



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org



06438

IND

United Nations Industrial Development Organization

INDUSTRIAL DEVELOPMENT AND
TECHNOLOGY TRANSFER
IN THE
AFRICAN COUNTRIES

1978

1. Director, Centre for African Studies (CAS), Dakar, Senegal.

2. The views expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.

1978

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards even though the best possible copy was used for preparing the master fiche.

CONTENTS

<u>Chapter</u>		<u>Page</u>
	INTRODUCTION	1
I.	THE ROLE OF FIRMS OF ENGINEERING OR MANAGEMENT CONSULTANTS	2
	A. Role in relation to the Government	2
	B. Role in relation to entrepreneurs and financing institutions	5
II.	THE PRESENT STATUS OF AFRICAN FIRMS OF CONSULTANTS	8
III.	CONDITIONS FOR THE DEVELOPMENT OF PRIVATE FIRMS OF CONSULTANTS	12
IV.	CONCLUSIONS	16

Annexes

I.	SOME FIRMS OF CONSULTANTS IN WEST AFRICA	17
II.	SOME STUDIES CARRIED OUT BY AFRICAN FIRMS OF CONSULTANTS	18

INTRODUCTION

The United Nations Industrial Development Organization (UNIDO) is at present giving considerable attention to self-help programmes for small-scale industry in the developing countries. A seminar has been scheduled on the subject to examine the entire range of problems with a view to deciding what should be done about them.

The term "self-help" covers forms of assistance other than those provided by Governments. Among other things, it includes the activities of firms of engineering or management consultants in the promotion of small-scale industry. The role and impact of these private companies in this area will therefore be one of the subjects to be discussed at the seminar.

The purpose of this brief paper is to indicate in general terms the role these firms of consultants can play in the efforts of the developing countries to promote small-scale industry. Such organizations include, of course, both foreign and domestic firms; our remarks will be concerned with the latter only. Specifically, the discussion involves private firms of consultants established in developing countries with domestic capital and personnel.

In these countries, small-scale industry consists of production units with a low level of investment which use unsophisticated techniques. In general, they are run by local managers and employ few workers. Characteristically, they produce consumer goods mainly from local raw materials and mainly for the home market.

The approach set forth in this paper may be an original one in that it stems from the thinking of a Senegalese in charge of a firm of consultants which has often dealt with the problems of industry.

The analysis is confined to the experience of a few French-speaking nations in west Africa, and thus it can certainly not claim to cover all aspects of the problem.

Certain of the points raised are specific to a given geographical area and a particular set of circumstances. Within this framework, an examination will be made not only of the role of firms of consultants as defined above, but also of their characteristics and their status.

It will be shown that, since their establishment, such firms have been beset by pitfalls. Finally, the author will endeavour to point out the measures that might be taken to facilitate their existence and help their farther development - to create the kind of conditions that will enable them to play a role in self-help programmes for small-scale industry.

I. THE ROLE OF FIRMS OF ENGINEERING OR MANAGEMENT CONSULTANTS

- (1) For the sake of convenience, the term "firms of consultants" will be used without distinction in this report, in preference to engineering or management consultants, etc.
- (2) The role of these firms is to assist the Governments of the developing countries to develop their national economies. Within this general purpose, there are two aspects to their work. The first relates to the efforts of the authorities regarding the setting up of the country's production system; the second relates to industrial entrepreneurs and financing institutions.

A. Role in relation to the Government

The so-called under-developed countries are continually faced with the following hard facts:

A population with a growing need for a variety of consumer goods;

The necessity of satisfying this need at the lowest possible cost in foreign currency and without any serious loss of customs revenue;

The need to add maximum value to basic commodities through industrialization, which makes it possible to substitute nationally produced goods for imports;

The constant need to check unemployment by the creation of labour-intensive industries, using manpower which has to be trained to meet the requirements of the sector;

The small number of indigenous university graduates;

The scarcity of African entrepreneurs who have the professional qualifications required of a technocrat;

The failure to follow up theoretical research by applying it and making appropriate financial arrangements.

The essential way to solve these problems is to take stock of the needs and then marshal the means for the attainment of the development objective - that is, development planning. However, to make possible this kind of planning and carry it forward, there is a need for a certain amount of thinking, study and research.

Well aware of the importance of study and research as a prerequisite for any course of action, the new countries have established their own national study institutes or offices. Among these bodies, some make it their primary goal to assist and promote the country's small-scale enterprises and industry.^{1/} However, the magnitude of the problems confronting these national agencies is such that they must inevitably rely on private firms or consultants for specific tasks. This is in fact the first aspect of the role of such firms - in relation to the State. The function they perform is unquestionably of advantage to their countries.

One of the reasons is that, in the developing countries of Africa, indigenous personnel trained in schools in the developed nations are more likely to have a better grasp of all the socio-psychological aspects inherent in any project carried out as part of a well-balanced development programme. For while technology may be universal, its application requires an understanding of the many factors specific to a given geographic area, factors which quite often escape the notice of foreign engineers and other experts.

^{1/} Office for the Promotion of Upper Volta Enterprises (OPEV) in the Upper Volta; National Centre for Industrial Studies and Promotion (SONEPI) in Senegal; National Office for the Promotion of Ivory Coast Enterprises (OPEI) in the Ivory Coast; National Centre for the Promotion of Small-Scale and Medium-Scale Industries (CNPPME) in Togo.

The paucity of data for certain areas of activity makes it necessary to go out into the field and collect the statistical information essential for any industrial study. This approach, particularly in Africa, is only possible or likely to be useful if the persons responsible satisfy certain requirements:

Thorough knowledge of the people of the area, who traditionally offer strong resistance to any attempts to penetrate their society;

Ingenuity at devising methods of inquiry, sometimes breaking away from modern techniques, which may be too rationalistic;

Identifiability as one of the local population on the basis of race, dress, language, character and attitudes;

Ability to assess the value of information received from the local population;

Ability to adapt easily to local conditions.

The role of African consultants is thus closely linked to the policies of the State regarding small-scale and medium-scale enterprises. Their impact is felt in the following areas:

1. Preparation of industrial studies

Market studies. Before any enterprise can be launched, the market must be analysed, as the determining factor both for the size of the enterprise and for its operating conditions and profitability.

Studies of industrial processes so as to permit an appropriate selection of equipment well suited to local conditions. In this connection, it should be added that African countries have techniques of their own which African consultants should study with a view to applying them scientifically to industrial production.-

2. Planning of industrial projects

Technical study of the appropriate industrial facilities for the industry in question;

Supervision of infrastructure and equipment installation;

Assistance in the development of prototypes.

These techniques include the lost-wax process in the Upper Volta, the indigo dyeing of fabrics and the method for melting iron ore.

3. Industrial promotion assistance

Assistance in research programmes for the development of small-scale industry;

Market studies;

Study and establishment of industrial zones;

Organization of training methods and methods for assisting existing industry.

This role of firms of consultants in relation to the State is not limited to the range of activities described above, because their staff can be a useful source of opinion in the developing countries. The experience these people gain during their studies and research means that they have a contribution to make at conferences and seminars. In addition, they function as channels of economic and technical information, which may help in evolving the right approach to development problems.

B. Role in relation to entrepreneurs and financing institutions

Indigenous entrepreneurs wishing to undertake industrial projects suffer from almost all the problems listed below:

Lack of capital: this is generally the most important factor responsible for the slow growth of small-scale industry;

Lack of professional skills: this is due to the fact that before independence industrialists were generally foreigners. Very often the industrial entrepreneur in a developing country is an artisan or a "complete stranger" in professional terms.

This last factor, which may be broadly defined as the absence of an industrial tradition, subsumes all the rest, which are the following:

Lack of organisation;

Lack of specifically industrial methods of management. Profits and products are not identified and considered carefully enough in relation to a plan of action;

Lack of a business mentality. The idea of considering the business apart from its owner is quite foreign to the entrepreneur.

Generally, given a small amount of initial help, the entrepreneur succeeds in setting up his business and getting it running in a satisfactory manner. As soon as it gets into its stride, however, symptoms of decline begin to appear. Among these symptoms, lack of working capital is the most obvious. This leads to all manner of difficulties, which ultimately result in the enterprise going to pieces:

- The staff become less and less motivated;
- The equipment falls into disrepair;
- The quality and level of production deteriorate;
- Customers go elsewhere.

These danger signals, which may go unnoticed at first, are usually brought on by the entrepreneur himself. The expansion of his business gives him a source of funds, which leads him to divert money away from the business to satisfy his own personal desires.

This pattern, which is a very common one in Africa, seems to be due in part to the factors cited above, which are directly connected with the man at the head of the enterprise. There are, however, other reasons which combine with them, namely:

- Lack of assistance once the enterprise has become operational;
- There is a tendency for aid to be discontinued as soon as the firm has been established. Where such assistance does continue, it is not accompanied by the kind of conditions that would continue to give the entrepreneur the same motivation as moved him to establish the business in the first place;
- Insuperable difficulties in dealing with financing institutions, which are governed by strict regulations, occasionally (let us be honest) out of tune with the legitimate goals of national industrial promotion.

Generally, even in the developed countries, firms of consultants act as advisers to industrialists and entrepreneurs on a continuing basis. This same service is also provided by similar agencies in the developing countries, and particularly in the following areas:

- Organizational advice;
- Management advice;
- Preparation of the documents required to apply for bank loans;
- Market studies;
- Industrial expertise.

In relation to financing institutions, the firms of consultants also help in preparing the paper work required for all decisions on financing and in supervising compliance with the terms of the credit extended.

To sum up, the role of firms of consultants in the promotion of small-scale industry in the developing countries can be very extensive. It should cover the full range of surveys and planning required for the establishment of these industries and their rational operation within a context of co-ordinated development. As matters actually stand, there are a number of stumbling-blocks which continue to limit their role, for reasons which are a reflection of their present status.

II. THE PRESENT STATUS OF AFRICAN FIRMS OF CONSULTANTS

1. The establishment of firms of consultants in the west African region dates back to the 1960s - that is, about the time these nations achieved independence. There are some ten such offices to be found in such countries as the Ivory Coast, Togo and ...

2. In general, these firms are small in size, with three or four graduates on their staff. In the older firms, the staff may have gained enough experience to enable these establishments to stabilize their internal organization.

3. The firms may be either multidisciplinary or specialized. In the first case, they have staff trained in a variety of fields, whose professional background has been gained through work in a wide range of situations. In the second case, they specialize in architecture, town planning or sociological problems. In the geographical region with which we are concerned, they provide near-total coverage of most development activities, specializing particularly in industrialization, town planning and housing.

4. For the most part, however, their involvement is quite limited and, despite their promotional efforts, full use is not being made of their services.

5. When one considers the problems these firms face, it is clear that they are connected with the attitude of the State towards them. Its attitude partially influences that of entrepreneurs and financing institutions.

In order of importance, the firms' major clients can be divided into five groups:

The State

Essentially, this means the ministries responsible for planning and economic development, and the following technical departments:

3/ See annex I.

Industry, energy, water management;
Public works, town planning, housing;
Commerce, distribution, transport;
Rural development.

National promotional institutions

Public enterprises

Energy and water;
Transport;
Cottage industries;
Credit institutions.

Private enterprises

Private banking;
Indigenous entrepreneurs and artisans.

External organizations

With particular reference to the industrial sector, the tasks undertaken by domestic firms of consultants cover the following fields:

Surveys and statistics;
Studies of industrial processes and production equipment;
Study and evaluation of production factors;
Study and development of prototypes;
Technical studies relating to industrial and residential buildings;
Preparation of technical and administrative documentation for invitations to submit tenders;
Examination of tenders.

A number of studies carried out by such firms are listed in annex II.

6. The situation of firms of consultants in the west African countries is by and large characterized by the following factors:

Small staffs, resulting in a lack of confidence in these firms on the part of government officials. In most cases, this lack of confidence leads to a bias in favour of the large firms. Other administrative officials may display somewhat more confidence in the African firms, but for safety's sake they insist on guarantees in the form of references for studies made in the past.

The absence of legislation or legislative reform regarding the African firm is one of the root causes of their difficulties. This legislative gap feeds the prejudices of the administrative authorities, reinforcing their persistent demand for services.

Given the present level reached by the African firms, legislative action could regularize the situation. With particular reference to the industrial sector, the measures that might be considered include, among others, the following:

Approval of these firms by the State as exclusive agents for national and foreign trade;

Extensive consultation of the firms on all major industrial studies within their fields of competence;

Systematic participation in all studies financed from abroad.

7. In addition, the failure of private entrepreneurs without capital to seek the services of local consultants is most characteristic of the situation. Entrepreneurs are far from convinced of the efficiency of the recently established African firms. Specifically, the indigenous entrepreneur shows great psychological resistance for the following reasons:

His failure to understand the need for study or advice before establishing his business;

His lack of funds, which discourages him from making an investment he often believes will prove a loss.

There are also financial difficulties in the way of a decision by the entrepreneur to have a study carried out, since, in most cases, his funds are relatively limited in relation to the cost of the study. On more than one occasion it has happened that a local firm of consultants has accepted a study assignment and has then had to wait for a bank loan to be authorized before it could be paid. This practice, which is equivalent to a pre-financing operation by the firm, is in no sense desirable, for although it may guarantee results, it reduces the commitment of the entrepreneur, who assumes no risk, and additionally it strains the already limited financial capacity of the firm, which faces the risk of not being paid if the bank loan is not authorized.

8. At the present time, the banks do not provide entrepreneurs with money to finance studies, and still less do they assist firms of consultants (with a few exceptions). The exceptional cases, however, are rare, because the banks come up against the interests of large foreign corporations, which are sometimes involved in the bigger firms of consultants.

9. In their dealings with international organizations the newly established African firms of consultants face problems because the organizations require guarantees in the form of references and insist on individual missions by specialized experts.

10. Finally, the African firms find themselves in an impasse because of the need to furnish references, which new firms cannot always do; the result is a vicious circle. For the time being, they are persevering despite the unfavourable climate. In the long term, their situation will have to be given greater consideration by government authorities and international organizations. Even now, measures are being taken in certain countries which, while not wholly official, are a step towards improving their position. In the end, the continued efforts of these firms will result in action to further their development. The upsurge and expansion of these African-run research firms is one of the most essential factors in the promotion of indigenous small-scale industry.

III. CONDITIONS FOR THE DEVELOPMENT OF

SMALL-SCALE INDUSTRY

1. The development of small-scale industry must be based on a planning policy which looks to the assumption of control over this sector by nationals of the country.

2. Whether in small-scale industry or in other areas of activity, the development of private companies depends on this planning policy. Private firms of consultants must therefore be regarded as national enterprises which have an impact on the country's economy, and as such they are entitled to certain categories of privileges which have been extended to other professions by appropriate legislation. The privileges in question follow from the observations made above regarding the need for special legislation.

3. Small-scale industry constitutes a particular area where these privileges might lead to effective results by strengthening co-operation between national promotion institutions and private firms of consultants.

This kind of co-operation is growing up in a number of developing countries. It takes various forms:

. study contracts negotiated on a case-by-case basis with internal financing arranged by the promotion institution for the studies to be sub-contracted;

. A general annual contract, making it easy for the promotion institution to finance annual budgets under which local consultants can be engaged for previously defined projects.

The example set by these countries with regard to co-operation between promotion institutions and national firms of consultants might profitably be followed elsewhere, to the degree that the same possibilities for financing exist.

In general, therefore, the institutions responsible for the promotion of small-scale industry can co-operate with local firms of consultants on a very broad footing through the following measures:

Systematic subcontracting of studies to indigenous consultants under annual general agreements;

Use of local consultants in place of foreign experts in connexion with international assistance. For some projects, the familiarity of these firms with the local situation, coupled with their professional expertise, provides at least as good a guarantee of results as foreign experts can offer.

Both these forms of co-operation can be financed either from the promotion institution's internal sources or externally through foreign aid organizations. Moreover, this co-operation can provide a basis for other relationships between the promotion institution and the local firms of consultants, such as, for example:

Exchange of information and documentation;

Joint participation in training programmes and national activities to promote small-scale industry;

Joint examination of diagnostic surveys and evaluation reports on the development of small-scale industry.

In most cases, the few existing indigenous small-scale industries are managed by merchants or former workers in technical or business fields, and only rarely by executives. In practice, as already noted, the financial resources of these establishments are very limited, and for this reason there is no possibility of their seeking the services of consultants.

As a rule, the development of an industrial enterprise depends on the motivation of the man in charge, who is unlikely to see any advantage in seeking the services of consultants. These two obstacles - lack of financial means and lack of motivation - could probably be overcome if certain conditions were met. One possibility might be the adoption by the promotion institutions of measures requiring the heads of small-scale industrial enterprises to satisfy certain conditions in order to become eligible for bank loans. The enforcement of these measures could be supervised by a body affiliated to the banks and connected with the indigenous firms of consultants, which would provide it with the information to base its decisions on. The agency in question would be a collective agency of the industrialists themselves, under the supervision of the banks and promotion institutions.

Under this system, local firms of consultants could be in a stronger position in offering their advisory services to the State. The results of their studies would have to be passed on to the supervising agency. In some cases, these services might be furnished free or for a merely nominal charge.

Despite all these efforts, however, the financial weakness of small-scale industrial enterprises will continue to be an inhibiting factor as long as the State fails to grant them subsidies. Such subsidies might be strengthened by external contributions.

6. Participation in international organisations' study projects. In selecting experts for programmes of aid to small-scale industry, the assistance agencies generally call on individual specialists in this field. The individual nature of this selection process might well be reconsidered with a view to a greater involvement of indigenous firms of consultants.

7. Consultants in the developing countries would profit in their development from the continuing source of training to be found in co-operation with foreign firms of a specialized nature. Such co-operation (which is not to be confused with subcontracting) is possible only if the organizations supplying the aid and the countries receiving it make it a rule that indigenous consultants are to be systematically involved in all major projects.

The example of one African country might be instructive in this connexion.

The authorities sent a circular to the different ministerial departments recommending the following measures:

Systematic engagement of indigenous firms of consultants on an exclusive basis for socio-economic studies financed from domestic funds;

Inclusion of a clause calling for subcontracting to domestic firms in contracts concluded with foreign consultants.

This clear trend towards reserving a certain range of activities for domestic firms is thus in harmony with the idea developed in section 2 of this chapter.

Such subcontracting is to be understood as meaning a two-way exchange of experience and knowledge between the domestic and foreign firms of consultants in a project to which each party makes its own appropriate contribution. In other words, where a national firm does work on a project, it must be regarded as having a genuine role to play and its contribution must be integrated in practice with that of the foreign firm.

From the international standpoint, firms of consultants can make themselves competitive by pooling their resources. By meetings at conferences, visits and other arrangements for exchanging experience, they can strengthen the ties between them. Such closer ties are a fundamental prerequisite for undertaking major study projects. It might even be possible to set up a multinational firm, which would have a useful function to perform in Africa.

There are many factors to encourage the small firms now operating to band together in a larger body:

- Lack of capacity;
- Insufficient financial resources;
- Limitations of national markets, which cannot alone stimulate their expansion;
- Diversity in their areas of expertise, resulting in a natural complementarity between them;
- Inability to compete for the more important African study projects, which are generally awarded to foreign firms;
- A more favourable position vis-à-vis certain international organisations.

V. CONCLUSIONS

1. There is an urgent need to promote small-scale industry in the African countries, since it is through the encouragement of this sector that it will be possible for African industry to develop. Thus, in raising the question of self-help for small-scale industry, UNIDO has rightly pointed to the potential role of firms of consultants in this area. Standing in the way of the development both of small-scale industry and the newly established national firms of consultants are a great many problems, which this paper has sought to identify.

2. Being staffed by indigenous personnel, such firms can bring to bear the kind of non-academic knowledge which enables them to carry out a wide range of studies that elude their foreign counterparts. For this reason, their potential role in the promotion of small-scale industry is of fundamental importance, in relation both to the policy of the national authorities in this sector and to private enterprise and financing institutions.

3. Despite their efforts, they come up against a number of difficulties. There are domestic difficulties in the African countries, where most officials show a preference for foreign firms, so that they have some guarantee of success when turning to them for help. Similar problems also exist at the international level, where the practice of recruiting experts individually and the insistence on references, of which African firms, being recently established, can only supply a few, bar these firms from consideration.

4. As these problems are overcome both domestically and internationally, the development of African firms of consultants will give greater meaning to self-help programmes for small-scale industry. The development of these institutions is one of the conditions for industrial growth in Africa.

ANNEX I

SHORT FIELD OF CONTRIBUTORS IN WEST AFRICA

Ivory Coast

- SIOTI** - Société Ivoirienne de Contrôle de Travaux et d'Expertises
- SIOTB** - Société Ivoirienne de Gestion d'Et des et de Services
- SIYPRO** - Société Ivoirienne d'Entreprises et de Promotion
- IFAU** - Bureau d'Etudes d'Architecture et d'Urbanisme
- AAS** - Atelier d'Architecture et d'Urbanisme
- Bio Yougo** - Architecture

Senegal

- ORSEPTC** - Société Africaine d'Etudes Techniques
- ARS** - Afrique Recherche Conseil
- SASUR** - Société Africaine de Coopération Economique Régionale

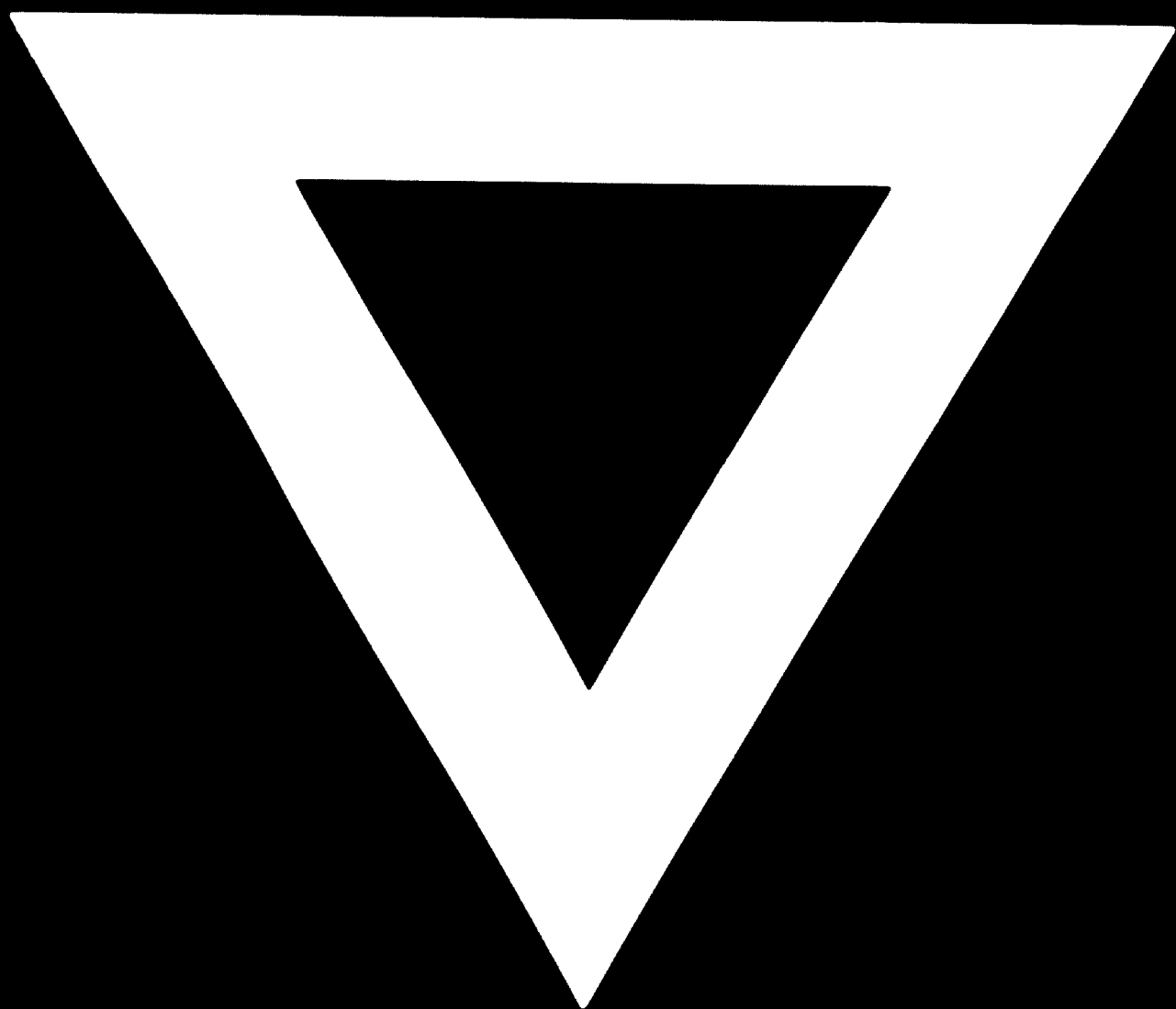
Togo

- GTED** - Cabinet d'Etudes et de Recherches de Developpement

ANNEX II

**SOME STUDIES CARRIED OUT BY AFRICAN
FIRMS OF CONSULTANTS**

Feasibility study for a bread yeast production unit	Ivory Coast	Ministry of Planning OPLI
Study on the conditions for the industrial development of indigo dyeing	Ivory Coast	Ministry of Planning
Economic and financial study for a tourist development	Senegal	Private
Feasibility study for a soft-drink plant	Senegal	Ministry of Planning
Profitability study for an ice chain to serve ten cities	Senegal	Ministry of Planning
Technical feasibility study for the series production of office furniture. Development of prototypes	Ivory Coast	Ministry of Planning OPLI
Technical, economic and financial study for a plastic footwear industry	Senegal	Foreign private
Profitability study for a goods transport enterprise. Starting of operations	Senegal	Domestic private



76.01.15