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Approaches to rural development: lessons of a pilot project in Nigeria

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In the early 1960s the then Western Region of Nigeria began to be faced with the problem of high and steadily rising levels of unemployment among primary school leavers in rural areas. Help was sought from the International Labour Office, which in 1964 assigned an interdisciplinary team of five experts to carry out a thorough on-the-spot survey of rural development activities that were planned or already under way, and to make recommendations. The team's report led to the decision of the Western Region authorities in 1965 to set up a pilot project for integrated rural development.

By 1966 a regional survey had been completed and a project area selected. In 1966 and 1967 a number of detailed fact-finding surveys were conducted in the area in question and a summary of the conclusions was published in 1969.[2] Subsequently, the government of what had meanwhile become the Western State requested assistance from the United Nations Development Programme to finance the experiment.

The project started in January 1969 with the ILO as the executing agency and the FAO as the subcontracting agency. It was later also assisted by UNICEF and operated on this basis until December 1974, after which date Nigerian staff assumed full responsibility.

The object of this article is first to review the activities of the project and to see how the different and apparently unrelated programmes it embraced were in fact integrated, and then to examine the merits of the various approaches that can be adopted to promote employment through rural development.

[1] Project manager, ILO Pilot Project for Rural Employment Promotion, Otta, Nigeria, 1973-75.

[2] See P. Mueller and K. H. Zevering: " Employment promotion through rural development: a pilot project in western Nigeria ", in *International Labour Review*, Aug. 1969, pp. 111-130, which also explains the reasons for the selection of the project area and identifies its main problems and characteristics.

Project structure and activities

The activities of the project can be grouped conveniently under three headings, namely the infrastructural, agricultural and industrial programmes.

The infrastructural programme was wholly confined to building and repairing rural feeder roads in an area where they had been neglected for years. In some cases it was possible to repair the local district council roads so as to make them passable to motor vehicles again; in others entirely new roads had to be built, together with the necessary bridges and culverts, to give motor traffic access to villages that had formerly been served by footpaths only.

The agricultural programme had three main components. The first was the crop multiplication unit for cassava, cocoa and rice, which worked in conjunction with the agricultural extension service to form the nucleus of a Farmers' Centre. The latter in turn was developed to include a training school for farmers brought in for one-day courses, a seed and fertiliser distribution facility, and an agro-industrial complex of grain drier, store and rice mill. The third component was a co-operative formed to buy in paddy, process it, and then market the rice.

The industrial programme was a single complex known as Training, Advisory and Common Facilities (TACF). As may be surmised, the objectives of TACF were vocational training, industrial extension and the provision of industrial facilities such as the supply of materials and the hire of machines to local enterprises. It consisted of three separate units, one for woodworking (TACF/W), one for building (TACF/B) and one for metalworking (TACF/M). All three had the above-mentioned objectives, which they pursued either independently, as in the case of common facilities, or sometimes jointly, as in the case of industrial extension and training courses.

With the support of UNICEF two industrial prevocational training schools were established to give one-year non-residential courses in woodwork or metalwork to unemployed and underemployed school dropouts.

The integration of project activities

Project activities were integrated wherever possible for two main reasons. The first was that this was the only way they could help rural people who did not fall conveniently into one occupational category or another. An individual man or woman in the project area might be farming one day and trading, manufacturing or building a rural feeder road the next. The second reason was that joint utilisation of staff and facilities greatly improved the cost-effectiveness of each programme.

As far as the infrastructural and agricultural programmes were concerned, it was found that the best response and results were achieved when both operated together in a village. Road building without any increase in agricultural production, and increased agricultural production without a road to get the produce to market, are obviously both limiting circumstances.

The industrial and infrastructural programmes, for their part, assisted each other principally on building construction subprojects and in the manufacture of tools and equipment for villagers to use in making roads.

The agricultural and industrial programmes were integrated in activities such as the manufacture of farm tools and equipment by TACF/M to the design of the agricultural staff, and demonstrations by TACF/B of building with low-cost laterite cement during the one-day training courses for farmers at the Farmers' Centre. Both agricultural and industrial extension staff made use of common mass media equipment such as the mobile film unit. They also used each other's premises, for example the agricultural extension centre in one small rural town and the industrial prevocational school in another.

Lessons of the pilot project

General observations

Experience with the pilot project allows a number of very general observations. The first is that the cost-effectiveness of the project was far greater among the young than among the higher age groups. The youngest persons involved were the 14-16 year-old boys in the prevocational schools, who maintained a very high level of attendance with a minimum number of dropouts and achieved a standard of training which was acceptable to employers in rural and urban areas alike. At the other extreme were the older woodworking master-craftsmen in the cost-covering training workshop of the TACF/W furniture factory, who refused to " waste " time on training when there was subcontracting work to be done and were simply absent when there was not. This observation is also borne out by the experience of TACF/M with the intermediate age range. As can be seen from the table, the most progressive entrepreneurs were on average less than 30 years of age, and by the end of the pilot phase these young craftsmen were making the greatest contribution to the generation of both employment and income, mainly owing to their adoption of new methods and modern equipment.

The second general observation is that in regions which, like the project area, have been drained of their more able people, enterprises should not be developed beyond a scale manageable by the local population unless government is prepared to provide managers for as many years as may be necessary. The project assisted the smallest enterprises by means of training, extension and common facilities but at no time took over responsibility for management; these undertakings are still working successfully without regular assistance. At the other extreme, the project started a small- to medium-scale furniture factory employing between 30 and 50 people and managed by a government officer. Although the factory is successful and profitable, the workers are incapable of taking over its management and it will therefore continue as a government concern for the foreseeable future. In between these extremes, the project encouraged the formation of group farms (see below) and, in due

Comparative data on metalworkers covered by the project

Item	Group A[1]	Group B[2]	Group C[3]
No. of master-craftsmen	24	11	19
Average age	43	37	29
No. of apprentices	8	10	79
No. of journeymen	—	—	4
Average value of equipment (in Naira) [4]	79	126	484
Estimated average gross annual income (in Naira)	368	626	1 152

[1] Traditional blacksmiths and tinkers with few tools. [2] Blacksmiths/fitters with hand tools and sometimes a drill. [3] Blacksmiths/welders with hand and power tools and welding equipment. [4] 1 Naira = US$ 1.63 or £0.89.

course, a co-operative agro-industrial complex. As only one main product and two by-products are marketed, the management tasks are not too complex, and although the local government is still providing managers for the time being, there is every likelihood that in two or three years the co-operative will be able to take over full responsibility.

The third general observation is that even where the objective is employment promotion it cannot be automatically assumed that labour-intensive technology is the most appropriate. The infrastructural programme staff tried two alternative technological approaches. In the early years of the project an attempt was made to use labour-intensive technology as much as possible, but it was found that the villagers would not contribute their labour free. Later on, some capital equipment was introduced for the heavier work such as loading, scraping and rolling, and village labour was then volunteered free for labour-intensive work such as bush clearing and the construction of ditches and drains. So a combination of labour- and capital-intensive technologies turned out to be best in this case.

In the agricultural programme it was found that there was virtually no choice in the project area between labour-intensive and capital-intensive technology. The traditional agriculture uses slash-and-burn techniques without mechanical or animal-powered equipment, and in fact manual digging, sowing and harvesting is the only possible method of cultivation between the many tree stumps. The only alternative at present is capital-intensive technology to clear the land for mechanised cultivation, and whether this becomes possible depends on government action. It is possible that an effective and cheap labour-intensive tree-stumper could be developed to suit local conditions, but this would require considerable investment in research and development.

The industrial programme also experimented with laterite cement block-making, which is an intermediate technology between the labour-intensive all-laterite method and the more expensive one using sand/cement blocks. Pre-

liminary research showed that the optimum technology for a specific building depended on the location of the site relative to supplies of cement, sand and suitable grades of laterite.

Observations on specific approaches

PREVOCATIONAL TRAINING

One of the pilot project's most successful ventures was the Prevocational Schools Programme, under which such schools were established offering both woodworking and metalworking courses in two towns. Participants were recruited among unemployed and underemployed youths, especially those with primary school training only, who had dropped out for lack of ability or because their family could not afford their schooling. After a one-year course concentrating on practical work but including some classroom studies all the youths found employment, 20 per cent of them in very small industrial establishments of one to five persons in the project area, and the remainder within a radius of 100 kilometres, principally in Ibadan, Ikeja and Lagos. Although a large percentage did migrate to the cities, many still return home at weekends and some send money to their families when they can, so that it cannot be said they are entirely lost to the rural economy. A survey carried out among the younger craftsmen found that some had migrated to urban areas in order to gain experience and accumulate capital before returning to their home town. By giving a second opportunity to youths who had a low achievement rating in an educational system oriented towards " the three Rs ", the programme made not only a technical and economic but also a human contribution.

VOCATIONAL TRAINING IN COST-COVERING WORKSHOPS

An approach to rural development that is frequently discussed but rarely applied with success is to establish training workshops fully covering their own costs. However, the pilot project achieved this with a woodworking shop which, by the end of the project, had grown into a profitable furniture factory. In 1973/74 total sales were 73,702 Naira (approximately US$120,000) and profits 8,001 Naira (approximately $13,000) after deducting all costs including depreciation, transport, management and government staff. By the autumn of 1974 quarterly turnover and profits were double the corresponding figures for the previous year, and in 1975 the factory continued to operate successfully.

Some aspects of the training were entirely successful, others less so. For example, the original goal of training master-craftsmen and their journeymen and apprentices was only partly achieved. The older master-craftsmen were not interested in training, but only in earning money. Three who were more receptive, however, were eventually " seeded out " to a new workshop. The younger journeymen and apprentices were eager to learn new skills, while 20 apprentices recruited direct by the factory were trained in all departments

(including the machine shop, spraying, upholstery, etc.) and by the end of two years had reached a satisfactory level.

Although cost-covered training was achieved it cannot be recommended as an approach without some qualification. Setting up the factory absorbed an unduly large proportion of the project's resources in both time and money, and it may be asked whether these would not have been better applied to the establishment of an ordinary training school, for instance. Perhaps the best course is an intermediate one, i.e. to establish workshops whose objective is simply training but which make some contribution to covering costs when possible.

PRODUCT DEVELOPMENT

An interesting approach was used to assist metalworking master-craftsmen in the project area. The first and possibly most difficult stage was product planning, which included market research and product development. This entailed visits to possible market outlets to identify metal products that could be made and sold at a profit. When possible, the products selected were simple enough to be made with the existing equipment of the better master-craftsmen (i.e. those belonging to Group C in the table). For products requiring more costly equipment the necessary tools could be constructed and/or used in the project's central workshop. Project staff then made prototypes of the selected products, which were afterwards demonstrated to wholesalers to obtain the first orders. It should be placed on record that one large firm gave preference to rural producers for goods of equal specification and price. Master-craftsmen of known ability were then invited to attend the project's central workshop —with their journeymen and apprentices—for training. This was confined to a short production run of the product, and when it was completed attempts were made to obtain a repeat order; if these were successful the second production run was made in the master-craftsman's own workshop whenever possible. At this point the master-craftsman became independent of the project except that he was free to ask the extension service for any advice he needed.

AN EXPERIMENT IN CAPITAL INJECTION

A very common complaint among small-scale industrialists, not only in Nigeria but also elsewhere, is that they are short of both working capital and capital equipment. The project carried out an interesting experiment with the woodworking master-craftsmen, which indicates that more capital equipment is not necessarily the " open sesame " to increased production and sales. The furniture factory had two very successful and fast-selling products, a lounge chair retailing in the urban market at 17 Naira and a settee for 30 Naira. For each of these items a complete kit of parts—sawn, shaped, jointed by machinery and ready for hand finishing—was sold to local woodworking master-craftsmen, one in each of the two major rural towns, with a view to broadening

the employment effect. The price charged covered the principal variable costs only (i.e. timber and labour), excluding all overheads, and was in fact subsidised. This enabled the two selected master-craftsmen to retail the assembled chair and settee at only 7 and 10 Naira respectively, yet even at this low price demand in the rural market was very limited. The provision of machined timber at minimal cost represented the facility of capital equipment to produce more cheaply, but this did not increase sales. The alternative approach of planning and marketing new products for the metalworking master-craftsmen produced more significant results.

Capital is available for worth-while investment from the Industrial Credit Corporation of the Western State government, but this facility was never used by the small-scale industrialists of the project area. The main problem was the lack of management know-how to apply for a loan, supervise its use and ensure repayment.

The conclusion from this limited experiment was that marketing, product development and management expertise are prerequisites of capital investment.

THE FARMERS' CENTRE APPROACH

It was realised that with a limited agricultural extension staff it would be difficult to reach the many small-scale farmers. The answer was to gather them together in groups so that they could retain their individual smallholdings while working together on a larger plot (the group farm) where mechanisation and improved techniques could be used.

As mentioned earlier, the core of the Farmers' Centre was an agro-industrial complex consisting of a grain drier, a store and a rice mill all run by a farming and produce-marketing co-operative, which was in turn an extension of the group farms. The activities of the Farmers' Centre included seed and fertiliser distribution; a tractor hire service; buying in paddy to be dried, stored and milled before marketing; and a training school. The training was given in one-day courses on subjects such as mechanisation and co-operatives. Sometimes there were contributions by the industrial extension service, for example demonstrations of building techniques using laterite cement. To ensure that the farmers were able to attend, a project-owned lorry converted to a simple bus carried them to and from the Centre.

This approach has great potential but had not been fully developed by December 1974.

THE INFRASTRUCTURAL APPROACH

The approach to rural road building was discussed above when considering alternative technologies. There is no doubt that rural people can see the benefit of an improved infrastructure and with adequate supervision and equipment are prepared to give their labour free for community development projects. The experience of road building could be extended to water supplies, sewerage and other types of infrastructural work.

THE PROVISION OF COMMON FACILITIES

The experience of both the agricultural and the industrial programmes in providing common facilities was encouraging. As outlined above, the farmer could obtain seeds and fertilisers, hire tractors and use a grain drier, while the industrialist could obtain sawn and planed wood, hire cement-mixers and use fixed woodworking and metalworking machinery. A scheme for the hire-purchase of hand tools for small-scale workshops also proved successful.

Conclusions

The two main lessons of the pilot project are that the approach or approaches adopted should be aimed at securing long-term benefits, particularly by providing assistance to the younger generation, and that all the various programmes should be integrated.

In areas where almost the whole population consists of very small-scale farmers, traders and industrialists, and the more able persons have already migrated to urban areas, far greater cost-effectiveness can be achieved by giving prevocational training to children and adolescents plus extension assistance to the younger entrepreneurs in their own enterprises. The alternative is to attempt to assist elderly farmers, traders and craftsmen who as a rule lack both education and ambition. Although the establishment by government of medium- and large-scale industries and farms has a considerable immediate impact on rural employment, the necessary managerial skills and experience may have to be imported into the area, and can therefore be as easily re-exported, while continuing employment may depend on continuing government support.

Agricultural and industrial workshops, used for both prevocational training and extension courses, should perhaps form the technological core of future rural development programmes. The extension officers' work should be closely integrated with that of the school instructors by helping to place graduates in jobs or self-employment and assisting them afterwards; while the instructors should help to develop new techniques and products and train adults on extension courses.

Undoubtedly, some of the lessons learnt may not apply in other regions, and local circumstances must always be taken into account. However, as far as the Western State of Nigeria is concerned, the project has certainly achieved its goal of breaking new ground. A survey of other parts of the state has now been completed and draft plans have been made for new growth centres to exploit the experience of the pilot project.