

Technology Transfer to African States

A look at the English-speaking Black States; situation unsettled, but there is recognition that transfer of technology justifies payment

BY W.C. HOWARTH*

Africa may be unfamiliar ground, so I should perhaps write briefly about the geography. Africa is vast continent and compared with Europe an under-populated continent. It conveniently splits itself into three main belts. In the North are the predominantly Islamic/Arab States, some oil-bearing and wealthy, most of which may have more in common with the Middle-East States than with African countries to the south. In the extreme south there are the so-called White-dominated and relatively industrially-advanced states, notably the republic of South Africa. In the middle, and it is a very large middle, we have what I will term the real Africa or perhaps more graphically the Black African States. With the exception of Ethiopia and Liberia these states are former colonies of European countries and nowadays they are classified as developing countries.



W. Howarth

It would be impossible to deal with all three belts in a short paper so I will concentrate on the Middle Belt and in particular on experience of the English-speaking Black African States. These states vary tremendously in size, in the wealth of their natural resources, population and so on. This has affected not only the pace of development but the political philosophy and the economic policies of the individual states.

Nigeria

At one extreme there is Nigeria, potentially the giant of Africa. It has wealth from oil and other natural resources, by far the largest population of any state in Africa (at least 60 million) and an expanding infrastructure — road, rail and air transport, port facilities, electric power, water supply, communications, etc. By any standard Nigeria is a fast "developing" territory yet unless one has visited Nigeria it is difficult to visualize the distances between major towns and the problems of distribution, etc.

At the other extreme, there are territories such as

**Industrial Property Adviser, UAC International Limited, London.*

Lesotho and the Gambia with populations less than that of the City of Rome and with few natural resources or anything more than the basics of an infrastructure. These might perhaps better be described as "under-developed" than as "developing."

It is very difficult to generalize in the context of Black Africa. However there seem to be four basic factors which to a greater or lesser extent are common to all the Black African States. These are:

From LES Italy International Conference

1. An economy hitherto based essentially if not solely on agricultural or mineral resources.

2. A rapidly rising trend in the standard of education of nationals resulting in a gradual flow of people away from the land and into the towns and cities.

3. A large unemployment or underemployment problem.

4. A shortage of foreign exchange.

I think there is now a widespread belief that industrial development is the key to economic growth which will solve some or all of these problems. How this can best be achieved depends not only on the political philosophy and economic policies of the states but also on the viability of possible industrial projects — a point sometimes overlooked in the past.

Technology Transfer

Contrary to what many people think, the transfer of technology to Africa is not a recent phenomena. The first tentative steps toward manufacture/industrialization were taken before the 1939-1945 war and further ventures were undertaken in the years before the states gained independence. In these relatively happy carefree days people weren't obsessed with licensing, etc., (we had few if any licensing executives). Such technology as was transferred was invariably part and parcel of predominantly overseas investment in such ventures. In effect those who created the manufacturing units provided the technology required.

Since independence many of the African States have gone through phases of what I will loosely term further industrialization. Most of this was directed toward import substitution, e.g. textile weaving and printing, clothing, footwear, plastics, assembly of numerous items supplied c.k.d food processing, brewing, etc. In most of these ventures there was substantial if not total investment by a former main overseas supplier and the general pattern that technology accompanied investment remained fairly constant. Up to this point there were few technology licenses, etc., and few if any

controls.

Major changes have occurred during the present decade following political awareness of African industry's dependence on foreign investment and/or foreign technology and, of course, balance of payments problems. The structure has undergone and is still undergoing rapid changes. There is now an abundance of indigenization decrees, national plans, controls on dividends and other forms of remuneration, all based on a desire that each state should control its own destiny. Overseas investors have had to sell-off part and in some cases all of their equity to nationals of the states or to local governments, often at state-controlled prices. This has put a different complexion on the continuing transfer of technology and some established investors are now having to negotiate licenses, etc., on an arm's-length basis.

Salient Fact

All this has brought the technology transfer question to the fore in Black Africa. There is growing awareness that whatever may be desirable in theory the salient fact is what worthwhile development requires foreign technology, know-how, technical assistance and training. There is also increasing awareness that most of this technology and assistance can be supplied only by private enterprise and nowadays this tends to mean supplied under licensing and technical assistance agreements.

So much for the background. The transfer of technology is, as I indicated, now very much an "in" subject. However, in the context of Black Africa it is still a subject which tends to have attracted more theoretical discussion than practical development. In essence, the subject is still in the "infancy" stage in Africa. For example, there is no African legislation or special controls on the lines of those in countries such as Spain, Mexico, Brazil or Argentina, or for that matter any *standard* procedures for screening agreements. In Africa, each and every transfer of technology tends to be a one-of job and it is usually a question of finding and negotiating the most effective way of operating within the restrictions which apply from time to time. These restrictions cannot be summarized or predicted on a general basis. The so-called wind of change in Africa is still a long way from blowing itself out and it would be a rash man who would even try to predict the immediate future.

If anyone is thinking of transferring technology to Africa the best advice I can offer is that he should investigate the background very carefully indeed, particularly the viability of the project and the political and economic conditions in the state or states concerned. These affect such basic questions as investment or licensing or a mixture of the two. On investment, the Black African States cover everything from almost total reliance on overseas investors, through mixed ventures (often in decreed proportions) to total investment by the state itself. The technical fields for local development (with state participation or assistance) vary from state to state. Some favor developments which convert local materials into manufactured products with higher export potential, others are looking essentially for further import sub-

stitution, e.g. pharmaceuticals. Some are willing to consider general expansion on any viable basis to create a widely-based industrial economy.

All of these factors influence the manner of participation, the earning and remittance of profits, the extent of allowable payments for technology, know-how etc., tax incentives and so on. A potential transferor/licensor must investigate these and other relevant factors, e.g., the existence of double-taxation agreements, before he can hope to negotiate realistically. He should also check on the potential of locally available staff; in many fields the local recipient/licensee or the technology may be starting from scratch with a labor force the majority of whom have had little or no practical training or industrial experience.

Almost the only factor which the African states have in common is acceptance of what has been termed the UNCTAD principle that governments of developing countries have a legitimate interest in preventing excessive exploitation of their one-sided technological and financial dependence, in particular the screening of agreements to ensure that there is no tax evasion (artificially high royalties and expenses), to control remittances and generally to avoid unduly restrictive features and tie-in clauses. I do not wish to appear unduly cynical, but some states seem to have found it easier to implement procedures for controlling fee/royalty-bearing agreements than procedures designed to encourage industrial development.

Nowadays the screening and control of license or other agreements which involve the payment and remittance of royalties, service fees or capital sums is part and parcel of the transfer of technology to the majority of African States. The regulations vary from country to country and are sometimes set out in relatively obscure memoranda or notices under Exchange Control Regulations.

However, most have in common the point that the local beneficiary or licensee must clear the agreement with the Central Bank or Ministry of Finance *before* entering into a royalty or fee bearing contract. In effect licenses, etc. have to be negotiated both with the licensee and the state concerned. One must always have regard to the peculiarities of the Exchange Control system when working out the terms.

You may feel that the position in Africa is not unlike that in developing countries elsewhere in the world. However, some African States tend to have strict and not always rational orders of priority for calls on the limited funds of foreign currency available. This can sometimes lead to strange preliminary decisions on the nature of contracts or on what might be regarded as essential parts of contracts.

As I said earlier, it is difficult to generalize in the context of Africa. Nevertheless it might be enlightening to illustrate what can and sometimes does happen in relation to certain basic arrangements for the transfer of technology.

Simplest Package

First technology for the establishment of what is in the territory a completely new local industry. In theory, at least, this is often the simplest package to

negotiate simply because the need for the industry has been established and the project has the backing if not the direct participation of one or more Government departments. A typical package here might cover:

1. Planning and design of the factory.
2. Plant and equipment required.
3. Supervision of the erection of the factory and the installation and starting-up of the plant and equipment.
4. Disclosure of processes and instruction in manufacturing techniques, methods, etc. for efficient operation of the plant and equipment.
5. Raw materials, components, etc.
6. Quality control and testing.
7. Packaging, where appropriate.
8. Ongoing technical assistance, servicing of plant equipment, etc. with, of course, production covered by such guarantees as may be appropriate. In the normal even such an arrangement would call for agreed stage payments during the setting up period followed by annual royalties or fees, possibly on a sliding scale.

In some states you may get such a package approved without difficulty. In others you may run into difficulties with Exchange Control or other government departments on any or all of the points listed above.

On the planning and design of the factory it is not unusual for Exchange Controllers to point out initially that such aspects can and should be dealt with solely by local architects, surveyors, etc. and that payments of foreign currency cannot be sanctioned for services/assistance of this nature. This can be frustration factor No. 1. However competent the local architects may be, the special problems attached to what is, in the state, a new industrial project, e.g. factory layout, plant weights, stresses, etc., water/power supply, have to be explained in detail. The architects themselves recognize that a great deal of time and effort can be saved and a more efficient factory planned and built, if assistance is rendered by personnel of the licensor with experience of similar projects elsewhere. Nevertheless, it might take weeks if not months to sort out this basic point with an Exchange Controller unfamiliar with industrial projects.

On point 2 — plant and equipment — supply of plant and equipment by the transferor of the technology can arouse suspicion that this will be at inflated prices and thus involve additional hidden payments. It can be simpler to provide only that the transferor will give all necessary assistance in relation to the purchase of plant and equipment including inspection before shipment if required by the purchaser. Another factor here can be the grant of import licenses to bring in the plant and equipment. Apart from possible payment problems there may be general quota restrictions, port congestion, etc. all of which can affect the timing of shipments to coincide with factory erection. Make sure licenses, etc. are obtained at as early a stage as possible.

Points 3 and 4 — supervision and instruction — meet with the same basic problem, namely the need for expatriate quotas and work permits for employees of the transferor seconded to the local company. These may be granted by officials in a Ministry totally unconnected with the project. Such officials may have no industrial/technical knowledge and initial decisions

may be based on a set of general rules. The point is most important in relation to experienced employees, e.g. factory foremen, who do not have advanced academic qualifications but are essential for implementation of training programs and the starting up of plant and equipment. It must be remembered that most infant industries in Africa have to start off with an untrained labor force, few of whom are likely to have had any relevant industrial experience. On-the-spot training is usually essential as also is the need to give more senior staff training and experience in the field in Europe or elsewhere. With local academically-qualified staff, there may be a gulf between theory and practice, so instruction and training are among the most important aspects of any transfer of technology. In most cases in Africa, you cannot simply transfer your technology in written form; you must teach people how to use it. You must insist on work permits, etc. for key personnel at all levels, not simply those at the top level.

Point 5 brings us back to suspicion of hidden payments if there is a restriction on sources of supply of raw materials, components, etc. Although such restrictions may be justified in many instances, particularly where the local operation is essentially little more than an assembly operation in the early stages, this can be another time-wasting factor in the negotiation process. You should also look into the position of continuing supplies of raw materials, etc. If any of these have to be imported, check whether you need import licenses and, if so, whether these are issued on a quota basis.

I will go straight to factor 8, on-going technical assistance. Strange as it may seem, continuing technical services seem to be somewhat suspect since there is a tendency to consider that the need for such services should diminish rapidly as the local people gain experience and expertise. Long-term agreements tend to receive unsympathetic treatment and it is certainly my experience that fixed term agreements are easier to negotiate; particularly short term, i.e. three to seven years, arrangements, with or without an option to renew.

Payments

This brings us to payments. Initial-stage payments rarely present serious problems since these can usually be costed and justified. The difficulties are invariably over royalties or other continuing fees when the factory is in operation. Nowadays many Exchange Controllers in Africa are firmly opposed to royalties, etc. calculated by reference to NSV, mainly because of rampant local and international inflation. At this time, the formula most widely favored is a percentage of the recipients profit. This is far from being an ideal yardstick for an infant industry, but a lot of hard bargaining is needed to arrive at a future, whatever the method of calculation, which exceeds the Exchange Controller's idea of a permissible percentage of gross profit. What may be an acceptable alternative, dependent on the nature of the technology and the tax situation, is an outright sale of the know-how for an agreed capital sum repayable by X number of annual installments. Certainly one should consider all possible payment

procedures likely to produce an appropriate total sum for the complete package.

Now a word or two about lesser transfers of technology, for example, licenses to an existing industry to use certain know-how coupled with technical assistance.

An important factor on this is the relationship between the parties. Nowadays few African States will sanction royalty/fee bearing arrangements between an overseas parent company and a local subsidiary. Exchange Controllers tend to be suspicious of licensing arrangements between related companies and some seem to think that such arrangements are designed solely to increase the amount of profit flowing to the overseas investor or in some way reduce the amount of profit which is subject to local taxation.

Equally important is the nature of the technology being transferred or licensed. This, above all, influences the type of agreement and you must consider carefully what is best tailored to the state in question, bearing in mind the known preferences of the local authorities. You may have a straightforward license, an outright sale, a technical aid agreement, a management contract, a special services contract or a mixture.

Flexibility

My experience in Africa covers advice to both transferors and recipients of technology. My experience when acting for recipients is that many companies who are in a position to provide the technology required in Africa tend to be obsessed with adherence to standard-type contracts which have served them well in the industrialized countries. There seems to be an in-built preference for licensing almost regardless of the nature of the technology available. This may or may not tie-in with the rapid growth of Licensing Executives in companies throughout the developed world! In Africa you have to be ready to bend with the prevailing wind, and as I said earlier this can veer and change direction without notice. The authorities and others concerned may not always see the problems in a straightforward industrialized or technical manner. Sometimes there are extraneous aspects which become important, regardless of the context or industrial merits.

As I said earlier, long-term arrangements and royalties/fees based on sales are both suspect. You must always ask yourself whether the technology/know-how should be the subject of a license or a sale. The answer usually depends on the complexity and confidential nature of the technology or know-how. At this stage, patented technology may be of limited application (1) because of the small number of local patents and (b) because the technology required is not of the most advanced nature. If what you are supplying is essentially the benefits of information and expertise embodying accumulated experience and factors, few or none of which are secret per se, you may be on a better wicket vis-a-vis Exchange Control with a fixed-term sale agreement with the agreed price paid by annual instalments. Obviously the outstanding balance would become payable on early termination. One other point here, please do not underestimate the sophistication of Exchange Con-

trollers in Africa. Many are familiar with developments elsewhere in the world and most are aware that rights in know-how, unlike patents, can be kept alive indefinitely so that a licensee could find himself under a perpetual obligation to pay for know-how which may be blunted if not overtaken by competitive techniques. The Controller will usually want a fixed term for the payment of royalties but will rarely worry about the imposition of continuing restrictions to protect confidentiality.

Potential Difficulty

An area of potential difficulty in Africa is that covered by technology which is already the subject of licenses containing provisions for the "equal treatment of licensees." Anyone in this position should tread very carefully in Africa because practice and royalty rates elsewhere may cut little or no ice with African Controllers. You could be faced with a demand to reduce the royalty charged to the African licensee regardless of the fact that this would confer more favorable terms which might need to be extended to other licensees. Unfortunately, I do not know the answer to this; I can only warn those in that position.

Finally, there is very little legislation in Africa which is concerned directly with the transfer of technology. One of the reasons may be the almost total absence of modern patents legislation. In fact, only Nigeria has a Patents Act with provisions which directly affect licensing. These provisions are set out in Section 23 of the Nigerian Decree No. 60 of 1970 and after covering the point that licenses have no effect against third parties unless and until registered that Section goes on to say:

"(3) Any clause in a contract for a licence under subsection (1) above is null and void in so far as it imposes on the licensee in the industrial or commercial field restrictions which do not derive from the rights conferred by the relevant patent or design or are unnecessary for the safeguarding of those rights:

Provided that—

(a) limitations concerning the scope, extent, territory or duration of the exploitation of the patent or design or the quality or quantity of the products in connection with which the patent or design may be exploited,

(b) obligations imposed on the licensee to abstain from all acts capable of prejudicing the validity of the patent or the validity of the registration of the design; and

(c) in the case of a patent, limitations justified by the interest of the licensor in the technically efficient exploitation of the subject of the patent; are not restrictions of the kind mentioned in this subsection".

Without giving away confidential information, I think you will find that these provisions are simply the forerunner of more stringent provisions which will apply across the board in Africa when uniform patents legislation is finally worked out and enacted by the numerous states. The question of abusive provisions in licenses is likely to be covered in detail along the lines of current WIPO/UNIDO thinking and we may get a position in which contracts will be invalid if they are not registered and will be incapable of registration if they contain any of the abusive provisions specified in

(Please turn to Page 240)

Licensing Situation in Australia

(Continued from Page 190)

standard of living and to expand into the logical marketplace on its boundaries. It must continue to actively seek new sources of technology from abroad as well as increasing research and development itself.

It is up to Australian business to take a more active part in communicating its needs to those who can supply them. Potential foreign operators could do well to establish lines of communication with Australian business concerns with a view to future development of this country and its resources.

Technology Transfer to Africa States

(Continued from Page 213)

the legislation.

What is perhaps more heartening in the long term is gradual widespread recognition of the fact that any transfer of technology, patented or unpatented,

justifies payment of remuneration which is equitable with due regard to all the circumstances of the case. No doubt people will always have differing views on how much or how little is equitable but at least we shall be quantifying the sum and not arguing the basic point as to whether or not payment is justified. It takes time but I think people in Africa are beginning to realize that in the technology context what you can get for nothing is rarely worth having.

Restrictions in Latin America

(Continued from Page 235)

12. Lic. Jaime Alvarez Soberanis, Legal Aspects of Mexico's New Law, *Les Nouvelles*, Vol. XI, No. 3, September 1976 at 159.
13. Normative Act 15 at Section 4.5.2.
14. Denis A. Daniel, *Licensing in Brazil*, 1975 at 34.
15. Normative Act 15 at Section 4.2.
16. Willis, at 354.
17. Normative Act 15 at Section 4.5.1.
18. Willis at 345.
19. For a Spanish text and English translation, see *Business Trends, Legal Supplement*, Vol. III, No. 43, October 15, 1974 at 133.
20. Ladas, *Latin American Economic Integration and Industrial Property*, *The Trademark Reporter*, Vol. 62 January 1972 at 1.