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Gezira: A Case Study in Economic
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Gezira: A Case Study in Economic Development

Reed J. Irvine

The Gezira plain is a broad area 200 miles long and 80 miles across (about half the size of South Carolina or a little larger than Taiwan) lying between the White and the Blue Nile in the heart of Sudan. At the turn of the century, it was a hard land with few trees to break the monotony of the flat, dusty plain, supporting only a sparse population from the crops that were cultivated during the three months of the year during which rain fell. Fifty years later, it was a tremendously productive area, with an irrigated area of a million acres, about a quarter of which was planted in valuable long staple cotton with a market value of over \$45 million. A greatly increased population now enjoyed a standard of living that would have been thought unthinkable fifty years earlier, at a time when the way of life in this barren area had probably not changed appreciably since Biblical days.

The economic development of this area over a relatively short period of time provides some valuable lessons to a world that is deeply concerned with the problem of raising the living standards of backward peoples. The story and the lessons have been told in a recent book by Arthur Gaitskell, who was intimately concerned with the development of Gezira for over 30 years. ^{1/} This detailed and thoroughgoing study provides the stuff against which many an assumption and theory of development can be tested, and it seems likely than many of those so tested will emerge considerably modified.

The Gezira project was what today would be called a joint venture. There were three partners in the venture--(1) private entrepreneurs who put up the operating capital and managed the cultivation and marketing of the crop, (2) the Government of Sudan, which was administered by the British and which provided most of the fixed investment, largely by floating foreign loans, and (3) the tillers of the soil, who operated as share tenants. The project required a heavy fixed investment in a large storage dam and irrigation canals and transportation facilities. It also required a sweeping land reform which made it possible to introduce efficient use of valuable irrigation water and other large-scale farming techniques. The unique feature of the land reform was that no property was confiscated. The title to the land was left with its original owners, but they were required to lease it to the Government at a reasonable rental for a period of forty years. The land was divided up into regular plots which made for efficient management of the irrigation process, and the plots were rented to the cultivators on a share basis. Landowners were permitted to take up such tenancies as they and the members of their family could cultivate. Inefficient

^{1/} Gaitskell, Arthur, Gezira, Faber and Faber, London, 1959.

cultivators were subject to dispossession by the management. The tenant rights could not be mortgaged and it was provided that no debts except those incurred for labor performed could be secured by a legally enforceable lien against the crops.

It will be seen that this land reform had nothing in common with the variety of land reforms that has been carried out in many countries since the war, in which the land was purchased by the various governments, often at a very nominal price, and resold to the cultivators. The Gezira method had the advantage of working no injustice on the landholders, for they were paid a fair rental and could sell their title on the market if they wished; at the same time it made possible a technological revolution in farming without reducing the cultivator to the status of a hired hand.

Proper use of the precious water required a regimen totally new to the Sudanese cultivators. They had to follow a strict schedule of planting, weeding, watering and harvesting. It was the duty of the management, which was a private company, to see that all the tasks were performed and keep the operation going smoothly. This was no mean task, and it required a substantial force of field men to see that things were done properly. At the same time, the tenant had considerable freedom, and his success depended to a large extent on his own efforts. Unlike cooperative arrangements, the profits were not pooled, and so to a large extent success or failure depended on how well the individual managed his own affairs, rather than on how the entire group performed.

However, the individual tenant did get benefits that large scale operations can bring. The plowing and spraying was done by machines provided by the company. Research, which was of crucial importance since plant diseases threatened for a time to overwhelm the entire program, was provided by the company. Credit to finance each stage of the farmer's operations was also made available to him on a systematic basis and at low cost.

The success of the scheme was by no means assured from the beginning. Rough sledding was experienced during the depression years, when low prices and low yields combined to make the picture black. Plant diseases were at this time a serious threat until they were overcome by research and new methods that involved a great deal of hard work on the part of the cultivators.

In the end, the scheme proved a tremendous success for all three cooperating parties. The private investors were well rewarded. Dividends averaged 15 per cent on nominal capital from 1926 to 1950, when the concessions were terminated and the companies liquidated. A liquidation profit of 25 shillings for every 20 shillings investment was then paid. The Sudan Government ended this same period with a large direct profit from the project, having laid out direct expenditures of £E 22 million and taken in direct revenues of £E 38 million.^{2/} In addition, of course, its revenues were greatly increased by the prosperity which the project brought to the country. Service of the foreign debt was no problem, being easily covered with the proceeds of the increased exports. The tenants netted £E 25 million over the 25 year period, and the average profit per tenancy in 1950 was £E 281 from cotton alone. These figures

^{2/} The Egyptian pound has had a declared par value of \$2.87 since 1949. During the prewar period, it generally maintained a value in the vicinity of \$5.00 though it sank as low as \$3.36 in 1932. From 1939 to 1949 the rate was \$4.12.

take no account of the value of the other crops, grain and fodder, which were regularly produced on the irrigated land. The tenants were transformed into a new elite, and tenancy rights today are an extremely valuable, though not a negotiable asset. The tenants themselves have graduated to the rank of gentleman farmer in numerous cases, hiring the labor to work their plots.

Although the scheme has proven so enormously profitable, Gaitskell emphasizes that the profit motive was not allowed to outweigh the interests of the native population. These were carefully safeguarded, though Gaitskell thinks in retrospect that not enough was done to try to see that their cultural development kept pace with their economic progress. Materially the lot of the people has been tremendously improved, and the country is economically viable.

It is unlikely that this would have come about without the private capital and personal spirit of enterprise which were responsible for beginning the project and advancing it against great difficulties. In reading Gaitskell's account, one can't but be impressed by the importance of the commercial motivations of the management in the overall success. There could be no question of leaving irrigation canals unused or of wasting valuable water, since this could mean the difference between financial failure and success. This is in marked contrast to the situation prevailing in some other African and Asian countries, where after the expenditure of large amounts of publicly provided capital on major irrigation works the water has gone unused and the canals have been allowed to deteriorate. Since it was not easy to raise capital for investment in Sudan, it was most important that it not be used wastefully, and every effort was made to get maximum productivity from it.

On the other hand, participation of the Government was of vital importance, for it is doubtful that sufficient private capital could have been raised to carry out the project without granting or selling large tracts of land to foreigners. This would have run counter to the desire to safeguard the rights of the Africans and avoid the growth of serious social problems. The Government, with the assistance of guarantees from the British Treasury, was enabled to raise funds in the London market to defray a large part of its portion of the capital costs. It also benefited from a long term interest-free loan from Egypt, which shared with Britain co-dominium in the Sudan. This was a precursor of today's "soft" loans, and while, in retrospect, it is clear that the project could have paid interest on this credit, the generous terms undoubtedly made the plans more attractive in the early stages.

According to Gaitskell, high among the reasons for the success of the Gezira project was the policy of making haste slowly. Valuable experience was acquired by means of pilot projects, which took time, but which in the end saved both time and money and perhaps averted complete failure. Gaitskell concludes from this experience that "the establishment of equitable and practical principles of development is more important than the pace." This is worth considering these days when there is such a great temptation to throw huge sums of capital into doubtful projects merely because time is considered to be the element that needs to be most economized.

By patient effort and adherence to sound economic principles, the Gezira plain was made into a source of wealth for the inhabitants. Economic progress might have been faster had land grants been made to Europeans and had foreign labor used to

the regimen of modern farm operations been imported; but this would have surely created grave social problems in the long run. Operations based on wage labor were rejected after they had proven unsuccessful in a pilot project. The cooperative-type organization was also found to be unsatisfactory, as the Sudanese were less eager to exert themselves when the gains from their effort went to the group rather than the individual.

Gaitskell feels that some things ought to have been done differently; for example, he thinks an equalization scheme to even out the fluctuations in the year-to-year profits of the tenants would have been desirable and that progress might have been steadier if the high profits of the good years had been partly carried over to supplement the returns in the bad years. A few years of exceptionally high profits followed by a fall had unsettling effects on the cultivators. In Gaitskell's mind this outweighed the possible good long-run effect. He notes that the good years before the depression probably encouraged the tenants to stick out the profitless years of the early thirties. On the other hand, serious troubles were experienced with the tenants and communist influence secured a hold when incomes reverted to the more normal figure of LE 300 per tenancy in 1952 after having soared to a fabulous LE 800 in the extraordinary year 1951. He does not believe that it would be feasible to try to meet this problem either by trying to stabilize the price of cotton on the world market or by diversification of production in Gezira. He thinks that the former would be unworkable and that the latter would run counter to the strong desire of the cultivators to maximize their earnings. No crop that could be grown in Gezira approaches cotton in profitability, and the possible safety that diversification might bring has little appeal when weighed against the loss of income that it would involve year in and year out.

The experiences gained in the development of the Gezira plain could be studied with profit in many countries of the world. One is tempted to agree with a Pakistani observer, Sayed Mohammed Afzal, who, hoping that it might prove to be a useful example for Pakistan and India, described the Gezira scheme as "one of those outstanding experiments on socio-economic problems of the current century (which) . . . deserves to go down in history as a great romance of creative achievements."^{3/}

^{3/} Quoted in Gezira from an article entitled "A Note on the Gezira Scheme, Anglo-Egyptian Sudan", in the Indian Cotton Growing Review. April 1949.