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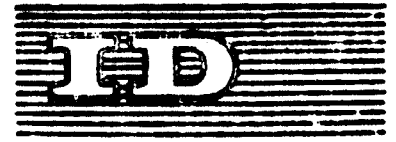
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When I first started to write this paper, I was not at all
sure of what I was doing. I had only a few ideas in my
mind, and I was not sure if they were worth writing about.
But as I went on, I found that I was interested in the
subject, and I began to write more and more.



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REPORT ON THE STATE OF THE ENGINEERING
INDUSTRIES IN CHAD ^{1/}

by

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^{1/} The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. This document has been translated from an unedited original.

The industrial sector of Chad's economy is responsible for only some 10 per cent of gross domestic production. The main barriers to the development of industry, which has a vital part to play in Chad's economy by reducing the heavy urban unemployment and cutting down the chronic trade deficit, are as follows:

Poor communications;

The fact that Chad is a land-locked country;

An unsatisfactory commercial, technological and human environment.

This is not to say that industrial activities are at a standstill. Tax facilities under the Investment Code and the new trends in economic policy initiated by the Higher Military Council and the Provisional Government have enabled people to promote activities in various sectors of industry, including the engineering industries.

CHAD'S ENGINEERING INDUSTRIES

This sector will shortly experience a fresh upswing after a very quiet period. The activities of the engineering industries fall under two heads - a modern sector, dominated by foreign companies, and a traditional sector, dominated by national entrepreneurs and promoters.

I. THE MODERN SECTOR OF THE ENGINEERING INDUSTRIES

This sector, which has just experienced a recession as a result of the closure of some leading undertakings, consisting of simple workshops (Métalux, Cometal, Armetal), is at present distinguished by Cyclotchad, a bicycle assembly factory. Activities in this area will increase with the setting up of SOMAT (Société de matériel agricole au Tchad) (Chad Agricultural Equipment Company); preliminary work on the construction of the factory is under way.

THE CIP-METALUX, COMETAL AND ARMETAL WORKSHOPS

The Armetal, Cometal and CIP-Métalux engineering shops, now closed because of difficulties encountered in marketing their products, were industries working mainly in the construction field. They produced, inter alia, metal structural work and furniture.

CYCLOTCHAD

Cyclotchad is a limited company (société anonyme) with a capital of 70 million CFA francs. In 1962 it took over the activities of the former Lambert company at Moundou, a town in Chad; the work consists of the assembly of Zéphir bicycles and Peugeot motor-assisted bicycles, to which the production of metal beds and chairs has been added. The company's shares are 100 per cent foreign-owned.

The company's annual production capacities are as follows:

- Bicycles: 8,000 units;
- Motor-assisted bicycles: 1,500 units;
- Metal beds and chairs: 7,000 units.

In 1976 the company employed 94 nationals at a total wage cost of 53 million CFA francs, thus helping considerably to reduce unemployment. The number of Chad nationals employed has continued to increase, rising from 73 in 1972 to 94 in 1976. The period 1972-1976 was also marked by a definite improvement in turnover. Investment is financed entirely from the company's capital and amounts at present to 86 million CFA francs.

HANDICAPS TO THE DEVELOPMENT OF CYCLOTCHAD

Cyclotchad is meeting with difficulties, particularly as regards the marketing of its production, the supplying of its factory with raw materials and the availability of local skilled labour.

1. Markets problem

(a) The domestic market. With some difficulty, Cyclotchad sells its entire production on the domestic market, against keen competition from the R. Dumas company, which imports and sells bicycles and motor-assisted bicycles of a different kind from Cyclotchad's products. Mention must also be made of the smuggling in, on a massive scale, of similar products made in Cameroon and Nigeria.

(b) The export market. Cyclotchad's chances of successfully exporting its production, particularly to the neighbouring countries, would be slim. The heavy expenses for transport increase the production costs of Cyclotchad's bicycles and motor-assisted bicycles.

It must not be supposed that, if Chad was to rejoin the Central African Customs and Economic Union (UDEAC), this would open up new outlets for Cyclotchad's products. Indeed, rejoining the Union might imperil Cyclotchad, for the factories in the UDEAC member countries, most of which are coastal countries, and also have lower rates of taxation, would subject the Cyclotchad works to merciless competition.

2. Supplies problem

As raw materials for its production, Cyclotchad imports, duty-free, parts and tubes from the United Kingdom and products for producing tyre inner tubes from Japan. Transportation of these imports between Douala, the Cameroon seaport, and Moundou, the site of the Cyclotchad works, is difficult and makes it essential for the factory to keep large stocks, involving a considerable financial burden. In 1975 the period to be allowed for shipping from the country of origin to arrival at Moundou was six months. The figure rose to nine months in 1976 and 10 months in 1977.

3. Labour problem

The skilled personnel at Cyclotchad consist entirely of expatriates. The company has failed in its endeavours to train national executives. The reason for the failure is that young people are disinclined to work in industrial concerns. However, Cyclotchad still trains its local personnel in the plant.

PENDING PROJECTS (SOMAT)

SOMAT is a mixed company with a capital of 270 million CFA francs.

The main purpose of the factory, which is still under construction, is to make ploughs, multi-purpose cultivators, agricultural carts, timber panels, carts and in general any manual or animal-drawn implements and equipment, by cold working (bending, cutting, drilling, punching, welding, grinding and polishing, assembly and painting).

The initial capacity of the plant has been designed for the following annual production at a single working station:

- 15,000 B.P. 4 ploughs under a licence from Bourguignon
- 2,300 wheel and axle assemblies
- 2,300 cart floors
- 450 hoes under licence from Monzon.

Capital investment by SOMAT will come partly from its capital and partly from long-term loans from specialized bodies.

A loan of 180 million CFA francs has just been given in July 1977 by the Caisse centrale de coopération économique (Central Fund for Economic Co-operation) to the Banque tchadienne de crédit et de dépôts (Chad Credit and Deposit Bank) for the partial financing of the programme of investment and operation of the factory.

SOMAT qualifies for privileges under the Investment Code and consequently enjoys a number of tax advantages.

ASSEMBLY OF WATCHES

Mr. Ismail has submitted a project relating to this industry. The aim is to assemble watches at N'Djamena so as to reduce the large-scale smuggling of watches. The low level of investment planned and the tax advantages which would be necessary for local production to be competitive have prevented any effective action.

II. TRADITIONAL SECTOR

The traditional sector plays a very marginal part in Chad's engineering industry. The development of this sector is severely handicapped by the following factors:

- The inadequacy of the financial resources of promoters;
- The poor quality of most undertakings;
- Poor project planning.

As a development strategy for this traditional sector of Chad's industry in general, the Government set up the Chad Industrial Promotion Office (BPIT) with UNIDO's aid in 1972. BPIT, which is intended to serve as the driving force behind Chad's industrialization, concerns itself inter alia with the following activities:

- Investigation of valid projects justifying investment;
- Study and preparation of projects for small investors;
- Installation and promotion of small and medium-sized national undertakings;
- Devising of rapid and effective back-up formulae;
- Setting up of a fund for financing small and medium-sized national undertakings.

With regard more particularly to the traditional sector of Chad's engineering industry, there are in existence in the country, and particularly in N'Djamena, many welding shops which could be developed and organized by promotional action into large engineering undertakings.

One example of workshops of this kind is the Coopérative des fabricants de cantines du Tchad (COOPFABRICATCHAD) (Chad Trunk-Manufacturers' Co-operative).

This body was set up in 1970. It is operating satisfactorily. According to its articles of association, its aim is to help its member craftsmen practise their trade of producing and selling trunks and the like. The co-operative has 57 members at present.

The activities of the co-operative consist in making trunks, wheelbarrows and buckets. Work is entirely manual. The raw materials for the co-operative are used drums, since sheet metal is too expensive. As working equipment, the members of the co-operative use rudimentary tools which are the personal property of each individual member.

The co-operative has received no form of aid, either internal or external, since its inception. Its turnover is approximately 50,000 CFA francs daily.

The co-operative intends to develop its production, but the only way of achieving this is to acquire more sophisticated equipment. The co-operative accordingly proposes purchasing a press for straightening the drums, shears, a compressor, a drill, a grindstone, a riveting machine and a forge.

The co-operative will of course have to consider training experts to operate the various new tools.

PROJECTS BEING IMPLEMENTED

1. Co-operative of Chad Plumbers

This was set up in 1976. It gives permanent employment to eight people. It represents a very **big** effort at organization and methodical work. Five million CFA francs are to be invested. The proposed labour force is 21 people.

2. Mr. Ismaiel Adam's millet mills

The Chad Industrial Promotion Office studied with the promoter the possibility of installing three millet mills in the large villages near N'Djamena. The Office is also concerned in financing the project.

3. Pilot garage at N'Djamena

The Industrial Promotion Office is studying the possibility of giving a Chad mechanic the facilities for setting up a well-equipped and well-organized mechanical repair workshop. The Office has already found a mechanic amongst those already working who is considered to be suitable for this experiment.

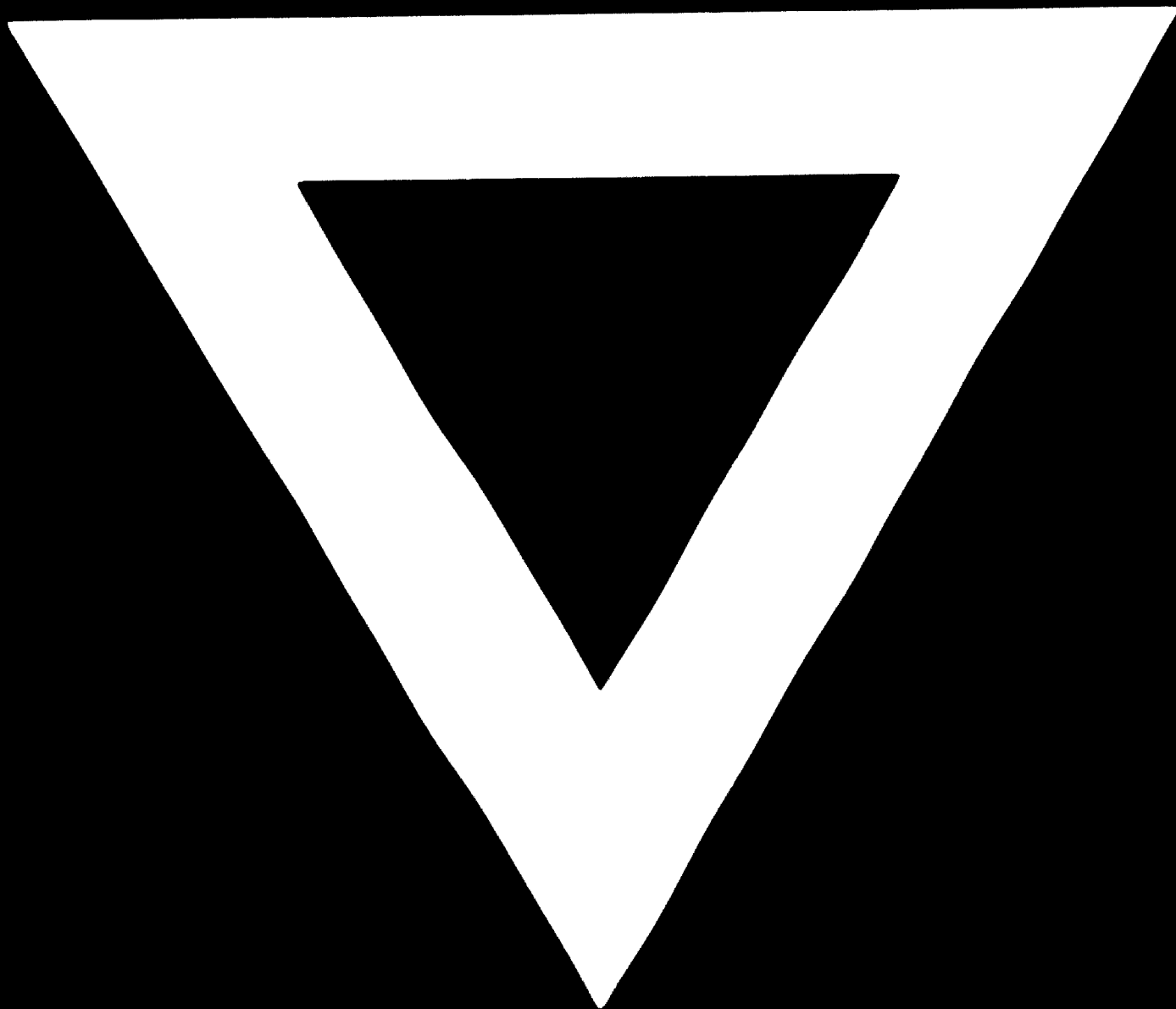
III. CONCLUSION

Chad's engineering industry is anything but large. It can be thought of at present as being limited to the assembly of bicycles and motor-assisted bicycles and to craft products. However, the special difficulties of Chad's economy as a whole have not spared even this still rudimentary industrial sector. The development of the engineering industry therefore depends on the solution of the specific problems confronting Chad's economy, including particularly:

- Improving access to the sea;
- Training of local senior staff;
- Financial aid.



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