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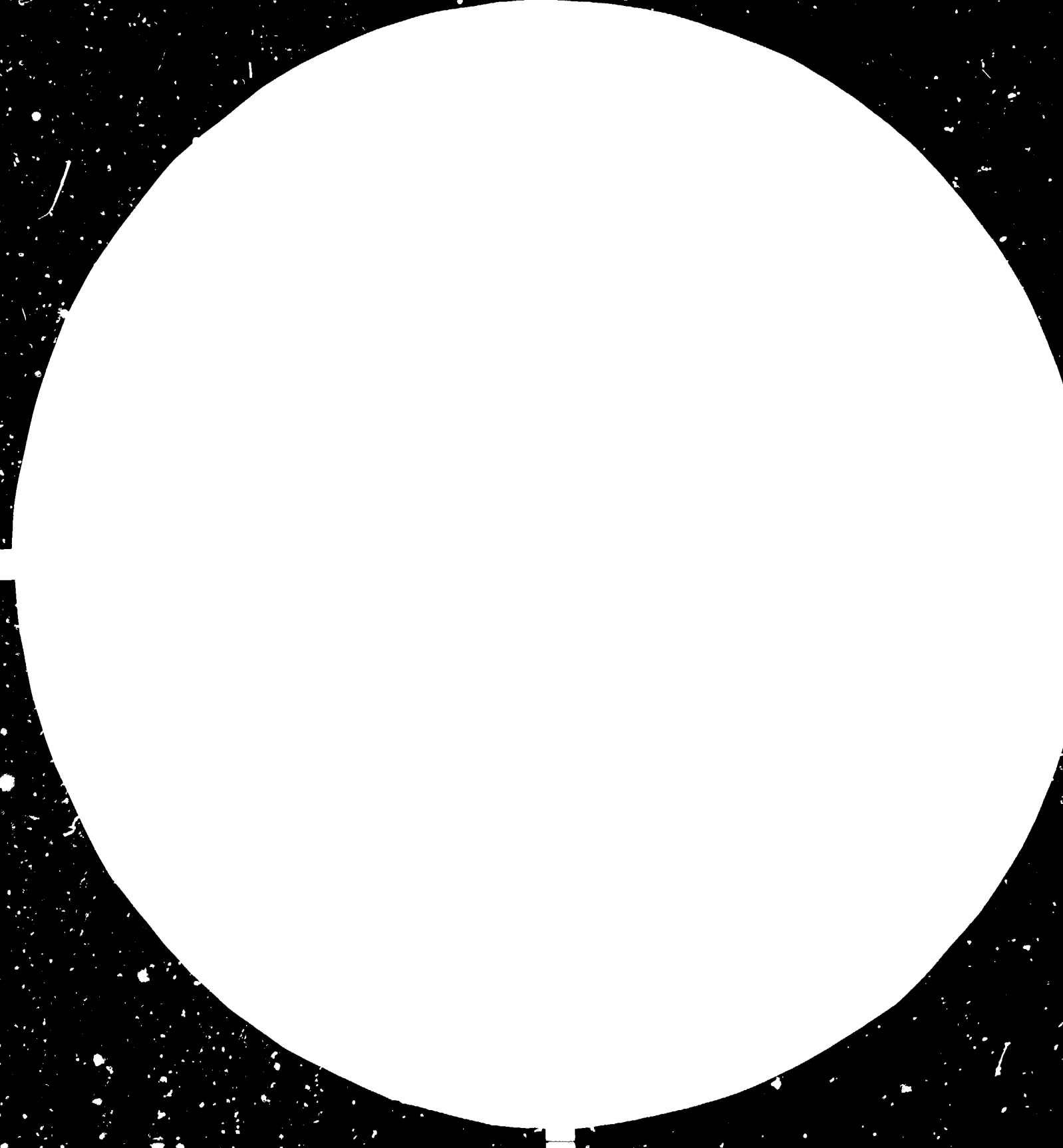
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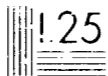
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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INDUSTRIAL DEVELOPMENT CENTRE, OSHOGBI,

NIGERIA (Textile industry)

DP/NIG/78/014

Final Report \*

Prepared for the Government of Nigeria by  
the United Nations Industrial Development Organization

Based on the work of

Mr. Georg V. Gruenwald, UNIDO textile expert

8 January 1981 - 30 June 1982

April 1984

\* This document has not been submitted for formal editing.

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ABSTRACT

Title of Project                    Industrial Development Centre, Oshogbo  
Number of Project                DP / NIR / 73 / 014 / 11 - 12  
Duration of the Mission        6 January 1981 - 30 June 1983  
Purpose of the Project         Development of Small-scale Industry  
Objective of the Mission :

- to conduct an initial survey of the small-scale textile industry in the area served by the Industrial Development Centre,
- to assist and advise small-scale textile entrepreneurs in application of modern technology, quality control and work study techniques,
- to guide, supervise and train counterpart personnel,
- to advise on the selection of machinery and equipment required at the Centre, to assist in the installing, setting up and running the textile workshop.

Main Conclusions and Recommendations :

Great opportunities are existing to achieve the main objectives of this project, even in spite of the absence of equipped workshops.

A great potential of well qualified textile officers is available to carry out all tasks lined out in the project objectives, bearing in mind the recommendations of the Textile Expert.

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INTRODUCTION

The Project Document of this project was signed on 2 November 1977, after an estimated starting time in September 1975.

The main objective of this project was the development and rational locating of small-scale industries, existing and new, in order to create employment opportunities, mobilise local resources (both human and financial), and stem the flow of rural migration to the urban centres.

It was also considered as important to ensure that the small-scale industry sector keeps pace with Government's plans to industrialize Nigeria.

As immediate objectives were considered the improving of the efficiency and productivity of existing small-scale industrial enterprises in the six States of Bendel, Kwara, Lagos, Ogun, Ondo and Oyo by

providing a continuous training programme to upgrade the knowledge and skills of entrepreneurs, as well by investigating and solving entrepreneurs problems,

fostering the development of new small-scale industry, by carrying out industrial, economic and marketing surveys, feasibility studies and appraisal of projects requesting loans, making recommendations on suitability and viability of such projects,

carry out follow-up procedures to ensure success of projects receiving loans,

developing a cadre of fully trained Government officers for IDC's and other Small-scale Industry bodies, capable of carrying out consultancy and extension activities, surveys and market studies, loan appraisals and feasibility studies and a continuous training programme for entrepreneurs.

At the time the T.E. commenced his assignment, there was no textile workshop available at IDC Oshogbo. The T.E. and his counterparts have had to devote their time to

- intensify already ongoing extension services to small-scale industries,
- evaluate pre-investment proposals of, for assistance applying ventures,
- conduct post loan investigations amongst industries which had received support by IDC already from Federal or State Government Credit Scheme.

## 1. INITIAL SURVEY

The first task was to undertake a survey of the condition of the textile industry existing in Nigeria. The T.E. found, that this industry takes two main forms :

- undertakings equipped with comparatively modern machinery for the industrial production of yarns, fabrics and garments and
- cottage industries and craftsmen engaged in handweaving, tailoring, tie-and-dyeing and embroidering.

The T.E. found that the modern type of industry was concentrated in the North (Kaduna, Kano area) and in Lagos area, whereas the cottage industry is widely spread over the whole country.

### 1.1 Modern equipped Textile Manufacturers

The factory type of textile undertakings form a major economic sector providing employment to about 75,000 workers. However, the present situation is rather gloomy because the industry faces heavy competition from imports and smuggling activities.

The industry in general has to be divided in  
privately owned companies and  
publicly owned or dominated companies.

The first mentioned are well organized and equipped with comparatively satisfactory quality and efficiency. They mainly suffer only under shortage of raw materials, both fibres, dyes and chemicals (because of import limits). The local fibre production - both cotton and synthetic fibres - is insufficient, dyes and textile chemicals are not produced at all.

Government or State owned industries have to - in the addition to the previous mentioned obstacles - struggle with an inflated number of unproductive civil servants, disproportional high overheads and low efficiency of production.

### 1.2 Cottage Industries

The activities of small-scale and cottage type of textile industry cover the handweaving of narrow strip fabrics, popular in many West African countries, dyeing and finishing of cloth, tailoring and embroidering of garments.



This sector still makes a valuable contribution to the livelihood of the rural population and also produces garments of traditional style and material, more acceptable to popular taste. It would be still meeting a wide demand, if manufacturing costs could be more reasonable.

In some parts of Nigeria there has been a decline of handweaving because the weavers are unable to face competition from factory-made products, though these do not conform with traditional designs and materials. One of the major causes of high costs is the need to join narrow strips of fabric to produce garment-width cloth.

Similar aspects refer to the traditional tie-and-dye technique, these products are not competitive price-wise with industrial printed fabrics.

In contrast to these (weaving and tie-and-dyeing) tailoring is still viable, due to two facts: The Nigerian in general still prefers individual clothing and secondly ready-made garments (factory-made) are extremely expensive, too many middle men between producer and consumer are trying to make their profits, which is not applicable to tailor-made clothing.

## 2. EXTENSION SERVICES

Since the UNIDO project is intended to develop small-scale industries rather than large undertakings, it is fortunate that cottage industries exist as a wide-spread infrastructure. From there it should be possible to develop a new society of organized private entrepreneurs, providing benefits to all concerned by employing groups of experienced craftsmen.

The information gathered during his survey has enabled the T.E. to draw up a plan of action which concentrated most of the efforts on the development of efficient small-scale manufacturing units, producing traditional textile products in rural areas. For an initial stage this plan of action was confined to extension services.

### 2.1 Organization of Co-operatives

The survey revealed that there was already a trend amongst the weavers to organize themselves. The T.E. has encouraged and patronized this tendency. He helped the organizations to become legally registered and

publicly acknowledged (see annex I.).

Similar attempts were made with the organization of tailors and tie-and-dyers, but not concluded before the expiry of the Expert's assignment.

## 2.2 Improvement of Raw Material Supply

One of the chief constraints to economic production at the rural level is the scarcity and high costs of raw materials as there are for the weavers : yarns, made of cotton, rayon viscose and acetate, synthetics, etc.,  
tailors : fabrics and accessories,  
tie-and-dyers : fabrics, dyes, chemicals and auxiliaries.

These have been purchased from local dealers in villages and small towns. The raw <sup>materials</sup> are passing through many hands before reaching the craftsmen.

Acting as intermediary, the T.E. has established direct contacts on behalf of registered co-operatives with manufacturers and importers of raw materials (see annex II.). This has eliminated partly these middle men, the previous sole raw material source.

## 2.3 Improvement of Production Methods and Equipment

To increase productivity and thereby lower labour costs, the T.E. has tried to introduce more effective techniques and advanced equipment.

The indigenous weavers in Nigeria (like in other West African countries) employ very crude equipment which produces woven cloth only 3 to 5 inches wide. The yarn is hand warped on a drag beam which often is nothing more than a wooden stick. The weaving process is very slow because of the limitations of the throw shuttle. A weaver produces only one 4 inches wide by 36 inches long strip in one day. Experience in India has shown that changing from narrow strip weaving looms to 28" wide looms can increase production by 250 to 300 %. Introduction of flying shuttles will be a further improvement of efficiency.

In an attempt to build improved equipment for demonstration purposes, the T.E. obtained quotations from local carpenters of 1.300 to 2.800 ₦ = 2.400 - 4.200 US\$ for a broad loom; but workmanship is of such a low order that he did not pursue this matter.

A temporary measure was to erect two second-hand broad handlooms for demonstration purpose in a temporary shed. For long-term purposes however, the T.E. has obtained quotations from handweaving equipment manufacturers in India, Hungary and Sweden. Some of the data\$ are used and included in

Annex IV : "Textile Workshop and Equipment at IDCs".

To improve the production methods of indigenous tailors and dressmakers, the T.E. has prepared a paper

"Upgrading of Small-scale Tailoring and Dressmaking Enterprises" (see Annex III).

Unfortunately it (never has) been implemented because of non-observance of the importance of such measures by the local authorities.

Nevertheless, provision has been made for this purpose in the above mentioned equipment list (annex IV) and by preparing and making available to all IDCs served by the project a number of working papers like

Industrial Profile for Ladies' and Men's Underwear  
Industrial Profile for Women's, Misses' and Children's  
Slips and Panties  
Industrial Profile for Men's Shirts and Trousers  
The Production of shaped, non-woven Structures  
Bras and Foundation Garments.

These papers have also served as skeleton within the framework of extension services carried out for individual enterprises, advising on appropriate factory lay-out and suitable equipment for their individual purposes.

### 3. TRAINING AND TRANSFER OF KNOW-HOW

#### 3.1 Training of Counterparts

During his assignment, the T.E. has been in the fortunate position to be provided with sufficient counterpart personnel. Five officers have been available at IDC Oshogbo and additional ten officers at IDCs in other four States served by the UNIDO project. (see Annex V).

All of these officers have had appropriate theoretical training overseas, most of them courses and fellowships abroad, some of them had practical experience in Nigerian and/or overseas textile companies.

But nevertheless, the original approach of these officers was very theoretical, very "Civil-Servant-minded". They were missing the understanding for real business life, the rough world of reality and tough competition.

In the light of these circumstances, the T.E. counts it as his major achievement to encourage and convince his counterparts to the attitude that also in Civil Service there is a place for private initiative.

In consequent follow-up of previously planned actions - against all sorts of bureaucratic constraints - efforts were enhanced to spread services to enterprises, other organizations and geographic areas. Extension and investigation tours were carried out by the T.E. and his counterparts, business relations were established between IDC officers and suppliers, subordinate officials could be convinced to the idea, that individual poor little craftsmen are the base for a future development of an industrially orientated economy.

The organization of co-operatives, the attempts to improve raw material supply, the efforts to obtain equipment and to conduct seminars have been carried out in closest cooperation between the T.E. and his counterparts, which can be seen in following figures :

Traveldays of the T.E. in Oyo, Ogun, Ondo, Kwara and Lagos State :

1981	68	thereof with counterparts	53
1982	51	" " "	35
1983	28	" " "	21

The T.E. has to report with all due respect the growing efforts and eagerness of IDCs' Textile Officers, their neglect even of bureaucratic personal constraints in their efforts to achieve results, to follow up plans of activities, to conduct investigation and extension service tours and prepare seminars.

### 3.2 Seminars

During the assignment period of the T.E. only two seminars were organized. Motivated by the relatively sufficient theoretical knowledge of

his counterparts and the recurring experience which is best expressed in quoting the words of the

Head of Textile Department, Polytechnic Kaduna,  
Mr. A.K. Bhattacharya :

"...to give priority to practical training of technical personnel and improvement of efficiency, rather than wishful thinking in terms of scientific researches and theoretical studies....",

the T.E. had the ambition to held practical seminars.

But here he had to face the heaviest difficulties :

The entire lack of funds.

After oneandahalf years of the T.E.'s assignment, some second-hand equipment was bought by IDC Oshogbo, the only and sole investment in equipment for the textile section by Nigerian Government (approx. US\$ 300.-). A temporary shed has been erected - the permanent workshops have still been under construction (since 1976) - and with the help of the counterparts, the T.E. could bring this equipment in working order.

With donations from two Nigerian companies (yarn suppliers), a

"Seminar for Small-scale Handloom Weavers", Oshogbo 7.6.1983 could be held for local IDC officers and indigenous representatives of local weavers co-operatives. The aim was to introduce broad-loom weaving, replacing the traditional narrow-strip weaving. 28 participants attended this seminar.

Another seminar had a broader audience :

"Textile Printing Seminar", Oshogbo, 15.- 18.3.1983,  
with a guest lecture of representatives of a multinational dye manufacturer.

IDC officers, Governmental officials, small-scale industrialists and craftsmen from

Benin, Kwara, Ogun, Ondo and Oyo State  
took part ( 36 participants).

Here again Nigerian and multinational companies had donated all necessary equipment, dyes, chemicals and auxiliaries. The paper costs of the technical manuals handed out to the participants were the only expen-

ditures for IDC Oshogbo.

The T.E. was able to encourage his counterparts to prepare and conduct these seminars very actively. They shared the compiling of technical hand-outs (more than 100 pages) in the fields of their specialities and conducted respective lectures.

In his closing address of one of these seminars, Mr. O.A.Kayode, Director of IDC Oshogbo said :

" It is a milestone in IDC's history, the first practical seminar has been conducted, the first opportunity to apply all the practical knowledge gained, to practical use...."

#### 4. TEXTILE WORKSHOPS AND EQUIPMENT

As already expressed in previous statements and reports, tailoring, handweaving, tie-and-dye and "Adire" fabric production are the most common, widespread textile activities in Nigeria.

Bearing this in mind, the T.E. has compiled the suggestions for machinery and equipment, submitted by Textile Officers from IDC Oshogbo, together with his own conception to establish a workshop at IDC Oshogbo. This layout is applicable of course to other IDC's throughout the country as well.

It is proposed in three stages of development, according to funds available.

Phase 1.1 Hand Weaving

1.2 Ready-made Garment Manufacture

1.3 Silk-screen Printing

Phase 2.2 Ready-made Garment Manufacture

Phase 3.3 Silk-screen Printing

See Annex IV

None of the equipment layouts represent production units nor the right balance between handlooms or straight sewing machines and specialized, sophisticated equipment. For example, one warping drum can serve 20 - 30 handlooms, one button holing machine is enough for 40 - 60 plain sewing machines. But nevertheless, these specialized machines have to be available to make the plain machines working efficiently.

These textile workshops, set up at IDCs throughout the country, equipped

with all necessary sophisticated machines, would provide training facilities to indigenous tailors, weavers, dyers, printers etc., improving their skills in adopting modern techniques. This should result in higher efficiency with all its consequences.

When people are trained, even these small craftsmen, they could invest in advanced equipment, provided they get the necessary support (loans) by authorities and/or banks. To utilize this equipment - because of too little production of their own - they could take jobbing orders from other small artisans, making their own work more efficient as well.

Annex IV gives an approximate picture of the equipment envisaged by the T.E. but still can be subject to alterations. Prices stated are based on quotations from late 1981 and early 1982. They do not include the service charges of UNIDO. They can vary considerably.

The previously envisaged

industrial spinning, weaving and knitting for outerwear,  
lace- and embroidery-section,  
grading equipment,  
automatic stencil processor

have not been included in these workshops because investment is too heavy.

It would be far beyond the scope of small-scale industry. Just as well

testing, quality control and research equipment  
is not considered, because there is sufficient access to  
Federal Research Institute, Lagos,  
Ahmadu Bello University, Zaria,  
Politechnic, Kaduna  
with all necessary installations.

#### 5. FINDINGS AND RECOMMENDATIONS

After experience in some other African countries, small-scale industry development has proved to the T.E. as a difficult way of industrialization of a region. It is missing publically acknowledged prestige and spectacular successes. But with the right concept and approach, well founded targets and hard work, an enormous impact can be achieved on the development of the most suffering levels of population in a country.

In this context, Industrial Development Centres in Nigeria can play an important role in assisting the right people to establish new and improve exist-

ting small-scale enterprises.

The best preconditions are given : The textile sections are numerically the largest ones within all the IDCs. To continue the work initiated by the T.E. relatively small financial efforts have to be made :

The textile workshops, outlined in annex IV of this report would be an ideal solution for the future.

But already with a small budget, activities of the textile section could be kept going on. These are

Detailed plans of field activities have to be prepared by the textile officers in good time to enable the Centres to provide all necessary funds for these activities (like travel expenses, allowances, etc.).

At least one of the existing handlooms has to be improved - in cooperation with the woodworking officer - to make it really collapsable. This would enable the textile officers to expand their activities over the whole State, carrying this loom from seminar to seminar.

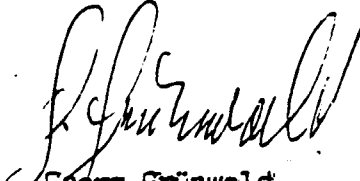
With a minimum of costs ( US\$ 200 - 300.-) small silk-screen printing units should be installed at the Centres, allowing to hold printing seminars for potential, preumptive beneficiaries.

Funds should be provided for raw materials and consumables like yarns, dyes, chemicals etc. Also here small amounts would be sufficient to keep experimental activities in the field of weaving and printing going.

One or two workers at each Centre should be delegated to keep these above mentioned activities going.

The T.E. realized that his counterparts were highly educated, mature men, who want to work practically, with meaningful objectives, where the smallest effort already is honoured - if nothing else - with job satisfaction by helping becoming small-scale industrialists to establish and/or improve their businesses. This seems to be the desire of these officers, to contribute in the development of their country.

Vienna, July 1983.

  
Georg Grünwald



ANNEX I

Organized and assisted Co-operatives

Alùbarika Weavers Multipurpose Co-operative Society Isale Abudu Salei c/o Alhaji Situ Isola P.O.Box 10, Shaki, Oyo State	18 members
Iwa Jowa Enterprises Society c/o Mr. Alimi Alaka P.O.Box 3, Iseyin, Oyo State	38 members
Aiyemidara Multipurpose Weaving Co-operative Society P.O.Box 5, Iseyin, Oyo State	29 members
Oshogbo Irepodun Weaving Multipurpose Co-operatives Associates 26, Laro Street Isale, Oshogbo, Oyo State	32 members
Ileogidi Weavers Multipurpose Co-operative Society Sabostreet, Oshogbo, Oyo State	27 members
Amada Jiwa Alaso-Ofi (Weaving) P.O.Box 75 Okelele, Ilorin, Kwara State	approx. 60 members

Registration Authorities

Ministry of Trade, Industries and Co-operatives  
Secretariate, Ibadan, Oyo State,  
Chief Industrial Officer Mr. M.A.Adekola  
Zonal and Areal Offices Oshogbo, Iseyin, Shaki, Ilesha, all Oyo State.

ANNEX II

Manufacturers and Importers of Raw Materials

BASF (Nig.) Ltd., Oba Adetona Str., Ilupeju, Lagos,  
dyes, chemicals, auxiliaries

Chemical and Allied Products Ltd., 24 Commercial Rd., Apapa, Lagos,  
Agents of ICI in Nigeria,  
dyes and chemicals

CIBA-GEIGY, 287 Agege Motor Road, Mushin, Lagos,  
dyes and chemicals

BAYER - Unichem Nigeria Ltd., 42/44 Warehouse Road, Apapa, Lagos,  
dyes and chemicals

Nigerian HOECHST Ltd., Oba Akran Ave., Ikeja, Lagos,  
dyes and chemicals

Reiss & Co., Afolabi Lisi Rd., Ilupeju, Lagos,  
Agents for ULANO Group of Companies, Switzerland,  
chemicals, auxiliaries

Five Star Textile Mills Ltd., Isolo Expressway, Lagos,  
fabrics, auxiliaries

Haffer Industrial Co., 269 Agege Motor Rd., Mushin, Lagos  
weaving yarns

Nigerian Textile Mills Ltd., Ikeja, Lagos  
weaving yarns

Nichemtex Industries Ltd., 21-25 Broad Str., Lagos  
synthetic weaving yarns

Prospect Textile Mills Ltd., Ilorin  
weaving yarns.

ANNEX III.

Copy of a Minute

Oshogbo, 19.5.1982.

TO : UNIDO Project Manager  
FROM : UNIDO Textile Expert  
Copies : Director of IDC Abeokuta  
Akure  
Ilorin  
Oshogbo (in alphabetical order)

Ref. : Upgrading of small-scale Tailoring and Dressmaking Enterprises.

Introductory some quotations from various reports and studies :

According to a study of small-scale industries in the Western Region of Nigeria, prepared by the Industrial Research Unit, Department of Economics, University of Ife, March 1972, out of 15.266 small-scale industrial units (carried on or near the family home by a sole entrepreneur mainly with family labour and capital, usually alongside other occupations, such as farming or trading) identified in 49 major towns and villages, tailoring accounted for 52 % of the activities.

According to data published by the Imo State Statistics Division in 1975, the number of industrial establishments was 1418. Most of these were active in the textile industry (dressmaking, tailoring and others).

In Niger State, one of the least industrially developed States, arts and crafts have a rich tradition. Beside of this, out of 108 small-scale manufacturing enterprises, textiles (tailoring) came third after grain milling and bakeries.

In a statement of

Nigerian Industrial Policy and Strategy, Guidelines to Investors, published in 1980, the Federal Government indicated that small-scale industries would receive special encouragement.

The official Nigerian definition of small-scale industries says that handicraft and cottage industries have special problems, distinct from those of small, more organized and modern factory-type enterprises.

But nevertheless, these craftsmen are still surviving, making their livelihood out of the desire of the people to keep alive old traditions of dressing themselves for special occasions. But also in daily life, people favour tailor-made dresses and suits to ready-made garments.

Comparing high priced, tailor-made clothing with cheap imported ready-made garments, the support for small-scale enterprises should be self-evident.

The Federal Government of Nigeria has established a working definition of small-scale industry, originally framed in the context of the SSICS (Small-scale Industries Credit Scheme), limited to ₦ 150,000.- for investment in machinery and equipment in 1979.

The establishment, or the investment respectively, in an appropriate small-scale ready-made garment manufacture would be around ₦ 50,000.-, not at all coming up to the limit, set by Government. This investment would enable entrepreneurs to produce garments in an efficient way, of high quality to reasonable prices, able to compete with imported (smuggled) products.

Federal and State Government authorities, schools, hospitals etc. should be encouraged to purchase uniforms from these (by SSICS or NBSI supported) companies only.

To quote other sources again :

The most important lesson from current and recent U.N. projects in Nigeria is that technical assistance provided from external sources must be carefully tailored to local conditions and the likely availability of resources at the planning stage.

These above mentioned small units of tailoring and dressmaking entrepreneurs would be flexible enough to meet the individual taste of the public and at the same time adopt modern (efficient) techniques of production and would lower production costs.

These facts justify the necessity of improving the skills and production methods of small-scale tailors and dressmakers. All efforts should be motivated towards this goal.

To use commercial patterns and standard sizes instead of visual estimates would be a first step in the right direction.

The utilization of a (relatively cheap) round cutting knife would allow production of small series of garments of the same size and cut in one operation in a fraction of the time used for cutting by hand and scissors for one garment. The cutting process amounts to one third of the total labour costs of a garment. Also fabric requirements would be economized.

The investment in a simple plain industrial (heavy duty) sewing machine with some, carefully chosen simple (cheap) attachments is superior to a household machine with all sorts of fancy stitches (which will never be utilized), the price difference being negligible.

A small generator is of great importance in a country with permanent power cuts. 1 KW is enough for 3 - 4 sewing machines and costs less than N 800.-, saving enormous production losses.

Introduction of piece rates would reduce production costs.

To make small tailors and dressmakers more efficient and competitive towards imported clothing, the solution could be found in organizing groups of them into officially registered co-operatives.

All efforts should be made by IDC's to encourage State Ministries to let these officially registered co-operatives participate in the respective State loan credit schemes. This would enable them to obtain loans for working capital and investment in equipment. Raw material purchase could be obtained directly from producers, with the assistance of IDC textile officers and the UNIDO Textile Expert.

"Common Facility Workshops" should be set up by IDC's in each State, equipped with more sophisticated, specialized machines like

overlocking-	button holing-
hemming-	button sewing,
triple stitch-	bar tacking machines etc.

The total investment for these machines would not be more than N 15,000.-. These machines would be at the disposal of assisted co-operative members on a non profit making basis.

These specialized machines are only fully utilized if they serve 30 - 60 plain sewing machines. In other words, none of the small-scale tailors or

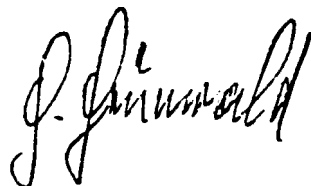
dressmakers can justify and afford investment in such advanced equipment. But the creation of

"Common Facility Workshops"

under the wings of IDCs would give these indigenous craftsmen and -women access to modern production methods and lower the production costs of these small-scale enterprises and be reflected in the selling price of their garments.

The UNIDO Textile Expert has contacted a modern garment manufacturer in Lagos and negotiated about possibilities to visit the factory with groups of tailors, showing them the operation of these machines mentioned above and up-to-date production methods. He has also arranged a programme to conduct introduction courses of up-to-date sewing equipment on the sewing machines mainly represented in Nigeria (Singer).

At the same time, the T.E. has established the necessary contacts with the main publishers of commercial patterns (Simplicity and Burda).



Georg Grünwald

U N I D O

Textile Expert

P.S. Official Exchange Rate in May 1982 1 N (Naira) = 1.53 US Dollar.

ANNEX IV

Textile Workshop and Equipment at Industrial Development Centres

Phase I

1.1 Handweaving Section

	US\$	US\$	US\$
1 warping drum, ø 3,0 m	215.-		
4 handlooms, 120 cm wide, with fly-shuttle beater countermarch, 8 harnesses auxilliaris	3.620.- <u>1.015.-</u>	4.850.-	

according to quotations of "Glimakra  
Vävstolsfabriken AB", Sweden, dated  
18.3.1982, prices are f.o.b.

1.2 Ready-made Garment Section

1 cutting mach.	1.443.-		
2 diff. lockstitch mach.	1.400.-		
1 overedging mach.	1.439.-		
1 overlocking mach.	1.440.-		
1 hemming mach.	1.355.-		
1 chainstitch mach.	2.978.-		
1 buttonhole mach.	3.000.-		
2 steam iron	400.-		
1 steam boiler	720.-		
1 steam heated vacuum table	<u>1.508.-</u>	15.683.-	

1.3 Silk-screen Printing Section

printing table, fixing oven, darkroom equipment for screen developing, screen washing facilities, frames, squeegees, auxilliaris .....roughly estimated		28.000.-	
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Phase I ..... Total

48.533.-

Phase II

2.2 Ready-made Garment Section

1 cloth spreader	3.930.-		
1 cutting table	2.950.-		
1 knit binder cutting mach.	4.048.-		
1 lockstitch mach.w.needle feed	2.400.-		
1 bar tacking mach.	2.092.-		
1 button sewing mach.	<u>1.500.-</u>	15.920.-	

Phase II .... Total

15.920.-

The prices of Ready-made Garment Equipment in Phase I + II are according to quotations from

Nippon Trading Co. Ltd., Tokyo,  
C. & F. Apapa, Nigeria, dated 9.2.1982.

Phase III

3.3 Silk-screen Printing Section

1 T-shirt 4-colour printer	53.200.-	
1 Jet dryer	<u>36.200.-</u>	89.400.-

Summary

Phase I	US \$ 48.533.-
Phase II	15.920.-
Phase III	<u>89.400.-</u>
<u>Grand Total</u>	<u>US \$ 153.853.-</u>



ANNEX V

List of Counterparts

I D C Oshogbo

O.A. Oshonowo	Senior Technical Officer
W.I. Essan	Higher Technical Officer
T.A. Olowokera	Higher Technical Officer
M.A. Adeoje	Technical Officer
R.A. Ogunsanya	Technical Officer

I D C Abeokuta

G.F. Adesodun	Principal Technical Officer II
K. Mayungbe	Higher Technical Officer
A.N. Olowofela	Assistant Technical Officer

I D C Akure

I.A. Adamolekun	Senior Technical Officer
A. Mohammed	Technical Officer
A.O. Agbelusi	Technical Officer

I D C Benin City

O.A. Otenuga	Senior Technical Officer
M.A. Kazeem	Senior Technical Officer
M. Adetula	Assistant Technical Officer

I D C Ilorin

G.D. Adejumo	Higher Technical Officer
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