complex system of formal procedures through committees will lead to a misallocation of resources. Committees tend to be manned by senior civil servants and academics, and they may well take pedestrian or partisan views. In particular, senior academics may be further removed from the realities of the rural setting than those more junior who have recently carried out field work, and may be more inclined to support work in the more accessible urban environment. Further, such committees may discourage research in public administration, both because of actual or supposed sensitivity, and because of under-representation of public administration as a discipline, at precisely the time when such research may be most critically important. What is needed is a facility for discussion and communication between Government and researchers in which neither side takes up a rigid position (as is forced on the researcher when he has to submit a very detailed research proposal) but in which an attempt is made to maximise mutual benefits. This then encourages Government to support research, in anticipation of useful results, and motivates the researcher with the sense that his findings will be taken note of and may have practical effects. Such a pragmatic approach is practised in Kenya, but may be much less easy in Uganda and Tanzania.

Contributions from Abroad

The developed countries can assist research for rural development in many ways, not least through training, technical assistance, capital aid and their own institutions for research, and through appreciating the priority concerns of African countries. There is also a potential contribution from spin-off from their own less obviously related research programmes. Their own allocations of research resource to defence, the space programme, the next generation of supersonic airlingrs,and even organ transplants, may appear questionable, to say the least, when viewed internationally; but even these extravagant if exciting enterprises may have possible applications to rural development in Africa. One might be the provision by the American satellite programme of soils geological and crop-acreage data to African Governments. Another could be the application of modern management techques to rural administrative situations. Here, as with data-collection, what is required is sophistication in simplicity. Computers are not

essential in order to devise and operate a critical path approach to implementing a coordinated set of rural programmes, but there is a need for a careful understanding of the situation and imaginative training. Equally, a massive research effort is not essential in order to improve Government procedures, but an organisation and methods background and some local knowledge should provide the expertise and understanding required. In this context it could be misleading to talk about "intermediate organisation" similar to "intermediate technology". The most skilful and insightful approaches are needed; but the skill and insight have to be used to adapt techniques to a physically dispersed and low key set of conditions. These are very difficult tasks. Indeed, it may be not the major technological research undertakings of the industrialised countries, but tackling the problems of rural development in the poorer countries, that is the more exacting important, and worthy challenge to human ingenuity and imagination.

NOTES ON TABLE III:

1. The figures given here are very tentative and subject to many qualifications.

2. Financial years are from 1st July to 30th June. Expenditure is plotted as at the end of successive financial years.

3. Sources for acreage and tenant figures: Department of Agriculture Annual Reports for 1956, 1957, 1958, 1959 and 1960.

4. Revenue is not indicated but was probably of those orders of magnitude

1957/58	£12,000	-	£16,000
1958/59	£17,000	-	£26,000
1959/60	£50,000	-	£70,000
1960/61	£78,000		

It will be noted that at the time of the viability crisis revenue was still only a small proportion of recurrent expenditure.

5. After 1961, recurrent expenditure on scheme operation was amply covered by scheme revenue, largely as a result of management rationalisation.