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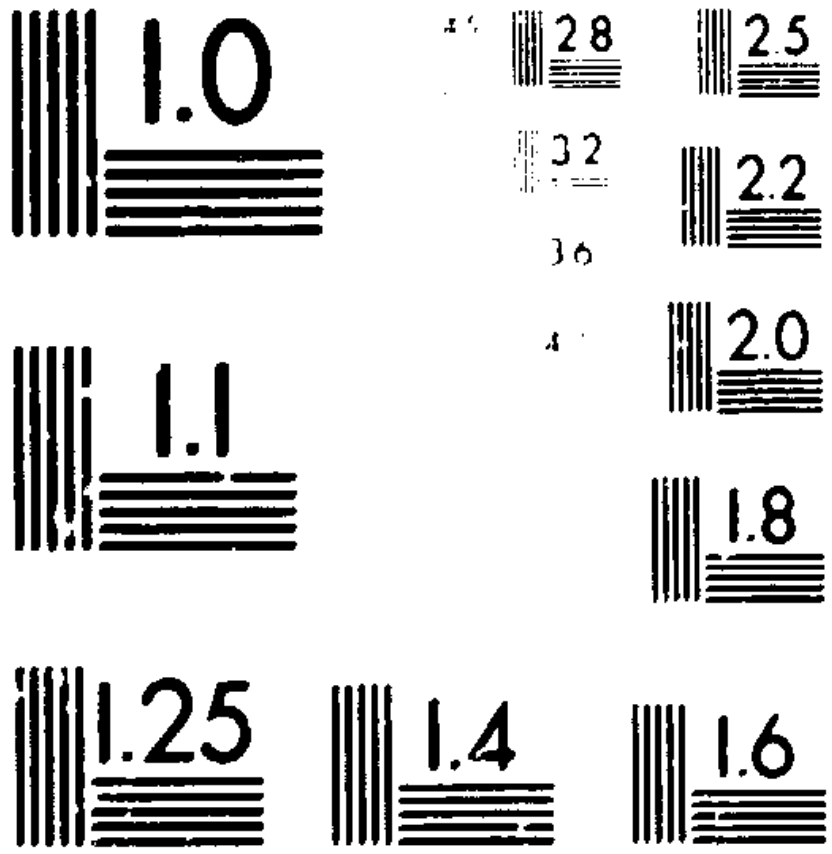

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Tanzania.

SURVEY OF THE FOOTWEAR PRODUCTION AND MANAGEMENT METHODS IN TANZANIA

SI/URT/82/802

TANZANIA

Technical Report: Part I - Survey of the Footwear Production and Management Methods

Part II - Survey of the Capabilities of the Morogoro Shoe Company

Prepared for the Government of the United Republic of Tanzania
by the United Nations Industrial Development Organization,
acting as executing agency for United Nations Development Programme

Based on the work of O.F. Klötzer, Footwear Industry Consultant (Management Expert) and F. Schmél, Team Co-ordinator and Footwear Engineering Expert, and Team

United Nations Industrial Development Organization
Vienna

PART I

Based on the Work of O.F. Klötzer

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P R E F A C E

This is to thank all, who by their help and cooperation made it possible to complete this comprehensive survey as scheduled.

We especially want to thank :

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E X P L A N A T O R Y N O T E S

1. Monetary Units.

US$ - United States Dollar

Tsh - Tanzanian Shilling

1US$ = 9.80 Tsh

1Tsh = 0.102 US$ November 1982

2. Measurement Units.

M2 - Square meter

sq.ft. - Square foot

sq.ft - 0,0929 M2

1M2 - 10.76 sq.ft.

kg. - kilogramme

1lb. - 0.4536 kg.

1kg. - 2.2059 lb.

to-metric ton - (1000 kg.)

3. Special Abbreviations and Signs.

FRG - Federal Republic of Germany

USSR - Union of Soviet Socialistic Republics

UK - United Kingdom

USA - United States of America

URT - United Republic of Tanzania

BMKI - Research Institute of Leather, Artificial Leather and Footwear Industries (Hungary)

BORA - Trade Mark used by Tanzania Shoe Company Ltd and also used to indicate the company

CIEM - Conserzio Italiano per la Erezione del Calzaturificio di Morogoro

DUNA - Duna Shoe Company (Hungary)

FAO - United Nations Food and Agricultural Organization

IBRD - International Bank for Regional Development

ITALMACCHINE - Italmacchine Plant S.p.a. Italy

NDC - National Development Corporation Tanzania

SIDO - Small Industries Development Organization Tanzania

TLAI - Tanzania Leather Associated Industries

MSC - Morogoro Shoe Company Ltd.

UNDP - United Nations Development Programme

UNIDO - United Nations Industrial Development Organization

WB - World Bank

CTA - Chief Technical Advisor

ITL - International Team Leader

CIF - Cost Insurance Freight

FOB - Free on Board

IDA - Industrial Development Assistance

PUR - Poliurethan

PVC - Poli-vinyl-chlorid

TR - Thermoplastic Rubber

A B S T R A C T .

Tanzania, the second largest producer of hides and skins in Africa has under the control of the Tanzanian Leather Associated Industries Corporation (TLAI) a parastatal organisation, two major shoe factories :

Tanzania Shoe Company Ltd. (Bora) Dar-es-Salaam and Morogoro Shoe Company Ltd, Morogoro, both facing severe problems.

There is not enough qualified management, skilled workers are missing, equipment of Bora is old and partly broken down, Morogoro is completely new, but designed in a way that it is highly depending on imports of material and foreign experts for which the necessary foreign currency is only partly available.

Morogoro Shoe Company, built to export 85% of its production, has no export chances today, because of bad quality and high prices of its production and will have only limited changes (25-35%) in the future. The survey comes to the conclusion to close down one of the two factories and concentrate all resources and efforts on the remaining one. A new organizational structure is also recommanded.

I. I N T R O D U C T I O N .

The Tanzanian Leather Associated Industries Corporation (TLAI) is the parastatal organisation for the leather, shoe and leather goods industry in Tanzania. It controls two major shoe factories : Tanzania Shoe Company Ltd. (Bora), Dar-es-Salaam and Morogoro Shoe Company Ltd., Morogoro.

Both factories are facing very serious problems. The operating results up to the present time have been far from satisfactory. The quality of the products has in most instances been very disappointing with sometimes severe setbacks at the marketing ends. The underlying causes to these problems are manifold, but the most important are the lack of appropriate know-how, operational training and experience, which is apparent in the execution of almost all types of work. It is not only evident in production, maintenance and marketing, but also in other areas, as well as at the levels from management down to the manual workers level. Both companies are operated with expatriate management or consultancy contracts for which the country has to pay in foreign exchange.

Little emphasis is given by such management in training the local manpower needed for the future development of the sectors as a whole. This project aims at assisting the industry to remedy this situation as quickly and thoroughly as possible.

The project was requested by telex M 1004 from UNDP Dar-es-Salaam, dated 1.4.82 and misc 1162 of 16.4.82 and approved by the Unido Project Review Committee at its 31st meeting held on 6 July 1982. The government counterpart agency was Tanzanian Leather Associated Industries (TLAI), Unido contribution was US$ 51.000 of which US$ 29.000 were subcontracted to BMKI through INTERAG.
The project became operational on 15 October 1982 when the chief technical adviser arrived in Dar-es-Salaam and lasted until 13 December 1982.

Main objectives were :

1. to assess the present and past performance of the management of the Morogoro Shoe Company against the existing management contract.
2. to assess the present and past performance of the team of consultants engaged in the Tanzanian Shoe Company Ltd (BORA) against the terms of reference of the existing consultancy agreement.
3. to prepare a proposal for the reorganisation of the technical management in the Morogoro and Bora Shoe companies.
4. to prepare a proposal for the reorganisation of the marketing network for footwear in the domestic market, as well as for the establishment of an export marketing organisation.

Subcontracted to BMKI were the following objectives :

5. Survey report on the technical capabilities of the Morogoro shoe factory to produce acceptable quality and quantity of footwear for export markets, taking in consideration the

production capabilities of the Bora shoe for the local market.

6. Plan of action, specifying the training needs and programmes for the upgrading and training of skilled workers, supervisors and management to provide the Morogoro shoe factory with the necessary work force.

7. Suggested product range for the Morogoro shoe factory with samples of footwear, detailed costings production planning for short, medium and long term basis. The footwear range has to be based on mainly locally available materials and only components and raw materials which are allowed to be imported under the present regulations and financial conditions, should be included.

8. Suggested marketing strategy for export and identification of possible export markets.

II. F I N D I N G S .

Leather shoe production is one link in the chain of operations which are necessary to make use of animal hides and skins. Before it comes to shoe making hides and skins have to be collected and tanned. The effectiveness of both operations is essential for leather shoe making.

1. Hide and skin collection.

Tanzania is the second largest producer of hides and skins in Africa, but from the available 1.3 - 1.4 million hides only 30% are used in Tanzanian tanneries. 70% are either exported in raw or semi finished or otherwise brought out of the country. Of the available skins of goat and sheep (estimated 2,5 million pieces) only 15% reach the tanneries. Hides and skins are under the Ministry of Livestock and there might be different opinions how to make best use of hides and skins.

2. Tanneries.

The tanneries finishing capacities do not cover the tanning capacities and only 50% of the hides reaching the tanneries can be finished.

The tanneries work only 40% of their capacity due to lack of spare parts, chemicals and poorly functioning raw material collection. Therefore leather to produce shoes is scarce and just enough to produce 3 million pairs per year.

3. Dependence.

The idea to process the available hides and skins into leather and finally into shoes and other leather goods is certainly right. Value is added to the raw materials and exporting finished goods brings much more income in foreign currencies than exporting raw materials. However this has to be done in a way appropriate to the overall economic and social situation of a country.
It has to be done in accordance with the financial and human resources available and so, that the dependence on foreign inputs in terms of expertise, material and spare parts does not consume most or all or even more than has been gained.
"The problem of the import-dependence of our industries has never been given sufficient weight in our decisions about starting a new project. When a project is submitted to Government by a Parastatal Corporation or a Ministry, it is urged that it will save (or earn) a particular amount of foreign exchange annually. It is rarely pointed out - and Government has not the habit of asking - what will be the annual Foreign Exchange demand of that project."
(President Julius Nyerere, October 1982)

4. Interdependence.

Shoe production is not only interdepending with hides and skins collection and leather production. The problems of a shoe factory in Tanzania cannot be solved in the company itself. Solutions can only be found by looking at the sector as a whole. It is therefor that this survey is structured in groups of problems rather than in different shoe companies. However a brief description of Morogoro Shoe Company and Tanzania Shoe Company Ltd (Bora) is necessary.

5. Morogoro Shoe Company Ltd.

The company was founded as a part of the Morogoro Industrial Complex in 1977, after a feasibility study had been made by a consultancy firm from Pakistan and an appraisal by the World Bank. (World Bank Report NO. 1213-TA
Tanzania : appraisal of the Morogoro Industrial Complex, March 1977, Industrial Project Department).

The project (US$ 17 Million) was financed by a World Bank loan.

The appraisal came to the conclusion, that MSC would be a highly profitable project for serving to its best the welfare of the Tanzanian people. The report is a masterpiece of an economic study. The only disadvantage is that it is completely wrong.

No one knowing a little bit about shoe production would ever base the report on those assumptions the appraisal was based on. (e.g. 80% export, competitive quality and prices etc.)

Computations were made on false world market prices and led therefor to results which are wrong.

No one knowing Tanzania and its specific economic policies and conditions would have proposed such a huge factory which is even in industrialized countries difficult to manage properly and profitably. MSC has a capacity to produce 2 Million pairs of leather shoes and 2 Million pairs of canvas shoes based on 300 working days per year.

The factory site is 35000 M2 of which 22700 M2 are covered by buildings. More than 1700 machines are installed.

It is planned to employ nearly 2000 workers and staff. Today 439 workers and 196 staff are employed, producing less than one pair of shoes per capita in one shift. (Normal productivity is 10 to 15 pairs) More details are given in annex V.2.

The company is highly depending on foreign currency for technical expertise, management, materials and spare parts. However for 1982 MSC received only Tsh 2 Million in foreign currency instead of Tsh 36 Million the company applied for.

While everyone who wants to produce goods in an economic way, tries to reach his target with a minimum input of capital, the project engineers for MSC seem to have had different objectives, namely to spend as much as possible.

The machinery layout is such, that each conveyer could produce any kind of shoe in any kind of technology one can dream of. The factory is absolutely universal and even then there is a surplus of 250 machines. With conveyers specializing on certain shoe types and using a reasonable number of different technologies at least 40% of the machinery would be unnecessary. Despite of the fact that MSC is heavily overinvested the outfit is unbalanced and nearly 1 Million US$ has to be spent on missing equipment. The subcontractor estimates that in total US$ 4,8 Million have to be invested for the realization of his 5-phase programme. (see annex V.2)

6. Tanzania Shoe Company Ltd. (Bora)

Bora was nationalized in 1967. Up to then the company produced

only a small number of military boots and was mainly used as a warehouse and distribution centre for production coming from Kenia (Bata).

In the process of building up a large shoe production Bora entered 1973 into an agreement with "Services Industries Ltd." (SIL) of Pakistan, who sent a management team, including a General Manager, to run the company. Later the agreement was changed, now providing only for a production manager, a designer and a chemist. The agreement expires in spring 1983, and is not expected to be renewed. The expectations in the before mentioned agreement have been met partially.

Especially in production management improvements were reached, while the training of the Tanzanian counterparts for instance in design have been neglected. The willingness to create new ideas or even to accept new ideas from others is underdeveloped.

Experiences of the Pakistan advisers seem to stem from a half mechanized, half manual kind of production, which did not meet the needs of Tanzania Shoe Company Ltd. completely.

However one has to take into account that management and consultants fight with many problems. The buildings are old, supply lines for electricity, compressed air etc. scarce and rotten. Most of the machinery is old (up to 15 years), badly maintenanced or broken down.

The company employs 2000 workers (3 shifts) and 500 staff and is hopelessly overstaffed and has little possibilities to get rid of its personnel. Lack of spare parts and material are further difficulties.

Only a part of the middle managers can be considered experienced enough for their job. The technical preparation of the production and production planning is insufficient, the quality of production poor.

There is no proper workshop for repair and maintenance of the machines. The company has about 100 to 150 skilled workers who could produce good shoes under better conditions.

Production is deteriorating drasticly and the company faces a loss of Tsh 10 Million for the first 7 months of 1982.

Bora also produces bicycle tubes and tires as well as rubber sheets and soles. The company has a wholesale operation and 70 retail shops where 800 people are employed bringing total employment to 3.300 persons.

There are no difficulties to sell the footwear produced even at horrifying retail prices : Tsh 180-360 for canvas shoes.

Tsh 450-700 for moccasins.

The minimum wages is 600 Tsh per month, but people queue up wher shoes are available in the shops to buy this expensive footwe

Bora has a perfect seller's market. The range is not market orientated.

Tsh 20 Million have been alloted for a rehabilitation programme to the company.

TANZANIAN SHOE COMPANY LTD. (BORA)

Production Report 1979-1982.

Unit : 1000 pairs.

PRODUCT	1979		1980		1981		1982 (7 months)	
	PLAN	ACTUAL	PLAN	ACTUAL	PLAN	ACTUAL	PLAN	ACTUAL
CANVAS SHOES	1500	1400	1547	1256	1375	1199	753	293
LEATHER SHOES	1330	1150	1518	1117	1255	1018	713	344
SANDALS PLASTIC SHOES	102	88	-	6	-	40	-	-
HAWAI SLIPPERS	2975	2452	3000	1762	315	137	-	9
TOTAL	5907	5090	6065	4141	2945	2394	1466	646

7. Problems.

7.1. Structural problems.

A shoe industry should produce shoes. The production of tires and tubes does not belong into a shoe company.

Whole sale and retail activities require special skills and are not usually be included in the activities of a shoe factory.

The production of lasts and shoe laces are better taken care of by small scale component industry.

Transportation, guarding, cooking and other activities not related to shoe making should be subcontracted to firms specialized in these fields.

"One really interesting fact which can be derived from statistics is that in Tanzania the productivity per worker was higher in small industries than in the medium and large scale industrial units"!

(President Julius Nyerere, October 1982)

TLAI does not seem to have possibilities to control, coordinate or help the subsidiary companies.

A central purchasing office concentrating the demands of the production companies would increase the buying power.

Supply surveys abroad would lead to better import conditions.

Supply surveys in local market would reduce imports.

A central export department both for leather and shoes would reduce export costs and would lead to a better use of rare exports skills and knowledge.

A central workshop for repair and maintenance of tanning and shoe production machines is in planning.

A clearing office dealing with all burocratic matters toget import and export licences, letters of credit and other permits and clearances is missing. The managers in charge are losing much time going to Dar-es-Salaam for these matters.

Central technical advise should be available.

7.2. Management problems.

The most severe bottle neck in the shoe industry of Tanzania is the lack of qualified management. The term "management" as it is used here means all people, who plan, organize, direct, supervise and/or control the work of others. Even the foreman is a part of management and should feel like a manager : "responsible to get things done!"

Good managers are rare especially on the lower and middle management level.

This is true also in Tanzania where industry has no long tradition.

In order to ease the situation TLAI has engaged expatriate management in Bora and MSC. The role of Pakistan consultants has been mentioned already under section 6 of this chapter.

For MSC, a management agreement was signed with Italmacchine Plants from Italy on 25 June 1979. The agreement has expired in September 1982.

According to this agreement the management agent had to supply :

a) General Manager

b) Production Manager

c) Leather Shoe Section Manager

d) Planning and Finance Manager

The main responsibilities of the management agent under the agreement were :

e) to run and conduct the factory and the business to the best of its ability and in the best interest of the company.

f) to train Tanzanian personnel

g) to make a long range plan covering financial, technical, marketing and management objectives and showing profitability projections for the manufacturing and marketing operations

h) to prepare an annual plan accordingly including also a financial budget

i) to put up report and control systems

k) to develop a general maintenance programme

l) to act as the company's agent in the purchase of plant equipment and other materials including raw material provided that it will pay to the company any commission earned thereby

m) to undertake, on behalf of the company to sell all products of the company outside Tanzania. (at least 85% of the production)

To a) The management agent sent a general manager, however he was not qualified and dismissed in January 1982.
The management replaced the dismissed general manager by the production manager who by no means is a good general manager.
He expressed "the project is wrong and cannot be run profitably".
He declared himself an engineer but not a general manager and stated that he does not like his job.

To b) The newly appointed production manager was already gone leaving the position vacant.

To c) The leather shoe section manager was gone too.

To d) The planning and finance manager proved not to be a planning and finance manager at all and was dismissed.
The position was vacant.

To e) The people involved worked certainly to the best of their abilities. But with a wrong technical concept, other difficulties and without help from their home base they could not do much.
(And there was not much ability)

To f) An impressive training programme was run. Those who have been trained in Italy reported that the time of training was too short for people knowing nothing about shoe making and that they faced some difficulties because of the language problems.
The majority was trained locally by those who had been trained in Italy, which was not sufficient.

To g) Plans were far too optimistic and targets were never reached.

To h) Plans were never reached : of foreign currency asked for in the budget only a fraction was available.

To i) There is no formal reporting and control system.

To k) There is no general maintenance programme executed.

To l) This has been done without getting the Tanzanian supply Manager involved, who consequently does not know what, where to buy and at what price. He also complained about problems with the stock inventory because he does not get hold of all documents. A special task team stated goods US$ 733.000 worth missing.

To m) 4.000 pairs of shoes have been shipped to Italy but were not paid yet. Reason : unsalable.

In both companies are small numbers of intelligent, hard working managers devoted to their task and able to do a good job with growing experience. They can be found in middle and higher management levels. But there are not enough to run two shoe factories.

Others are happy to have got a management position and being in doubt of their capabilities hesitate to take decisions, to tackle problems or even to execute decisions taken by top management. They feel safe only when nothing changes. More training, more education and more experience will better the situation.

7.3. Financial problems.

Next to management problems the problem of getting enough foreign currency is essential.

The shoe production as in existance now needs a constant imput of spare parts, materials and expertise which has to be imported. However the situation could be eased by using more local materials for shoes to be sold in the local market. (e.g. sandals with sisal or wooden soles instead of PVC or PUR)

Small tools and simple machines could be produced locally.

The purchasing departments do not have enough information what could be bought at home nor do they encourage other industries to start to produce it. (e.g. cotton yarn to produce laces is only available in white colour. Black and brown laces are imported. Is there really nobody to dye the yarn?)

Of course these are rather small amounts that can be saved shortly. There is no denying the fact that Tsh 150 Million per year in foreign currency are necessary to get the industry going at full capacity.

7.4. Cost problems.

One pair of safari boots, which can be bought in Europe for US$ 7.- has an ex-factory price in Morogoro of US$ 21.-

There are many reasons for this extraordinary fact. Some are :

- Leather prices from local tanneries are twice as high as on the world market.
- Low labour productivity.
- High depreciation (Tsh 60.- per pair).
- High administration costs (Tsh 40.- per pair).
- Import duty (ranging from 25% to 160%).
- Transportation costs. etc.

7.5. Organizational problems.

The scope of a shoe factory especially in Morogoro asks for well built organisation with a sophisticated Management Information System, normally run by computers.

The low level of experience in shoe production needs a short span of control with one foreman for 10 workers maximum on production level and maximum 1 supervisor for 4 employees on department level. Team work on an interdepartmental basis is essential. Day to day information and many feed backs are necessary to keep things going smoothly. An example is given in form of a flow chart attached how e.g. Range Building should be handled (see page 21a).

Organizational problems would be less if production could be broken down into smaller units working independent. For a concrete proposal see "Recommendations".

RANGE BUILDING FLOWCHART.

RESPONSIBLE	TASK
Marketing Department	Collect Market information. ideas, photos, sketches, surveys, contact retailers, fairs, and produce range outline.
Production Department	Sample making
	Pattern making
	Technical specifications
	Material requirements
Supply Department	Material availibility
Accounting Department	Costing
Marketing Department	Pricing
General Manager	1. PRE-RANGE REVIEW
	Quantity Estimates/Planned Salesmix
Retail Committee	2. PRE-RANGE REVIEW
(Customers)	Quantity Estimates/Wanted Sales Mix
General Manager	Final Range Review
	Final Quantities, Final Sales Mix
Supply Department	Supplies what necessary
Production Department	Production
Marketing Department	Quality control
	Shipping

7.6. Personnel problems.

A severe problem is the surplus of manpower in Bora as well as in MSC. Bora could handle its present production under the given circumstance with 750 in production and 250 in staff.
MSC has 439 employed in production and nearly 200 in staff functions. As production is low and interrupted frequently because of bad planning and missing materials workers are bored. Having no work they are undisciplined, stay around talking, sleeping, are late, go too early and have a high rate of absenteeism. There was no statistic available but 15% being absent is certainly close to reality. Some managers give a bad example as well and office staff seems to be not well motivated. This situation demotivates the personnel and it might be hard to get them used to normal work later on.

III O P T I O N S .

For various reasons as pointed out before and facing the problems which have to be taken care of, it seems unrealistic that the Tanzanian shoe industry can run Bora and MSC presently at the same time at full capacity. The lack of management material, expertise, quality and export markets is too obvious.
The need for foreign currency is too large.

3 alternatives have to be taken into consideration.

a) To reduce the capacity of MSC and increase the capacity of Bora shoe by moving machinery to Dar-es-Salaam.

b) To close down MSC for the time being, moving surplus equipment (annex V.2. subcontractorsreport) to Bora and preserve the machines in MSC for a later start-up.

c) To close down the leather shoe production in Bora, moving the few machines in good state, about 100 skilled workers and a number of qualified managers to MSC.

Each option has its pro's and con's which are listed down on the following pages and commented on in order to give a base for decision.

To a).

Positive Aspects.

There is no need to buy any machinery or equipment for the rehabilitation programme of Bora.

Having two production places (Dar-es-Salaam and Morogoro) fire hazard is lower.

MSC gets smaller and is therefor easier to manage.

Lower manpower requirements in MSC.

Lower energy demand in MSC.

Negative Aspects.

Does not solve the management problem in both factories.

It is more management needed than in option II + III.

Does not solve problem of surplus work force in Bora.

More foreign experts needed.

Old buildings in Bora have to be repaired while new building in MSC is not used.

More spare parts in stock needed.

More material in stock is needed.

Coordination problems between Bora and MSC stay in existence.

Less buying power unless purchasing can be centralized.

Problem of disassembling of complicated machines.

Risk of breakage on transport.

High administration costs.

To b).

Positive Aspects.

Less foreign currency needed because of reduced production.

Better productivity by better machines.

Eases management problems.

Negative Aspects.

Old buildings have to be renewed.

Fire hazard.

Position in the capital of the country. On long term basis Dar-es-Salaam has to offer enough job opportunities which are more attractive than working in a shoe factory.

Bora's rehabilitation programme has to be financed.

Reduces capacity too drastic.

Makes no use of the new machinery in MSC.

Causes high preservation costs in MSC.

To c).

Positive Aspects.

Makes full use of new machines, equipment and buildings.

Eases training needs.

Fills management gaps and eases management problems.

Better location, industrial decentralization.

Less foreign experts needed.

Solves manpower surplus in Bora.

Can run two shifts and produce 6 million pairs.

Negative Aspects.

Creates housing problems.

Fire hazard.

Needs reorganisation (for details see recommendations).

IV. R E C O M M E N D A T I O N S .

1. It is recommended to the Ministry of Industry.

a) To take a decision which of the options pointed out under III. should be taken.

b) To secure the necessary imput of foreign currency for the implementation of this option.

c) To have TLAI better equipped to control, audit, supervise, coordinate, assist, advise and otherwise help the subsidiary companies.

d) To encourage small scale shoe industry - now producing approximately 2 million pairs of shoes annually - by getting them better supplies of material and spare parts in order to create competition between them and TLAI shoe production.

e) To cooperate with the Ministry of Livestock in the improvement of hides and skins collection and quality and to prevent export of hides and skins needed to supply the tanneries in Moshi, Morogoro and Mwanza.

2. To TLAI.

a) To rehabilitate Wet-operation and to enlarge finishing capacity up to tanning capacity.

b) To install machinery in Morogoro to produce woven leather from goat and sheep skin. The surface of the skins is often defect. Woven leather hides these faults, and makes skins more valuable. There is a potential market for woven leather shoes in summer season.

Machines are available from Cadix, Belgium.

c) To start foot measurement survey for local market.

Shoes are produced from European lasts which do not seem to fit the feet in Tanzania. For details ask Mr. J. Berg, Unido.

d) Not to prolonge management contract with Italmacchine Plant. They do not have the necessary experience in running big scale shoe production. The company has only some 30 employees. Management & Staff is hired ad hoc on the market, and is not backed by the company. What is needed is a management team working together in a big shoe factory since years. These teams are hard to get and their experience is expensive. The following companies may be able to supply a team :

- Clarks Ltd. Street, Sommerset, U.K.
  att. Mr. Anthony Clothier.
- Salamander A.G. Kornwestheim, Federal Republic of Germany.
  att. Dr. Dazzert.
- Freudenberg & Co. 6941 Weinheim, Federal Republic of Germany.
  att. Mr. Hermann Freudenberg.
- SVIT, Gottwaldo, Czechoslovakia.
- Borovo, YU-56223 Borovo, Yugoslavia.
- Sabaria, Szombathely, Hungary.
- Duna Shoe, Budapest, Hungary.
- Tisza Shoe, Martfü, Hungary.
- Genesco, Nashville, Thennessy, USA.
- Marbot & Comp. SA, F.24190 Neuvic-sur-l'Isle, Dordogne, France.

e) If expatriate management is hired employ "Deputy System" which means : The manager should be Tanzanian, the deputy expatriate. The deputy is running the day to day's business, while the Tanzanian handles affairs with local personnel and institutions involved. The deputy by discussing with and reporting to the manager teaches the Tanzanian manager until the manager can operate independent.

This system prevents the Tanzanian manager just being a spectator and gets him involved. It prevents him losing face by making mistakes and there is no gap when the expatriate leaves.

f) To exclude retail and whole sale operations from the shoe factories and organize them in a separate company or companies.

g) To separate production of rubber sheets, tubes and tires, lasts, laces, heels and unit soles from the shoe factories and make them independent to sell also to other shoemakers and to the market.

h) To start to supply marketing survey in local markets to find out which materials are available to substitute imported materials.

i) To give supply managers the possibility to learn more about availability and prices of goods which have to be imported.

k) To concentrate buying power by buying centralized for whole TLAI. Therefor an import-export department should be installed in TLAI handling at the same time clearing matters described under item 7.1. of this report.

l) To continue and expand with the centralized, well organized, long term management development programme started under Project DP/URT/78/010 for the sector. The success of all activities is

depending of it.

m) To change planning procedures.

The planning system (5 years forecast) does not give realistic results. Even the one year plan is everoptimistic and seldom met. Reasons for the failure of the planning system are :

- a 5 years planning period is too long for the shoe industry. 3 year planning will do.
- The planning people have not enough information on which assumptions their planning should be based.
- Plans are not action orientated, which means there is no list of actions to be taken in order to reach targets of the plan.
- The actual performance should be checked regularly against the plan and action should be taken if the plan is not reached.
  e.g. revision of the plan.
  decision on new efforts to be made,
  replacing of managers who failed,
  correcting other bottle necks

3.To Morogoro Shoe Company.

a) Implement recommendations of the subcontractors report (annex V.2).

b) Stop hiring workers and staff. Send as many workers and staff as possible on unpaid vacation. Have all others fully employed. Take care of constant flow of material, reinforce on the job training and try to reach a production of 8 pairs per capita and shift.

c) Intensify quality control.

d) Have lace-plant operate in 3 shifts and sell laces in local and export markets.

e) While working on reduced scale improve discipline and have factory cleaned inside and outside the buildings.

f) Install proper management information system e.g. daily, weekly and monthly production report
weekly and mothly sales report
quarterly trial balance sheet & profit and loss account
install monthly reports of raw material and ready made shoes stock.

g) For export use "Quality by Selection" system, which means : select only shoes of good quality to fulfil orders for export. Sell 2. grade on local market. Missing pairs in the assortment have to be produced again. Apply this system until a degree of quality is reached sufficient for export markets.

h) Plan production 3 months ahead to avoid lack of materials as much as possible.

i) Change your range as much as possible in order to minimize imput of imported materials.

k) Make better use of leather waste. Don't throw it away but sell it to the private sector or give it to schools for handicraft training.

1) The functional organisation scheme which the subcontractors proposed in Annex V.2. is a solution necessary for the time until enough production management is available.
Finally production should be split up in 6 to 10 independent shoe production units specialized in one type of shoe each, e.g. cemented, stitch down, mocassin, injection moulded etc.
Each production unit should produce a complete shoe from the pattern making to the packing, including technical production preparation and production planning.
They receive orders from marketing and deliver their production to marketing.
Production of lasts, laces, heels, unit soles and other shoe part should be organized in independent production units, who also sell to other shoe factories and the market.
Only marketing, manpower development and administration, supply, maintenance, financing, accounting and similar services should stay centralized.
If room is needed to implement this splitting in specialized production units, closing operations should be transferred to towns and villages up to 100 Km. around Morogoro.
These closing units should employ 50 to 100 workers, preferably women and should be run by one superintendent and 3 to 6 foremen.
Delivery of cuttings and collection of uppers should occur every second day.

The following targets must be reached-among others- to be competitive on international markets :

Sales per person employed (excluding retail) per year	Tsh. 200.000.-
Sales per person working in production	Tsh. 250.000.-
Sales per working hour and person working in production	Tsh. 160.-
Produced number of pairs per person employed per year (excluding retail)	Pairs 2000
Numbers of workers per one staff member	1.5
Number of days missed through sickness per worker and year	Days 12

4. To Tanzania Shoe Company (Bora).

Most of the recommendations given in this report are also applicable in Bora.

Some deal with the specific situation in Morogoro and are not applicable in Bora.

Bora has some very capable young managers who could be promoted to production manager, chief engineer and even General Manager.

ANNEX V.1.

P R O G R A M M E D I A R Y

Oct. 1982

15. Arrival in Dar-es-Salaam, meeting Mr. B. Svensson ITL, URT/78/010/à/01/37.

16. Discussion with Mr. J.H.T. Kisonda, Director of Finance and acting General Manager, TLAI.
Visit to Bora to meet Mr. Y.J. Mwailolo, General Manager of Tanzania Shoe Company Ltd. for general discussion.
Meeting with Dr. F. Malata Unido expert and discussion about aspects of the technical status of Bora.

17. Studying of W.B. document, minutes of MSC board meetings and other relevant reports.

18. Visit to UNDP, Mr. P. Reynolds, Acting Resident Representative and Mr. S. Henein, Senior Industrial Development Field Adviser.
Visit to Mr. J.V. Iwabuti, Chairman of the board of TLAI. Briefing by the Minister of Industry Mr. B. Mramba in presence of his Deputy Mr. E.G. Mwanansao and Mr. Mworia, who was nominated as contact within the ministry.

19. Visit to Morogoro to meet the General Manager Mr. F. Parri, Italmacchine Plants, who was absent.

General discussion with Mr. S.H. Mwilina, manpower development and administration manager and tour of the factory accompanied by Mr. Kibona, acting production manager.

20. Visit to Bora.

21.-24. Studying documents, discussions with Mr. P.B. Buit, Unido expert, about the situation of the Tanzanian tanning industry and with Mr. R. Chambers, Unido expert about export of shoes to neighbouring countries.

25. Visit to Bora to assess the performance of a team of consultants from Pakistan.

26. Visit to Mr. Mworia, Ministry of Industry, to discuss actions taken by the management agent of MSC.

27. Visit from Mr. J.V. Iwabuti, Chairman of TLAI about the above concern.

28. Discussion with Mr. Leffier, Cotton Mill, Morogoro, about problems in Morogoro.

29.-31. Elaboration of a working plan for Hungarian subcontractor.

Nov. 1982

1. Sick.

2. Arrival of five Hungarian experts, briefing, discussion of work plan.

3. Introduction of subcontractor to Bora.

4. Introduction of subcontractor to UNDP, meeting with Mr. Buit and Mr. Chambers to inform subcontractor about tanning industry and shoe export.

5. Travel to Morogoro, arrange accomodations.

6. Tour of MSC (plants, workshops, and stores).

7. Discussion on further orocedures with the subcontractor.

8. Interviews with managers of manpower development and administration, marketing and supply.
Meeting with members of Party and Trade Union to explain the reason of our stay in Morogoro.

9. Interview with production manager, and training officer. Visit to the samples room and selection of samples for local market and export for the product-mix to be recommended and elaboration of costing sheets.

10. Interviews with chief engineer, chief accountant and 5 trainees.
Meeting with Mr. F. Parri, General Manager, about main problems in MSC.
Informal meeting with Mr. Kisinini, about special difficulties in stock inventory and supply matters.
Visit to Morogoro Tannery.

11. Report writing.

12. Meeting with Mr. Trung Tin, W.B. about problems in Tanzanian shoe industry and targets of the survey.

13.	2. meeting with chairman and secretary of party and trade union.
15.	Report writing.
16.	Return to Dar-es-Salaam.
17.	Meeting with Mr. Tin W.B. and Mr. Berg, Unido, to oiscuss main point of the survey.
18.	Participation in tripartite meeting of Unido Project DP/URT/78/010.
19.	Collecting further information from Mr. Kijuga and Dr. Malata in Bora.
20.	Discussion of subcontractor's report.
22.	Visit to UNDP, Bora.
23.	Travel to Morogoro accompanied by Mr. Beeby, Unido expert, looking for accomodation, shopping etc. for Mr. Beeby.
24.	Introducing Mr. Beeby to Mr. Parri, training officer and production manager.
25.	Studying subcontractor's report.
26/11-6/12	Collecting further information, report writing and copying.
7/12.	Final discussions in Dar-es-Salaam with TLAI and UNDP.
8/12.	meeting with Mr. B. Mramba, Minister of Industry, Mr. E.C. Mwanansao, Deputy Minister and Mr.T.Mworia, Secretary in the Ministry to discuss the report.
13/12	Return to Vienna.
14/12-15/12.	Debriefing in Unido, Vienna.

ANNEX V.2.

Persons contacted in Tanzania.

The following list consists of the most important persons met in Tanzania.

From the Ministry of Industry.

B. MRAMBA, Minister

E.C. MWANANSAO, Deputy Minister

T. MWORIA, Secretary

From TLAI.

J.V. IWABUTI , Chairman

A. NG'AMILLIO, General Manager

H.T. KISONDA, Chief Accountant

From Tanzania Shoe Company Ltd. (Bora).

M.J. MWAILOLO, General Manager

KIUGA, Chief Accountant

From Morogoro Shoe Company Ltd.

F. PARRI, General Manager

S. MWILIMA, Manpower development and Administration Manager

E. KISININI, Supply Manager

F. RATAIHWA, Marketing Engineer

A. NG'INGO, Chief Engineer

BANKA, Chief Accountant

KIBONA, Acting Production Manager

S.M. OROTHA, Training Officer

MAZOEA, Welfare Officer

From UNDP.

P. REYNOLDS, Acting Resident Representative

S. HENEIN, Senior Industrial Development Field Adviser

From World Bank.

NGUYEN TRUNG TIN , Development Officer

From UNIDO.

J. BERG, Senior Industrial Development Officer

B. SVENSSON, ITL-DF/URT/78/010

P.B. BUIT, Leather Industry Expert

R. CHAMBERS, Marketing Expert

F. MALATA, Shoe Machinery Expert

R. BEEBY, Training Expert

D. RUSSEL, Design Expert

From BMKI, DUNA Shoe Factory and INTERAG.

F. SCHMEL, Team coordinator footwear engineering expert

G. BORI, Economist, Marketing expert

J. CSONKA, Mechanical Engineer foreign trade mark expert

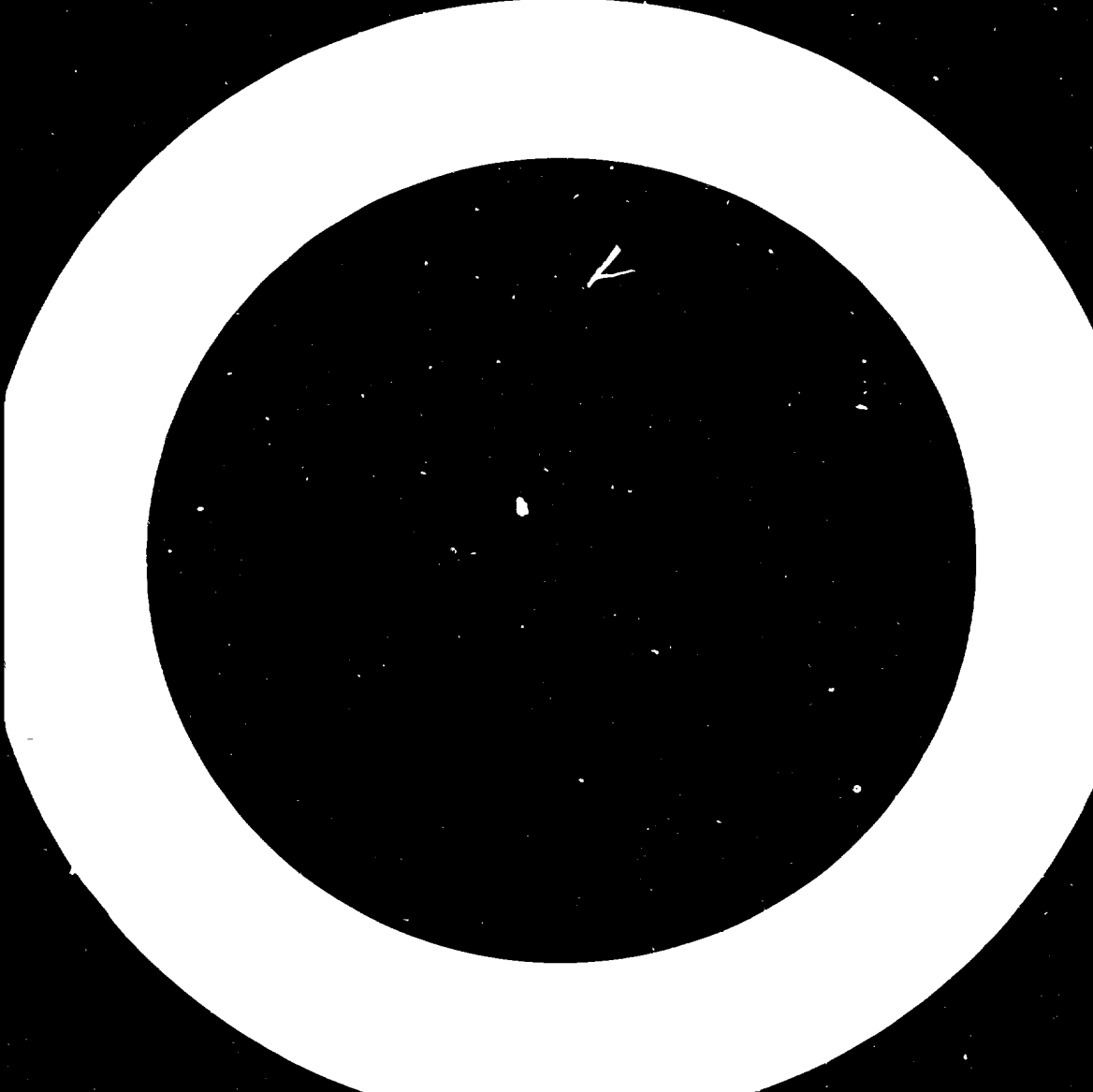
S. CSONGEI, Footwear technologist range building expert

I. SOPONYAI, Footwear technologist production control expert

ANNEX V.3.

R E F E R E N C E S .

1. Tanzania: Appraisal of the Morogoro Industrial Complex.
   World Bank study No 1213-TA (1977)
2. Survey of the existing Operational Tanneries Connected to TLAI.
   Study made by the Unido team in 1980.
3. Agreement between NDC and ITALMACCHINE for the project
   engineering and training concerned with the establishment of
   the Morogoro Shoe Company (1977).
4. Agreement between Morogoro Shoe Company and ITALMACCHINE
   for Management and Marketing services to be rendered to the
   Morogoro Shoe Company (1979).
5. Report of the special Task Team of the Special Committee
   of the TLAI Board of Directors (1982).
6. Commissioning report made by Dr. F. MALATA, UNIDO expert (1982).
7. Manual for the preparation of industrial feasibility studies,
   Un publication No ID/206 (1978).
8. Invoices of supplies made by CIEM (1978-1980).
9. Information sources on leather products industries.
   Un publication No ID/226 (1979).



PART - II

Based on the work of Ferenc Schmél, team co-ordinator and footwear engineering expert; Géza Borí, economist, marketing expert; József Csonka, mechanical engineer, foreign trade expert; Sándor Csöngei, footwear technologist, range building expert; and István Soponyai, footwear technologist, production control expert

Explanatory Notes

Reference to dollars ($) are to United States dollars.

The monetary unit in the United Republic of Tanzania is the Tanzanian shilling (TSh). During the period covered by this report, the value of the Tanzanian shilling in relation to the United States dollars was $US 1 = TSh 9.80.

References to tons are to metric tons.

A full stop (.) is used to indicate decimals.

A comma (,) is used to distinguish thousands and millions.

The following forms have been used in tables:

A dash (-) indicates that the amount is nil or negligible

Parentheses around a figure indicate a minus amount

In tables, totals may not add precisely because of rounding.

Besides the common abbreviations, symbols and terms, the following have been used in this report:

Economic and technical abbreviations

c.i.f. cost, insurance and freight

f.o.b. free on board

Organizations

BMKI	Bör-, Mübór-és Cipóipari Kutató Intézet (Research Institute of Leather, Artifical Leather and Footwear Industries) (Hungary)
BORA	Tanzania Shoe Company and also used as a trade mark
CIEM	Consorzio Italiano per la Erezione del Calzaturifico di Morogoro
DUNA	Duna Cipögyár (Duna Shoe Company) (Hungary)
FAO	Food and Agriculture Organization of the United Nations
IDA	International Development Association, an affiliate of the World Bank

INTERAG	Interag Co. Ltd. (Hungarian foreign trade company)
ITALMACCHINE	Italmachine Plant S.p.A. (Italy)
MSC	Morogoro Shoe Company
NDC	National Development Corporation (United Republic of Tanzania)
OECD	Organisation for Economic Co-operation and Development
SIDO	Small Industries Development Organization (United Republic of Tanzania)
TLAI	Tanzania Leather Associated Industries
TSC	Tanzania Shoe Company (BORA)
UNDP	United Nations Development Programme
World Bank	International Bank for Reconstruction and Development (IBRD)

Mention of firm names and commercial products does not imply the endorsement of the United Nations Development Organization (UNIDO).

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INTRODUCTION

Background

The United Republic of Tanzania is one of the East African countries that has a large livestock population. According to the most recent estimates, the livestock consists of about 12.5 million head of cattle and 9.5 million sheep and goats. Taking into account off-take rate applicable to the local conditions and estimating 50 per cent collection, this amount of raw hides and skins could produce 10 million pairs of leather footwear.

Realizing the importance of this natural resource, the Government of the United Republic of Tanzania has made considerable efforts to develop the leather and leather products industries: three mechanized tanneries have been erected within the last 15 years, a large footwear factory and a medium-sized leather goods factory were installed and a leather-board plant is under construction in Morogoro. Other plans to further expand the leather products industry are under consideration. Besides the new factories, the Tanzania Shoe Company (TSC) in Dar-es-Salaam produces leather, canvas and plastic shoes for the local market, which are sold in their own retail outlets under the trade mark BORA.

The overall capacity utilization in the tanning sector is about 50 per cent, while in the shoe industry it is well under 20 per cent (5 per cent in Morogoro). The main problems in the footwear industry are the lack of know-how, operational training and experience, poor marketing and maintenance and the technical and production management methods used.

As the two major shoe manufacturing units under the control of the Tanzania Leather Associated Industries (TLAI) are facing serious difficulties, the Government of the United Republic of Tanzania requested assistance from the United Nations Industrial Development Organization (UNIDO) to carry out a techno-economic survey of the existing capacities and to recommend action to be taken in order to solve the problems mentioned above and increase productivity in this sector.

Otto Klötzer was the chief technical adviser for the project. Through the Hungarian foreign trade company, Interag Co. Ltd. (INTERAG), the Bör-, Mübör- és Cipöipari Kutató Intézet (BMKU) (Research Institute of Leather, Artificial Leather and Footwear Industries) was chosen to make the survey and recommend future steps for training and technical know-how acquisition.

Objectives

The team of five Hungarian experts from BMKI worked under direct supervision of the chief technical adviser. According to the terms of references BMKI was expected to supply the following services:

(a) A survey on the technical capability of the Morogoro Shoe Company (MSC) to produce an acceptable quality and quantity of footwear for export markets, taking into consideration the production capabilities of TSC for the local market;

(b) A plan of action, specifying training needs and programmes for skilled workers, supervisors and management to provide MSC with the necessary work force;

(c) A suggested product range for MSC, with samples of footwear, detailed costing and production planning for the short, medium and long term. The range of footwear was to be based mainly on locally available materials; only those components and raw materials that were allowed to be imported under existing regulations and financial conditions were to be included;

(d) A suggested marketing strategy for the export and identification of possible export markets.

Arrangements

In order to meet the UNIDO requirements and to utilize experience gained in running a shoe factory of similar size, a team of experts was created that had the following features:

(a) Special tasks were assigned to each team member, namely:

Marketing and economic aspects

Range building and technical preparation of production

Production and quality control

Labour and management training

Equipment maintenance

(b) Two experts were called in from the Duna Cipögyár (DUNA) shoe factory. They had over 20 years experience in marketing, economic and technical control of large manufacturing units and are in key positions at DUNA;

(c) The team co-ordinator had much experience in advanced training methods used in the footwear industry of industrialized countries as well as in investment preparation and execution, with special reference to developing countries;

(d) An expert in foreign trade also participated in the field work in order to advise on commercial and contractual aspects of recommendations.

The subcontract called for 3.2 expert-months field work plus 0.8 expert-months additional services, which were to be rendered in the home country. The five experts departed from Hungary on 1 November 1982; one of the team members returned on 13 November 1982, while the other four arrived at Budapest on 23 November 1982. (Thus, the actual service provided was 3.5 expert-months including travel, or 3.16 expert-months exluding travel). The representative of INTERAG stationed in Dar-es-Salaam assisted the team in administrative and organizational activities.

Having discussed the objectives and the workplan with the chief technical adviser of the project and with the international team leader of project DP/URT/78/010, and having taken into consideration the background information and guidelines received by the team co-ordinator during his briefing in Vienna (27 October 1982) it was decided that the team should move to Morogoro on 5 November and return to Dar-es-Salaam on 16 November 1982. It was agreed upon with the chief technical adviser that the team should concentrate on techno-economic aspects of the project, while the adviser would deal mainly with managerial questions and higher level industrial policy problems.

Services rendered

The team of experts discussed the main problems and difficulties of the local shoe sector with the members of the UNIDO team serving under project DP/URT/78/010, then made a short survey in the Tanzania Shoe Company (BORA) and its retail outlets in Dar-es-Salaam. A detailed study concerned with the investment, starting up, recent production, training of personnel, marketing and management of the Morogoro Shoe Company was carried out on site. Several official and informal meetings were arranged with local authorities, UNDP, UNIDO and World Bank representatives, as well as with diplomatic and commercial missions of different countries to the United Republic of Tanzania. (The complete programme is attached as appendix I; a list of persons met in the United Republic of Tanzania is found in appendix II).

The team of experts left shoe samples and techno-economic documentation on basic shells, patterns, drawings of cutting layouts, costing sheets, descriptions of materials to be used, technological sequences of operations, time standards etc. that were elaborated and used by DUNA at MSC for further use and reference.

FINDINGS

The market

Domestic market requirements

Footwear consumption in industrialized countries is in the region of 4.0-5.5 pairs per capita annually; in the centrally planned economy countries it is 3.0-4.5 pairs per capita. Taking into consideration the climatic conditions and traditions of developing countries, the minimum annual consumption should be around 1.0 pair per capita. Computations based on the most recent production statistics and estimates of retail data show that the actual consumption in the United Republic of Tanzania is about 0.3 pairs per capita.[1/] This is considered to be a very low consumption figure, even under present conditions.

Marketing studies made by local factories and institutions, as well as the opinion of the UNIDO team of project DP/URT/78/010 that is based on research by the marketing expert, indicate a real possibility of selling 5 million pairs of leather shoes in the United Republic of Tanzania without any difficulties and probably without any influence on local retail and, consequently, on ex-factory prices. BORA's output is nearly 1.0 million pairs annually, and the private sector and the shoe manufacturing units controlled by the Small Industries Development Organization (SIDO) add some 2.0 million pairs yearly, so there is enough room for increasing the supply of leather footwear to the local market.

The team of experts visited BORA shoe shops in Dar-es-Salaam and confirmed that extremely high retail prices are found in the United Republic of Tanzania, as the following data show:

	Selling price (TSh/pair)
Jogging shoes	350-500
Clogs	400-600
Canvas shoes	180-360
Moccasins	450-700
Ladies' shoes with polyurethane soles	380-480

Owing to the shortage of supply, the footwear is distributed in the United Republic of Tanzania rather than marketed.

The quality of the locally available footwear is rather poor, the styles are out of fashion and the materials used are low-grade. The main reasons for this situation are the monopoly of BORA in selling shoes, insufficient information on fashions and the lack of foreign exchange required to introduce new lasts and injection moulds. In spite of the quality problems and the low standard of living of the population, the domestic market is fairly large, which stresses the need to increase the output of the shoe industry.

1/ If canvas, rubber and plastic footwear is included, the figure would still be below 0.5 pair per capita.

Export considerations

The industrialized countries have increased their footwear imports significantly during the past two decades owing to high local costs (mainly high wages) and the lower prices offered by a number of developing countries. A newcomer to the world market should consider the following points:

(a) Highly fashionable shoes or special footwear (safety boots, sports shoes etc.) are still manufactured for the domestic market in large quantities in such countries as Austria, France, the Federal Republic of Germany, the United Kingdom of Great Britain and Northern Ireland and the United States of America for their home markets;

(b) The largest exporters of fashion leather shoes to the world market are Brazil, Czechoslovakia, Greece, Hungary, Italy, Mexico, the Philippines, Romania, Spain and Yugoslavia; major exporters of canvas and rubber footwear are Hong Kong, Pakistan, the Republic of Korea and Taiwan Province;

(c) Most industrialized countries are both exporters and importers (for example France and the Federal Republic of Germany);

(d) A number of developing countries are making efforts to increase their export potential in this subsector, for example, Algeria, Argentina, Colombia, Egypt, Ethiopia, Indonesia, Morocco and Tunisia;

(e) Some African and Asian countries have no - or at best an insufficient - local footwear industry; therefore they are potential importers (e.g., Burundi, Kuwait, Madagascar, Rwanda, Saudi-Arabia and Zaire);

(f) The most important importers world wide are the United States and the Union of Soviet Socialist Republics - their total imports exceed 500 million pairs a year.

The above points illustrate the possibility of entering into that wide market, on one hand, but point out the heavy competition on the other. Taking into account the increased population growth, the expected improvements in the standard of living in developing countries and the structural changes taking place in the industrial sector in the developed countries, it can be expected that the world demand for footwear will increase and that the production capacities for footwear will continue to move to the South. However, export opportunities are available only for those suppliers who are able to produce shoes of the required quality, follow the fashion trends and keep reliable and short delivery times - at reasonable prices.

Availability of material

According to estimates of the World Bank, based on statistics from the Food and Agriculture Organization of the United Nations, the United Republic of Tanzania had the following resources in 1982:

	Livestock population (million)	Off-take (percentage)	Hides and skins available	
			Million	Thousand m^2 (million sq ft)
Cattle	12.8	14	1.8	4 185 (45.0)
Goats	5.8	33	1.9	791 (8.5)
Sheep	3.8	21	0.8	335 (3.6)
Total	22.4		4.5	5 311 (57.1)

The annual growth rate is estimated as 2.5 per cent.

A survey made by the UNIDO team under projects DP/URT/78/010 shows that the actual collection of hides and skins in the country was at 65 per cent for hides and 30 per cent for skins, compared with the estimated earlier figures. In other words, the theoretical material availability is 5.3 million m^2 (57.1 million sq ft) and the theoretical tannery finishing capacity is 2.0 million m^2 (22.0 million sq ft). In spite of this, the tanneries are short of raw materials owing to collection problems. Another factor contributing to the shortfall is that some rawhides and skins are exported, and a substantial amount of this is leaving the country through non-recorded illicit trade. Thus, only 30 per cent of locally available hides and about 15 per cent of skins were made available for local tanneries. The raw materials have a small surface area - about 2.3 m^2 (25 sq ft) per hide and 0.4 m^2 (4.5 sq ft) per skin - and are rather thin and have a poor grain.

The survey mentioned above gives the average annual capacities for finished leather of the three mechanized tanneries that were installed in the United Republic of Tanzania in the past 15 years:

	Total capacity in thousand m^2 (million sq ft)		Capacity of the Morogoro Tannery in thousand m^2 (million sq ft)	
Soft leather from hides	1 186	(12.7)	419	(4.5)
Splits	238	(2.6)	74	(0.8)
Sheep and goat skins	603	(6.5)	205	(2.2)
	2 027	(21.8)	698	(7.5)

The vegetable-tanned hard leather manufacturing capacity of the local tanning industry is about 365 tons/year (mainly concentrated in Mwanza).

The installed capacity of the tanneries would be sufficient to produce approximately 7.8 million pairs/year footwear with leather uppers and about 1.0 million pairs/year with genuine leather soles. Because the tanneries have difficulties in obtaining raw hides and skins, imported chemicals, spare parts and electric power, their overall capacity utilization was only 40 per cent in 1982, which consequently affects their deliveries to local shoe factories.

The price of local leather is too high - on average it is double the world market price (see appendix III). This is probably due to the low capacity utilization but creates an unfavourable condition for export.

Owing to the quality and properties of the raw hides and skins, the finished leather from the tanneries is mainly embossed and full-grain nappa and goat skin, corrected-grain hides, suede leather and lining. The best quality soft leather is supplied by the Moshi Tannery, but acceptable finished leather also comes from the Morogoro Tannery. The sole leather produced in Mwanza is rather thin, and its abrasion properties are rather poor.

Because cotton and similar raw materials are available in the United Republic of Tanzania, the local textile industry is being developed. As a part of the Morogoro Industrial Estate a canvas mill has been installed next to the shoe factory building, and it will provide upper materials for the inexpensive type of footwear.

All the other materials, fittings and chemicals (e.g. thread; dyestuff; adhesives; compounds for polyurethane, PVC and thermoplastic rubber; rubber; and crepe) are to be imported from Europe. Import duties range from 40 per cent to 160 per cent.

Staff

There should be no problem in recruiting workers for the shoe factory; the experience of the Morogoro Tannery and the Morogoro Shoe Company indicates that plenty of unskilled labour is available.

The national education system is very efficient. An abundance of young people have completed primary school (seven years). A reasonable number of students are in secondary schools (four years to achieve Form IV and two more years for Form VI). Young people who have completed higher education show potential and understanding in how to carry out their tasks; they are also responsive for new ideas.

The Tanzania Shoe Company

The Tanzania Shoe Company (TSC) was established by Bata more than 20 years ago, in order to provide the local population with footwear at reasonable prices. The shoes produced are marketed under the brand name BORA and sold through wholesale and retail outlets that are controlled by the Company itself.

The installed capacity of the plant, which is located in Dar-es-Salaam is 4 million pairs of canvas and leather shoes and 3 million pairs injection-moulded plastic beach sandals yearly. The actual output is much lower: during the first seven months of 1982 about 1.0 million pairs of shoes were manufactured.

Technical assistance is provided by a Pakistani firm, according to a special agreement, which supplied the Production Manager, the Chief Designer and a chemical expert.

The working conditions in TSC are difficult, mainly because both the machinery and the building are old and run down. The quality of footwear is very low, but this has only a slight negative impact on the economic situation of the factory, since TSC is the only organized retailer in the country and

can charge high prices to compensate for losses in the manufacturing process. Although UNIDO experts assigned to the factory were making a significant contribution towards improving product development and equipment maintenance, the product range and productivity are still far below international standard.

The Morogoro Shoe Company

The Morogoro Complex

A detailed study was made by international experts in 1977 for the World Bank. The study showed that it would be feasible to create an industrial estate comprising a tannery, a canvas mill, a leather-board plant, a footwear factory and a leather-goods plant. The Morogoro Tannery was established using Bulgarian expertise (two Bulgarian specialists are still working there) and became operational in 1980. As the next stage of the project, a footwear with a planned yearly output of 1.8-2.0 million pairs of leather shoes and the same quantity of canvas shoes was installed by the Italian firm Italmachine Plant S.p.A. (ITALMACCHINE).

The shoe manufacturing plant project had a number of weak points:

(a) The capacity of the factory was much too large. In industrialized countries the optimum size of such plants is considered to be 0.5-1.5 million pair/year;

(b) The plant capacity also caused other problems:

(i) Recruitment and training of unskilled labour required more time than was planned. While the project envisaged 30 per cent, 60 per cent and 80 per cent capacity utilization for the first three years of operation, respectively, only 1.6 per cent, 2.4 per cent and 5.5 per cent were achieved;

(ii) It is doubtful that the local staff could have been trained in three years to take over the complete technical management of the plant, even if the contract had been well formulated, signed with an experienced and serious company and delivered efficiently. The management contract with ITALMACCHINE did not have very much chance to succeed;

(iii) The raw and auxiliary materials were not available in the quantities required, significant steps would be necessary to ensure the reliability of deliveries from the tanneries;

(iv) It was especially difficult to secure funds to purchase imported materials and to improve hide and skin collections;

(c) The targeted export figure of 80 per cent of production was far too optimistic for a developing country and for a new factory that had no tradition in shoemaking and therefore was unknown on the world market and that used raw hides and skins of lower grades; 80 per cent of total production meant a minimum of 1.60 million pairs of canvas shoes for export, an over-optimistic plan considering the heavy competition from East and South-east Asia and the competitive prices on the world market;

(d) The World Bank study considered countries of the Organisation for Economic Co-operation and Development (OECD) and in near-eastern Asia as possible markets for footwear manufactured by Morogoro and priced at $9.10 a pair (average, at the 1977 price level). However, this price was unobtainable even for such European countries as Greece, Hungary, Portugal and Yugoslavia, which were established exporters and had long experience in this sector;

(e) The location seemed to have been justified because the estate idea enabled the supply of leather and canvas from neighbouring factories. However, it is cheaper to transport raw materials than shoes, which need more care, and the only suitable export facilities in the United Republic of Tanzania are in Dar-es-Salaam and Kilimanjaro;

(f) Production costs and ex-factory shoe prices were underestimated. TSh 62.25/pair was calculated for leather shoes; but these are sold ex-factory for TSh 200 and TSh 400 today in the United Republic of Tanzania;

(g) The average imported material consumption was estimated for 1982 as $1.60/pair, which at today's costs would be applicable only for moccasins of a reasonably good quality, made of goat upper and leather soles. The cost of imported materials would be higher for other footwear, however: $2.27 for canvas shoes, $3.36 for jogging shoes and $2.68 for sandals (see table 1).

The plant

The MSC plant was installed in 1980 and was to start up immediately.

The site preparation and arrangement have no major weak points, but the building construction selected does not fit local conditions. While the tannery and canvas mill were built using a pillar construction and brick walls, the two-storey shoe factory has steel pillars and aluminium walls. The building has no ventilation system, no solvent-exhausting network and the distribution system for compressed air and electric power are also weak. The workshops are very hot during the daytime. Although the building is only five years old, the walls show significant signs of corrosion and the roof leaks when it rains.

The equipment delivered by Consorzio Italiano per la Erezione del Calzaturificio di Morogoro (CIEM), a consortium formed by ITALMACCHINE especially for this project, had a total value of $7.5 million. In general, the machines are of good quality and high productivity. Most of the machines were purchased from various Italian shoe machinery manufacturers, but some equipment comes from the Federal Republic of Germany and Spain as well; thus, there are 191 different types of machines from 25 different manufacturers. The idea behind this large range of machines was probably to enable MSC to produce a wide variety of products and to have a flexible manufacturing programme, so that the range of products would be similar to that exported by Italy to other industrialized countries.

A thorough survey of equipment carried out by the experts led to the following conclusions:

(a) The plant is well equipped in general, since almost all the manufacturing lines were able to produce a variety of shoe types using different technologies (stitch-down, stuck-on, McKay-sewing etc.);

(b) The machine types selected and delivered do not always fit the local conditions (e.g., BIMA integrated workplaces for reinforcing operations, SAGITTA PC 15 R high-frequency moulding machines, FERRARI two-colour direct-injection moulding machines etc.), or the respective operations could be performed without them (trimming of lining, some finishing operations, applying adhesive etc.);

(c) The machine park is unbalanced; there are insufficient quantities of some equipment (e.g., there are only five pulling-over and lasting machines, eight sole-laying presses and very old toe-part conditioning equipment etc.), some is missing completely (e.g. last manufacturing and maintenance machines and counter-conditioning equipment), other machines are in excess (e.g. heel-nailing, heel-seat pounding, edge folding and reinforcing machines) and some are not needed at all (e.g. two photoelectronic leather surface-measuring machines);

(d) The selection of machine types seems to have been made on ad hoc basis, since equipment was available from other Italian suppliers of the same or even better quality for the same or sometimes lower prices (e.g., ATOM clicking machines, COMELZ edge-folding machines, CAMOGA splitting machines and CERIM lasting equipment);

(e) Most of the sophisticated machines were bought at not low, but still reasonable, prices, while small equipment was supplied in unjustifiably large quantities (e.g., finishing equipment, buffing machines) or at comparatively high prices. The price should be only one consideration when selecting machines for a new shoe factory; among the others are the services provided by the manufacturer, the auxiliary material requirements, the working reliability, the supply of square parts, the expected life of the machine, the level of skill required for running and the function/cost ratio. If all these had been studied carefully, it would not have led, necessarily, to such a high share of Italian machines;

(f) No special machines were delivered for canvas shoe manufacturing (e.g., string-sewing or insole-stitching machines) or for maintenance.

The total value of spare parts delivered by CIEM was only 5 per cent of the value of the equipment; the suggested figure for a new plant is usually around 10 per cent. (Added to the f.o.b. cost of equipment are 6.99 per cent for erection and 7.14 per cent freight charges.)

The infrastructure of MSC is acceptable. The plant is located 4 km away from Morogoro, a town having a population of about 45,000. There are sufficient water and electric power supplies (two transformers needed for full capacity operation are being purchased), the road to Dar-es-Salaam is in good condition and telephone lines are installed. However, at present MSC must use the telex connected to the Morogoro Tannery.

The factory does not have even a provisional production programme. Although the responsible managers of MSC and TSC have had an official meeting and agreed upon a slight specialization of the two manufacturing units, the technical staff of MSC was not able to elaborate a suitable product range. After nearly three years of unsuccessful operation, management continues to emphasize that MSC should produce shoes for export and BORA for the local market and hopes that this can be realized.

Most of the difficulties that normally arise during the starting-up period were supposed to be overcome by subcontracting ITALMACCHINE for assistance in management and marketing. According to the management agreement, the contractor was to provide a general manager, a production manager and two managers for production supervision for a period of three years. They were to run the factory and train the local managerial staff. ITALMACCHINE took the responsibility of selling 80 per cent of the actual production on the export market; this has never been done. The planned fee for the subcontractor consisted of a lump sum of $350,000, plus 2.5 per cent of the f.o.b. selling price of exported shoes and 3.0 per cent of the gross profit (before taxes). The contract expired, without exporting any shoes and without having built up any marketing organization and channels.

Training

As a part of the engineering agreement signed by the National Development Corporation (NDC) and ITALMACCHINE, a training programme was envisaged whereby 24 Tanzanian staff members were to be trained in Italy for six months each and 10 non-Tanzanian expatriate staff for two months each also in Italy. The fee was a fixed sum of $300,000 for training; travel, accommodation etc. were not included in this sum.

The training record kept at MSC shows that 24 staff were trained in 1978 in Italy for a period of nine months (three months language and six months professional training). Interviews with a number of participants of the training programme indicate that the trainees did not learn much in Italy - partly because of the communications problem and partly because of the rather short time available. Most of the trainees had no previous experience in shoe manufacturing, but after their return to the United Republic of Tanzania they were expected to train local labour.

MSC makes efforts to train local staff and recruit highly educated personnel (e.g., they had 26 students in various diploma courses and colleges in 1982), but this helps only at the middle-management level. Very little professional know-how in design, pattern making, technology, production control, quality control and marketing of footwear has been accumulated in Morogoro. Furthermore, no journals, technical periodicals, books and brochures that could serve as a basis for self-study are available in the factory.

Management structure

The number of employees in the company was 635 in November 1982 (the planned number of workers required for full capacity operation is 1,760), out of which 429 were engaged directly in production.

The staff structure is as follows:

	Number of staff	Share (%)
General manager's office	4	1.9
Administration	91	44.2
Finance	18	8.7
Supply	27	13.1
Marketing	20	9.7
Production	10	4.9
Engineering	36	17.5
Total	206	100.0

A new organizational flow chart, which attempted to contribute to better co-operation within the factory, was proposed recently. Although the financial and administrative management seem well-arranged, the technical side was somewhat neglected, perhaps owing to lack of sufficient trained personnel. The main problems are:

(a) There are no staff dealing with the technical preparation of production;

(b) The design and pattern-making department works almost without control. There are also no books or periodicals that could be studied with a view to expanding the range of designs;

(c) The marketing department is expected to handle export trade without suitable communications, organizational conditions and authority;

(d) The maintenance and the tool-making (cutting, die manufacturing etc.) departments are not receiving enough attention.

Production statistics

The production figures verify the points made above:

	Actual production (pairs)	Planned output (World Bank study) (pairs)	Actual production (as percentage) of planned)
1980	20 000	1 200 000	1.7
1981	57 362	2 400 000	2.4
1982 (Jan-Sept)	132 591	3 200 000	4.1

According to the top management of MSC, the main reasons for the low production are the shortage of foreign exchange for imported materials and an insufficient supply of leather from the tanneries. This is obviously only part of the problem, however.

The quality of shoes produced so far is very poor (there are some 10,000 pairs of rejects on stock). The main products are jogging shoes, training shoes, clogs, safari boots and a few moccasins.

The working pattern

Special attention was paid to the actual working methods used at various levels of the company, and some interesting aspects were identified.

Today, marketing is almost equivalent with selling the shoes. The factory used to produce a few hundred or thousand pairs on its own and then tried to sell them. During the past two years, BORA sold most of the footwear from Morogoro, but that agreement was terminated in mid-1982. One of the marketing officers recently returned from a trip on which he managed to sell 12,215 pairs of shoes for TSh 3,820,475 to retailers and wholesalers (e.g. men's safari boots, size 39-44, for TSh 325/pair and clogs, size 39-42, for TSh 420/pair).

An attempt was made to export footwear to Burundi. The offer by MSC for a pair of men's shoes made of corrected grain leather and polyurethane soles was $28.66. The buyer's counter-offer was $11.47, minus 18 per cent duty and freight, which was accepted by MSC. The figures for a pair of safari boots were $18.57 (MSC) and $7.43 (buyer). This shows how unrealistic the MSC prices are and the lack of market information at each level.

There is no planned range-building in the company. The chief designer (one of those who was trained in Italy) creates new models without any fashion information, data on prices and capacities.

Costing is done for each style manufactured. The material requirements are close to the international standards, but the overhead components are extremely unproportional; for example, several costing sheets indicate TSh 40.50/pair administrative overheads (excluding financial costs) and TSh 60.40/pair depreciation. The ex-factory prices are usually set by guessing rather than based on market research.

The supply of materials depends on import licences, the production in local tanneries and the requisitions made by the production department. Supply officers lack inforamtion regarding local availability of auxiliary materials and are not informed about international prices. It happens frequently that the production department requires a new supply of finished leather within a very short time - an impossible task for the local tanneries whose typical delivery time is one month.

The production-control system is weak and production planning involves too much administration. There is no organizational flow-chart for these activities, and there are no sound ideas concerning the planning of design, pattern making and technical preparation of production.

Urgent steps should be taken in order to strengthen maintenance and die-making in MSC. Some 31 machines lack manuals (many others have them, but in Italian only). Most of the production machines have never been used, are covered by dust, show the first signs of corrosion and in a large number of machines the adhesives have dried. About 5 per cent of the equipment is broken and can hardly be repaired. Small components (e.g., switches, indicator lamps, timers) were taken away from many machines. Equipment stored in the ready-goods stock is in especially bad condition.

RECOMMENDATIONS

Since MSC was established, a large amount of funds have been invested in infrastructure and the initial training of staff and workers. The working capital of the company has been exhausted without reaching more than about 5 per cent of the originally projected production capacity, and no real headway has been made in export sales.

The activities of the team of experts were concentrated on finding a feasible solution to MSC's problems and suggesting a plan of action that would lead to production at installed capacity. The recommended product range has been designed taking into consideration local economic constraints and material availability, and a realistic training programme for the staff and workers is suggested.

The following recommendations focus chiefly on technical and economical aspects; more general and higher-level recommendations are elaborated by the chief technical adviser and are set out in his report.

Repair and maintenance

The most urgent action to be taken should be conservation of the installed and stored equipment, regardless of whether it will be moved or kept for the gradual increase of production. All of the production machines need cleaning, greasing, lubricating (some require disassembling to perform these operations) and protection against rust and dust. Without such maintenance the equipment should not be switched on, in order to avoid further breakage. Most of the machines could not be sold to other local manufacturers, and the majority of the machines will be ruined within one or two years if they stay in the present condition.

It is therefore strongly recommended that a special team be formed of the best mechanics and electricians available under the leadership of an experienced maintenance engineer. This team should be provided with all the necessary materials and requested to conserve and repair each machine within the shortest possible period of time. They should be released from their present jobs and engaged full time on this task. As another option, a local machine-maintenance company or a foreign firm experienced in shoe machinery manufacturing and installation could be employed. (Such companies are, e.g., SKOMAB in Austria; SVIT-INVESTA in Czechoslovakia; ANVER in France; ALBEKO in the Federal Republic of Germany; KAEV-INTERAG in Hungary; SIDECO in Italy; and USM in the United Kingdom.)

Foot-measurement programme

There are large quantities of footwear in sizes from 43 through 45 on stock at MSC because the size range was not compatible with actual demand. This shows that neither the shoe industry nor the trading organizations or agents have information about the foot sizes of the local population. It is recommended that a foot-measurement programme be carried out in order to obtain objective antropometric data, establish size systems and ranges for

different age, ethnic and geographic groups of the local population and prepare lasts that would fit better. Such a survey would provide the entire shoe industry with information about the most marketable ranges, it would create much better wearing conditions for young people (especially children) and it would prevent the development of foot diseases caused by unsuitable, ill-fitting, improperly designed footwear.

The following institutions have experience in foot measurement: CTC in France, PFI in the Federal Republic of Germany, BMKI in Hungary, TNO in the Netherlands and SATRA in the United Kingdom - and one of them could be contacted to undertake such a programme.

Product mix

When selecting a suitable product mix, the following constraints have to be taken into account:

(a) The quality and the quantity of the locally available finished leather;

(b) The capacity of each technological sub-processes, computed at the level of capacity utilization that could be achieved in the United Republic of Tanzania;

(c) The amount of training necessary to develop the skills of local labour, who have no traditions in shoemaking;

(d) The local and international demand for different types of footwear;

(e) The local costs (leather duty on imported materials etc.);

(f) The product range and quantities that could be supplied by BORA working at its full possible capacity.

As a result of optimizing the product mix, the following production programme is suggested for MSC (see also appendix V):

	Thousand pairs per year	Percentage
Canvas shoes	950	26.4
Jogging shoes	220	6.1
Clogs with wooden soles	200	5.6
Safari boots	450	12.5
Men's and children's sandals	400	11.1
Moccasins	550	15.3
Ladies' fashion sandals	330	9.2
Conventional shoes	500	13.9
Total	3 600	100.1

This product mix features the following:

(a) It would fully utilize the direct injection-moulding capacities if the factory operated on three shifts;

(b) It would utilize the last-turning machines' capacity for manufacturing wooden soles;

(c) It would provide the maximum possible number of cheap canvas shoes for the local population;

(d) The remaining assembling capacities (lasting, making and finishing) would be used for moccasins, fashion sandals and shoes with mainly leather soles, which are oriented towards export and provide the maximum value added;

(e) The programme reflects the achievable outputs of each production line of the factory.

Exports

The value added in terms of foreign exchange was studied for the suggested product mix, as well as for each shoe type separately. First, thorough computation of ex-factory prices was carried out based on production cost components used in industrialized (particularly in European) countries. Appendix IV contains costing sheets for a number of styles. The ex-factory prices, including freight and profits, would be:

	Dollars/pair
Safari boots	13.24
Moccasins	16.84
Conventional shoes	16.65

Estimating the c.i.f. prices in a similar manner for the above types, then deducting import duties and freight costs, as well as a 13 per cent discount for shoes intented to be marketed in industrialized countries (because footwear from the United Republic of Tanzania has no reputation, no tradition and no established brand name in those countries), the f.o.b. prices were calculated. On the basis of differences between these prices and the costs of imported materials required (from appendix V), and taking into consideration the requirements of different markets, the shoe types were ranked and a probable share of total export was given to each one (see table 1).

Thus about 20 per cent of the total exports might be oriented towards industrialized countries, while the remaining 80 per cent should be sold in other African and Asian countries. The most beneficial types are the following:

Table 1. Estimated sales prices for various types of footwear

	Price (c.i.f.) of locally manufactured footwear in industrialized countries (dollars per pair)	For sale to industrialized countries					Duty (30%)	Freight	Ex-factory price	Shared total exports (%)	Cost of imported materials[a/] (dollars per pair)
		Duty (18%)	Freight	Discount (13%)	Ex-factory price	Share of total exports (%)					
		(dollars per pair)					(dollars per pair)				
Canvas	4.50	-	-	-	-	-	1.35	0.6	2.55	3	2.27
Jogging	5.80	-	-	-	-	-	1.74	0.6	3.46	8	3.36
Clogs	4.70	0.84	1.2	0.61	2.05	2	1.41	0.6	2.69	9	1.03
Safari	13.24	2.38	1.2	1.72	7.94	6	3.97	0.6	8.67	12	2.36
Sandals	6.00	-	-	-	-	-	1.80	0.6	3.60	8	2.68
Moccasins	16.84	3.03	1.2	2.19	10.42	7	5.05	0.6	11.19	18	1.45
Fashion sandals	9.80	1.76	1.2	1.27	5.57	1	2.94	0.6	6.26	9	2.18
Conventional	16.64	2.99	1.2	2.16	10.29	4	4.99	0.6	11.05	13	1.63
Total						20				80	
Average					8.62				7.42		2.11

a/Taking into account 70 per cent duty/in average/ US$ 7.65 100%

	Imported material consumption (%)	Value added in foreign exchange (dollar/pair)	
		Europe	Africa and Asia
Moccasins	15.2	8.97	9.74
Leather shoes with leather soles	19.6	8.66	9.42
Safari boots	28.8	5.58	6.31
Ladies' fashion sandals	31.6	-	4.08

The average f.o.b. export price for shoes would be $7.65/pair; the average consumption of imported material would be $2.11/pair.

The quantity of footwear to be exported was determined on the basis of a break-even analysis:

Total amount of foreign exchange required to manufacture 3.6 million pairs of shoes yearly	$7,596,000
Minimum quantity that could be exported, whereby the foreign-exchange revenue would still compensate for expenditures for imported materials	992,941 pairs/year

In order to earn some surplus foreign exchange in Morogoro (which might be used for repayment of the International Development Association (IDA) loan, for instance) 1.2 million pairs/year, or 33 per cent of the planned total output, would need to be exported according to the distribution shown above.

Further costing sheets were completed for each type of footwear. Representative styles were selected partly from those shoes being manufactured in Morogoro and partly from the range having been produced in DUNA. The prices on materials are either valid local quotations or calculated at the world market level and increased by 70 per cent duty. The labour components were determined at double the direct time consumption in order to cover the lower productivity and taxes on wages. The costing sheets, along with drawings of styles and their possible variations, are attached in appendix VI.

Phases of implementation

It is recommended that such a production and export programme be implemented gradually, as shown in table 2. The suggested implementation schedule has five phases, each of which should be calculated as taking about one year. A faster tempo would need much more international assistance in training and starting up.

The main features of this schedule are:

(a) The targeted total output is 90 per cent of the installed capacity, which gives room for changes in product mix if the market so requires;

Table 2. Implementation schedule

Type of footwear	Phases of implementation (Thousands of pairs) 1	2	3	4	5	Targeted export Thousands of pairs	Million dollars
Canvas	330	600	750	900	950	36	0.092
Jogging	100	200	220	220	220	96	0.352
Clogs	70	180	200	200	200	132	0.340
Safari	200	320	430	450	450	216	1.821
Sandals	-	180	250	350	400	96	0.346
Moccasins	-	120	250	450	550	300	3.292
Fashion sandals	-	-	-	150	330	120	0.745
Conventional	-	-	100	280	500	204	2.218
Total	700	1 600	2 200	3 000	3 600	1 200	9.186

(b) Only one or two new types of footwear are introduced in each phase (the four types in the first phase are already being manufactured in Morogoro);

(c) The increases from one phase to the next are compatible with the starting-up capacities of the respective production lines;

(d) No export is envisaged for the first and second phases; however, marketing activity should begin at these stages.

Financial aspects

The economic analysis of the recommended product mix, marketing strategy and implementation schedule are attached in appendix VII.

The total production costs in the fifth phase are TSh 498.5 million, having the following components (see also appendix VI.1):

	Percentage
Factory costs	89.2
Operating costs	94.8
Proportional costs	94.6
Materials	74.4
Labour	3.5

The working capital required is TSh 144.3 million (appendix VI.2), out of which TSh 4.6 million is cash in hand (appendix VI.3) at the targeted output.

Appendix VII shows the revenues received from local and export sales, the amount of foreign exchange required for imported materials and the subsidy in local currency to be given to the Morogoro Shoe Company in order to promote its export activity for each phase of implementation. The latest figures were computed applying the following premises:

(a) Owing to the conditions existing on the local market, the most profitable factory strategy would be to produce shoes for the local population only;

(b) Manufacturers of footwear for export have to be motivated to produce the required quality and delivery standards;

(c) First, possible revenues were computed for the types and quantities to be exported (multiplying the export quantities by the respective ex-factory prices valid for the local supply);

(d) Revenues to be received from the export of footwear were deducted from the planned local sales revenues. The total difference is the factory's loss on exports;

(e) The required government subsidy was determined by adding 20 per cent incentives to the losses.

The profit to be realized by MSC was computed for each phase of implementation in the upper part of table 3. The extraordinary (compared to that of in the industrialized and more advanced economy countries) gross profit of up to 20.9 per cent of the cash inflow is a result of the very high local selling prices.

The government-level profitability is indicated in the lower part of table 3. In TSh terms, the Government has an inflow composed from tax paid by the Company after the realized gross profit and an outflow paid as subsidies on exports. The balance is positive in the fifth phase, that is, TSh 148.9 million annually.

As far as the foreign exchange balance is concerned, the Government has an inflow from export sales, while the outflow is due to the import of materials, tools and spare parts. By the fifth phase of implementation, MSC would earn for the Government $1.46 million by exporting 1.2 million pairs of footwear.

Social factors

In addition to the economic and financial aspects discussed above, the following social and political factors have to be considered:

(a) The recommended production programme provides for 2.4 million pairs footwear yearly for the local population; the imported material required for these shoes is compensated for entirely by the envisaged exports;

(b) Included in the footwear to be marketed in the United Republic of Tanzania are cheap canvas shoes and sandals, which are needed by the local population (especially those having rather limited funds), fit local climatic conditions and are not found in sufficient quantities in the shops at present;

(c) If shoes had to be imported, the government expenditures for 2.4 million pairs would be about $17 million, compared with the expenditure of $7.6 million for imported materials for shoes produced by MSC;

(d) MSC would provide employment for about 1,700 persons;

(e) The factory would contribute to the development of people and local industrial potential and would establish a more favourable image and position for the United Republic of Tanzania on the world market;

(f) The export of footwear would influence positively the ranges offered on the local market, narrowing the gap in fashion between the locally sold shoes and those sold in developed countries. Furthermore, it would assist in obtaining more up-to-date technical, market and fashion information for local staff.

Capacity

The allocation of capacity according to the recommended product mix is shown in appendix VIII.1 and figure VIII.2. Technical details (average runs, last and mould requirements) are given in appendix VIII.3.

Table 3. Financial analysis

Level	Phase of implementation 1	2	3	4	5
	(Millions of TSh)				
Factory					
Sales revenues[a/]	137.2	403.4	544.7	741.9	828.2
Subsidy	-	-	58.2	158.2	283.3
Production costs	(101.5)	(205.6)	(290.0)	(406.3)	(498.5)
Sales tax	(27.4)	(80.7)	(105.6)	(139.5)	(147.6)
Gross profit	8.3	117.1	207.3	297.8	465.4
Net profit (50%)	4.1	58.6	103.6	148.9	232.7
Government					
Tax (50% of gross profit)	4.1	58.6	103.6	148.9	232.7
Sales (25%)	27.4	80.7	105.6	139.5	147.6
Duties on imports (70%)	11.2	24.9	33.3	44.9	51.9
Subsidy	-	-	(58.2)	(158.2)	(283.3)
Net government income	42.7	164.2	184.3	175.1	148.9
	(Millions of dollars)				
Foreign exchange					
Foreign exchange income	-	-	1.72	4.45	9.18
Cost of imported materials	(1.63)	(3.36)	(4.86)	(6.54)	(7.57)
Cost of tools, spare parts etc.	(0.20)	(0.15)	(0.10)	(0.15)	(0.15)
Balance of foreign exchange	(1.63)	(3.78)	(3.04)	(2.15)	1.46

Note: Calculations are based on current prices and taxes.

a/ After deducting sales tax.

There is surplus capacity on the lace/thread, heel, top-piece and sole production machines. Operating these machines in three shifts, since they are the most expensive ones, the following items and quantities may be produced annually for the local market:

	Pairs
Lasts	30 000
Heels	360 000
Top-pieces	300 000
Polyurethane soles	600 000
Laces	1 200 000

The total value of these items is approximately TSh 36 million; the imported material requirement is about $800,000.

Another alternative might be to produce shoe uppers for co-operating partners from industrialized countries. Here again, the main objective must be to use local leather as much as possible. Appendix IX shows costing sheets for moccassin and military shoe uppers, featuring the following data:

	Production costs (TSh)	Imported material requirement		Possible price (Dollars)
		Dollars	Percentage	
Moccasin uppers	134.10	0.61	9.9	6.80
Military boot uppers	104.30	0.59	13.2	4.20

The quantity produced could be as high as 1,000,000 uppers a year. This could be achieved in one shift by decreasing the output of the ready-made shoes, or by introducing a second shift in the cutting/closing rooms.

In considering the possibility of exporting shoe uppers, the extreme requirements of the partner concerning the quality of workmanship, the punctuality of deliveries and the need for a well established communication system with the partner must be borne in mind. Taking into account these conditions, the team recommends this alternative with some reservations.

Another option may be to manufacture military and safety boots in Morogoro. The shoe type would have uppers made of heavy printed leather without lining, leather (later leather-board) insoles and soles of polyurethane, polyvinyl chloride or thermoplastic rubber. There are two direct injection-moulding machines, equipped for this type of footwear, that are capable of producing about 100,000 pairs of boots/year.

In any case, the direct labour requirement for the recommended capacity would be 1,410 workers, having a shift coefficient of 1.23 (appendix X). Overall production would be 2,550 pairs per worker per year or 8.5 pairs per worker per day (or 2,100 pairs per employee per year, if the approximately 300 office personnel are included). This production figure is only slightly lower than figures for developed countries, although the high proportion of canvas shoes and other simple shoes must be considered.

Because MSC was over-equipped, a number of machines are available to transfer to other shoe manufacturing units in the United Republic of Tanzania. With a view to recommend production programmes, the machine park was studied with special care. Appendix XI.1 shows the allocation of existing

equipment and reserved quantities. Comparing the needs with the availability, appendix XI.2 shows that there are 268 surplus machines valued at $784,303 (calculated on their original f.o.b. prices). It is strongly recommended that the import of equipment be restricted until this surplus has been transferred to other factories. Appendix XI.3 provides a list of machinery to be bought for Morogoro ($910,000).

Technical management

As pointed out in findings, the technical management structure of MSC needs improvement. Recommended organizational flow charts for the Production, Marketing and Maintenance Departments are attached as appendix XII.

Market study

It is recommended that a market study be carried out to explore the best opportunities for exporting footwear, components (especially laces, heels and soles) and shoe uppers to countries paying in hard currencies. The market research should include countries near the United Republic of Tanzania (e.g., Burundi, Madagascar, Mozambique, Rwanda, Uganda, Zaire and Zambia), countries in the Near and Middle East (e.g., Jordan, Kuwait, Libyan Arab Jamahiriya, Oman, Saudi Arabia, United Arab Emirates and Yemen) and also the European market. The best time for such an exercise would be when bulk production has been started up and a quality improvement can be seen in Morogoro (second phase of implementation). The study should provide the Tanzania Leather Associated Industries (TLAI) with relevant information regarding:

Prices, quality standards, ranges required by particular markets
Duties, taxation, tariff and non-tariff barriers of the countries involved
The competition, including samples and quotations from other suppliers
Local trade and brand name regulations
Co-operation possibilities with local manufacturers and traders
Margins, commissions, storing and advertising expenses, freight and insurance costs

Since the United Republic of Tanzania has fairly good economic relations with the Union of Soviet Socialist Republics, it is strongly recommended that its commercial section be approached and negotiations started on possible shoe exports to the Soviet Union.

It is also recommended that special attention be paid to the possibility of packaging and finishing the exported shoes in order to cut freight and shipping costs.

In order to implement the five-phase project as recommended, TLAI, and consequently MSC, need outside assistance. The best solution would be to enter into a technical assistance contract with a firm having long-time experience in running a shoe production unit of a similar size. Such a company would be able to provide expertise and personnel for training, starting up, market research and selling the products abroad.

Training

It is recommended that the following training be carried out:

(a) Instructor training - experienced workers would be trained as instructors in the partner's factory (strictly in English). There should be two trainees in cutting, three in closing, two in lasting and making, one chemist and one maintenance engineer in polyurethane and polyvinyl chloride/thermoplastic rubber injection moulding. Duration: 10 to 16 weeks each;

(b) Training of local workers by the above instructors, supervised by the expatriate instructors in Morogoro. Each training course, run by one instructor, would prepare 6 to 10 operators 8 to 15 weeks;

(c) Starting up the first two tracks in each section of production, headed by four expatriate production supervisor experts (at the same time, the training of the next lot of operators should be continued);

(d) Training on site by: expatriate experts in design and pattern cutters (who would organize the fashion system as well), the chief of preventive maintenance, supply officers and the production planning superintendent;

(e) Training of the overall technical management on site.

In addition to experts for training mentioned above, one expert would be needed to organize the export section of the Marketing Department and one to undertake the technical preparation of production. In summary, the following experts are needed:

	Expert-months
1 team leader	36
3 instructors	30
1 designer	24
1 maintenance expert	18
1 chemical expert	18
4 production supervisors	72
1 marketing expert	24
1 purchasing expert	18
1 technologist	12
1 production controller	30
15	282

(See also the bar chart.)

The technical assistance contract may have an option for both parties concerned to enter gradually into a joint-venture or marketing contract, which would assist in increasing the efficiency of the co-operation.

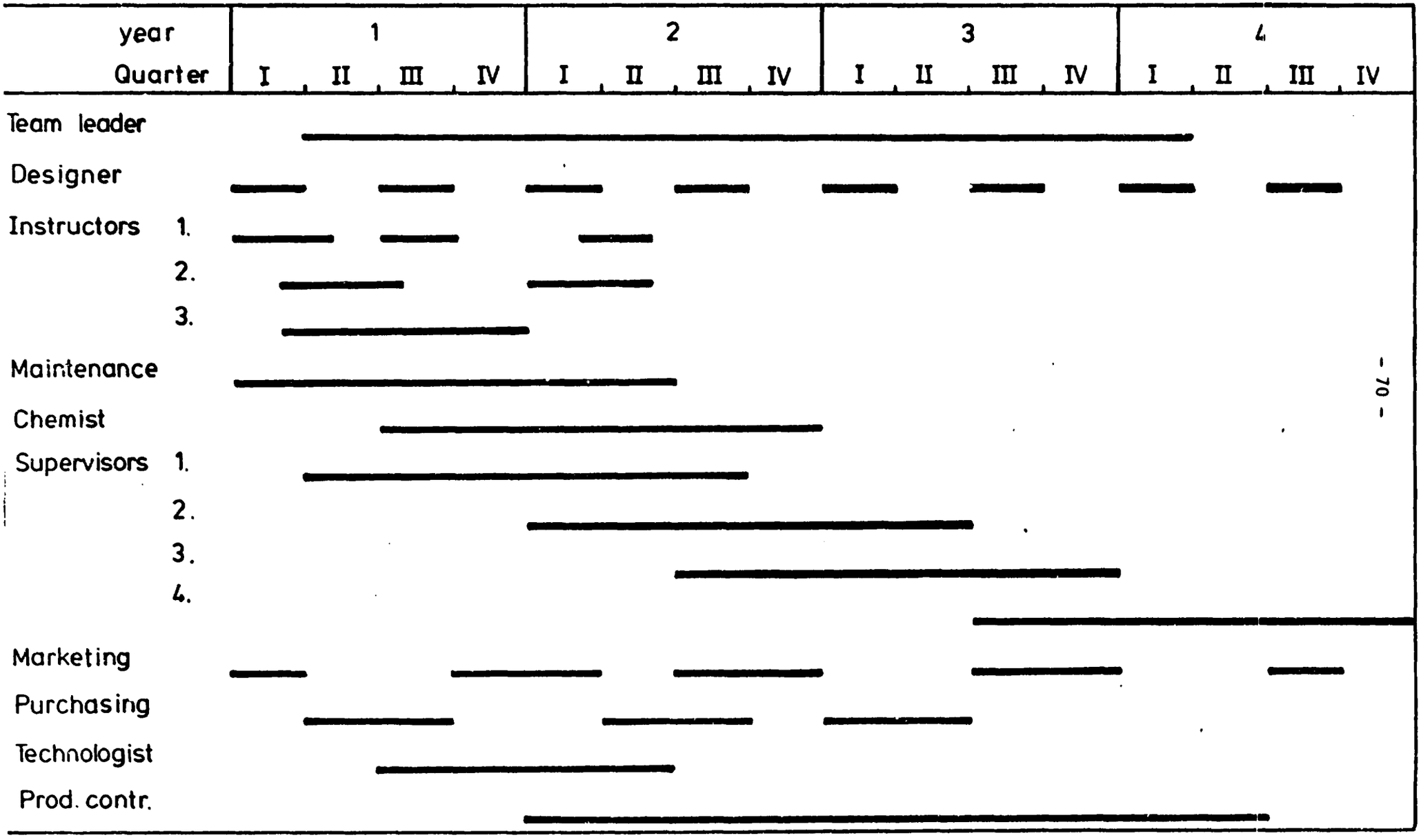
Costs of implementing the recommendations

The costs of all measures recommended by the team of experts would be:

	Thousands of dollars
Additional equipment	980
Repair and maintenance of the machines	80
Repairs to the building	250
Know-how or trade-mark fees	700
Additional training	400
Technical assistance	1 900
Market research, expanding product range	150
Foot-measurement programme	80
Other expenses	260
Total	4 800

These costs are estimated at 1982 world price levels or from similar activities with outside expertise.

The technical assistance project implementation



References

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2. Survey of the Existing Operational Tanneries Connected to TLAI. -Study made by the UNIDO team in 1980.
3. Agreement between NDC and ITALMACCHINE for the project engineering and training concerned with the establishment of the Morogoro Shoe Company /1977/.
4. Agreement between Morogoro Shoe Company and ITALMACCHINE for management and marketing services to be rendered in the Morogoro Shoe Company /1979/.
5. Report of the Special Task Team of the Special Committee of the TLAI Board of Directors /1982/.
6. Commissioning report made by Dr.F.Malata, UNIDO expert /1982/.
7. Manual for the preparation of industrial feasibility studies. UN Publication No. ID/206 /1978/
8. Invoices of supplies made by CIEM /1978 - 1980/
9. Information sources on leather and leather products industries. - UN Publication No. ID/226 /1979/
10. The world footear industry. SATRA /1980/

The programme completed by the expert team in Tanzania

November, 1982

2nd Arrivel in Dar es -Salaam and finalising the working schedule.

3rd Visit to TLAI and BORA, dicussion with Mr.F.Malata abaut the Tanzanian shoe industry.

4th Discussion with Mr. Buit and Mr. Chambers concerning the local material availability and market researches carried out by the UNIDO team.

Visit to the UNDP office.

5th Travel to Morogoro, discussion with Mr. B. Svensson ITL regarding the background and the history of the WB project.

6th Visit to the Morogoro Shoe Company, survey of the plant, workshops and each manufacturing unit.

7th Discussion with the CTA concerning the efforts to be taken in order to obtain the maximum possible information.
Survey of the engineering and management contracts signed by TLAI and ITALMACCHINE.
Sudying of the WB document, which initiated the Morogoro Complex investment.

8th Interview of the administrative, the marketing and the supply managers of the Company.
Meeting with the representatives of the factory's party organisation and trade union.

9th Interview of the production manager and the training officer of the factory.
Selection of samples for the product-mix to be recommended and elaboration of their costing sheets.

10th Interview of the chief engineer, the chief accountant and selected staff undergoing training in Italy or trained in-plant.
Preparation of the optimum product-mix and calculation of the production costs.
Visit to the Morogoro Tannery.

11th Survey of the machines installed and/or stored in the factory.

12th Meeting with Mr. Tin from WB and discussion about the possible solutions to the existing problems.

13th Preparation of a recommendation focused on the export strategy to be implemented.

14th Discussion with the CTA concerning the management structure and staffing of the Company.

15th Collecting further data in the factory. Computation of the working capital and the export-subsidy required.
Selection of equipment needed for the suggested production programme.

16th Elaboration of a list of surplus equipment, wich may be moved to other footwear manufacturing units.
Moving back to Dar-es-Salaam.

17th Meeting with Mr. Tin from WB and Mr.Berg from UNIDO and presentation of the main points to be recommended to the Goverment.

18th Formulation of the report:finalising the findigs.

19th Visit to the Hungarian Ambassy in Dar-es-Salaam.
Formulation of the report: collecting all the backstopping and supporting economic calculations for the alternative solutions.

2oth Discussion with Mr.Berg /UNIDO/ and the CTA about the formulation of the final reports and the future actions to be taken.

21st Finalising the report /formulation and typing/.

22nd Visit to the UNDP office.
Handing over draft of the report to the CTA and the ITL.
Departure to Hungary via Frankfurt.

Annex 2.

Persons contacted in Tanzania

The fellowing list consists only of the most important persons contacted by the Hungarian team of experts while staying in Tanzania.

From UNIDO

Dr.Otto Klötzer - CTA of the project SI/ORT/82/8o2
Mr. B. Svensson - ITL of the project DP/URT/78/olo
Mr. S. Buit - leather industry export
Mr. R. Chambers - marketing export
Dr. F. Malata - shee machinery maintenance export
Mr. D. Ruasel - design export
Mr. J. Berg - industrial development officer

In the UNDP Office

Mr. Henein - Senior Industrial Development Field Adviser of the UNIDO

From WB

Mr. Nguyen Trung Tin - Development officer

In TLAI

Mr. A. Ngamillo - Managing Director

In the Morogoro Shoe Company

Mr. S. Mwilima - Administrative Manager
Mr. F. Rataihva - Marketing Manager
Mr. E. Kasinini - Supply Manager
Mr. A. Ng'ingo - Chief Engineer
Mr. Banka - Acting Finance Planning Manager
Mr. Kibona - Acting Production Manager
Mr. S. Morotha - Training Officer

In the Hungarian Ambassy

Mr. Szabó - Ambassador
Mr. T. Kenyeres- Representative of INTERAG in Tanzania

Leather prices in Tanzania.

/Extract from a quotation of the Morogoro Tanneries/

Unit: Tsh/sq.ft

Article	Thickness	Grade II	Non graded
Plain upper	1.2-1.4	22.13	
	1.4 - 1.6	22.25	
	1.6 - 1.8	22.38	
	1.7 - 1.9	22.5o	
Print upper	1.4 - 1.6	21.75	
Heavy printed upper	1.7 - 1.9	17.38	
Sport suede	2.o - 2.2	22.25	
Suede splits	1.3 - 1.5	18.oo	
Sandal leather	2.o - 2.2	22.5o	
Anilin/semi aniline	1.4 - 1.6	23.63	
Clog leather	2.2 - 3.o		28.75
Calf garment		25.31	
Calf upper		25.31	
Lining splits	1.o - 1.2		1o.oo
Pigmented splits			16.5o
Goat/sheep upper		26.25	
Goat/sheep lining			2o.oo
Insole	per kg		75.oo

Remarks : 1. All prices inclusive 25 % of sales tax

2. Terms of payment: strictly cash

Annex 4.1

COSTING

/European cost components/

Style : Moccasin /one pair/

	Qty	Unit	Rate US $/unit	Cost
Upper leather /goat/	2.9	sq.ft	1.7o	4.93
Socl lining	o.3	sq.ft	1.1o	o.33
Insole /leather beard/	o.o3	m^2	3.8o	o.11
Stiffener /card board/	1	pair	o.15	o.15
Sole /leather/ + heel	o.4o	kg	3.7o	1.48
Toppice	o.1o	kg	1.oo	o.1o
Leather welt	1.3o	m	o.23	o.3o
Auxiliary materials		total		o.48
Packaging /bag, box, carton/		total		o.4o
	Materials subtotal			8.28
Labour	52	min	6.oo/hour	5.2o
Manufacturing expenses				o.58
Depreciation				o.42
Adm., finance, marketing				1.6o
	Total production costs			16.o8
Profit margin	3	%		o.48
	EX FACTORY PRICE US $			16.56
Freight to the wholesaler/retailer				o.28
Selling price		US $		16.84

Annex 4.2

COSTING

/European cost components/

Style: oo2 - Men safari boot /one pair/

	Qty	Unit	Rate US $/unit	Cost
Sport suede /2.o mm/	2.6o	sq.ft	1.1o	2.86
Cow lining	o.82	sq.ft	1.oo	o.82
Stiffener /textile base/	o.25	sq.ft	o.35	o.o9
Toe puff /split leather/	o.15	sq,ft	o.7c	o.11
Crepe rubber sole /8 mm/	o.48	kg	2.2o	1.o6
Bend sole leather /3 mm/	o.28	kg	3.7o	1.o4
Auxiliary materials		total		o.45
Packaging /bag, box, carton/		total		o.4o
	Materials subtotal			6.83
Labour	32	min	6.oo/hour	3.2o
Manufacturing expenses				o.55
Adm., finance, marketing exp.				1.6o
	Total productions costs			12.58
Profit margen	3	%		o.38
	EX FACTORY PRICE		US $	12.96
Freight to wholesaler/retalier				o.28
Selling price			US $	13.24

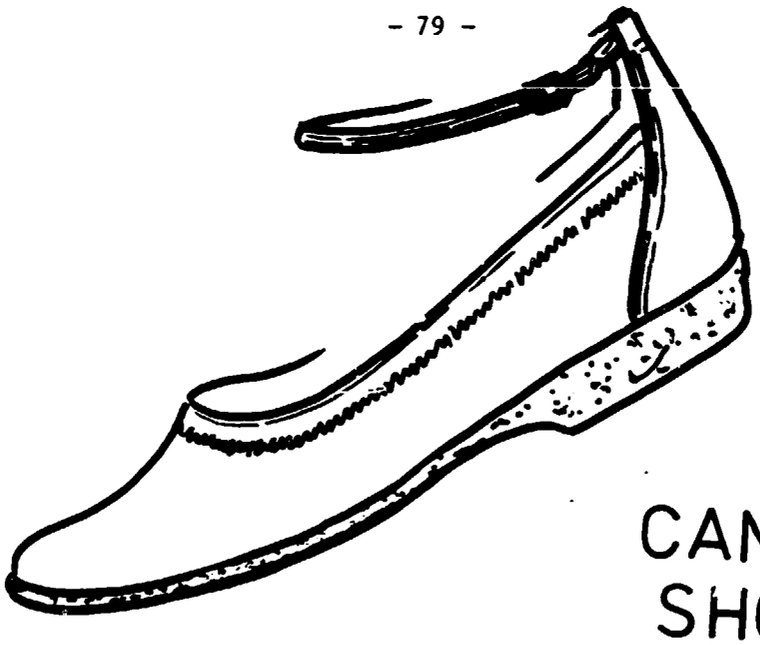
Annex 4.3

COSTING
/European cost components/

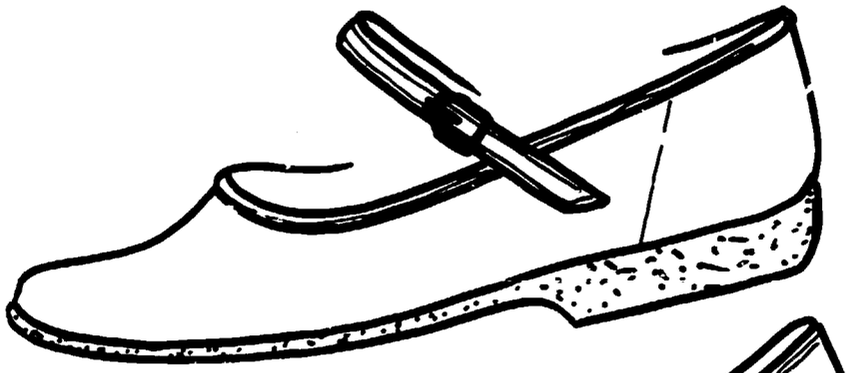
Style : 63oo9 - Conventional shoe / one pair /

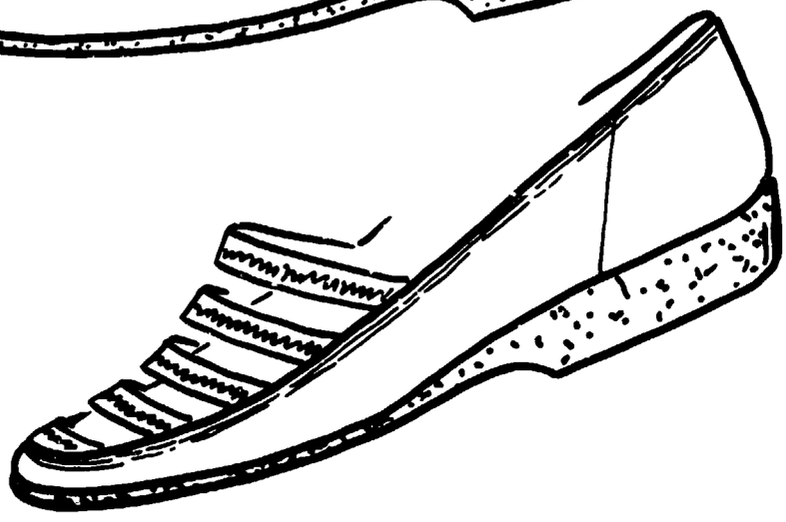
	Qty	Unit	Rate US $/unit	Cost
Cow leather /printed/	1.83	sq.ft	1.4o	2.56
Cow lining	1.84	sq,ft	1.oo	1.oo
Stiffener /leather board/	1	pair	o.15	o.15
Toe-puff /thermo/	o.2o	sq.ft	o.32	o.o6
Hard card board	o.o72	kg	o.65	o.o5
Steel shank	1	pair	o.o3	o.o3
Insole /alfacell/	o.o5	m^2	4.7o	o.24
Sole /leather	0.4o	kg	3.7o	1.48
Toppiece	o.1o	kg	1.oo	o.1o
Leather welt	1.3o	m	o.23	o.3o
Auxiliary materials		total		o.48
Packaging /bag, box, carton/		total		o.4o
	Materials subtotal			7.69
Labour	56	min	6.oo/hour	5.6o
Manufacturing expenses				o.58
Depreciation				o.42
Adm., finance, marketing				1.6o
	Total production costs			15.89
Profit margine	3	%		o.48
	EX FACTORY PRICE		US $	16.37
Freight to the wholesaler /retalier				o.28
Selling price			US $	16.65

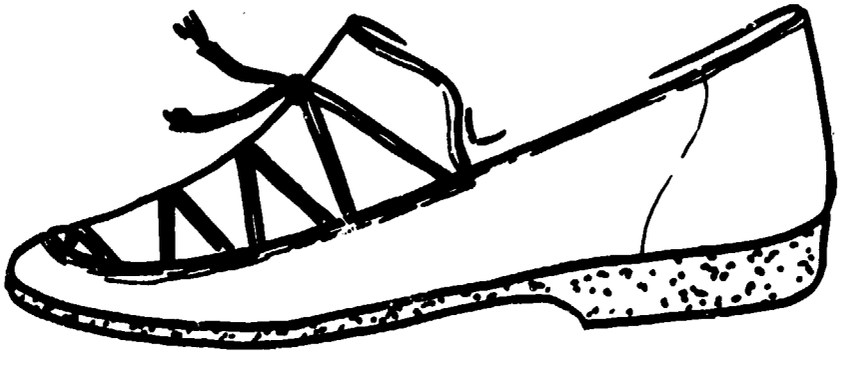
Annex 5.1



CANVAS SHOES







COSTING
/Tanzanian cost components/

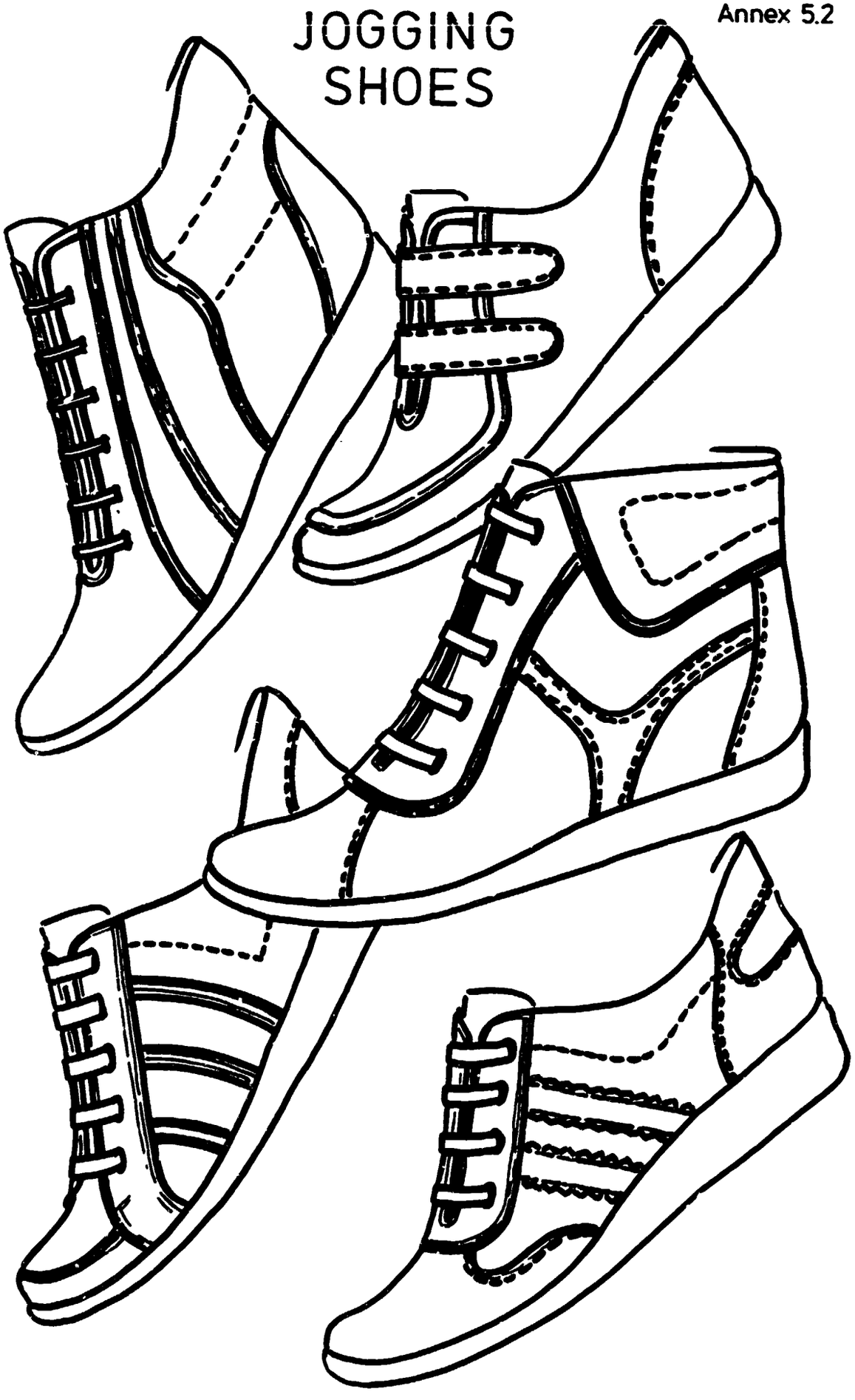
Style: Canvas shoes /ladies - one pair/

	Qty	Unit	Rate Tsh/unit	Cost	
Upper canvas	o.14	m^2	54.oo	7.56	
Binding straps	1.2o	m	o.6o	o.72	+
Stiffener /veg. split/	o.3o	sq.ft	11.25	3,38	
Toe-puff /textile/	o.ol	m^2	21.6o	o.22	
Insole /textile - split/	o.5o	sq.ft	17.oo	8.5o	
PU compound	o.3	kg	44.oo	13.2o	+
Auxiliary materials		total		21.4o	+
Packaging		total		2.5o	+
	Materials subtotal			57.48	
Labour	38	min	4.oo/hour	2.53	
Depreciation				4.81	
Overheads				38.48	
	Total production costs			1o3.3o	
	Solling price			185.oo	

+ Imported material consumption Tsh 37.82
/65.6 %/

Annex 5.2

JOGGING SHOES



COSTING
/Tanzanian cost components/

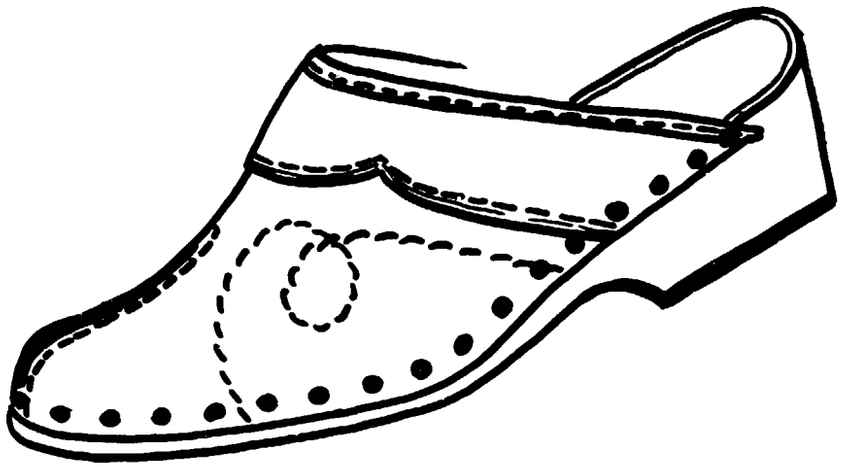
Style:13406 - Jogging shoes /one pair/

	Qty	Unit	Rate Tsh/unit	Cost	
Canvas	8.36	dm^2	48.48/m^2	4.05	+
Split suede /1.4 - 1.6/	0.76	sq.ft	16.50	12.54	
Cow lining /0.7 mm/	0.43	sq.ft	14.50	6.24	
Sponge for socs /4 mm/	0.04	m	59.30	2.37	+
Stiffener /1.1 mm/	1.5	dm^2	38.50/m^2	0.58	+
Toe puff /split/	0.15	sq.ft	12.95	0.65	
Insole /alfacell/	3.72	dm^2	36.39/m^2	1.35	
Sole /PU unit/	1	pair	25.00	25.00	
Sock lining	0.48	sq.ft	13.20	6.34	
Auxiliary materials		total		24.17	++
Packaging /bag, carton/		total		2.50	+
	Material subtotal			85.79	
Labour	110	min	4.00/hour	7.33	
Depreciation				4.81	
Overheads				38.48	
	Total production costs			136.41	
	Selling price			330.00	

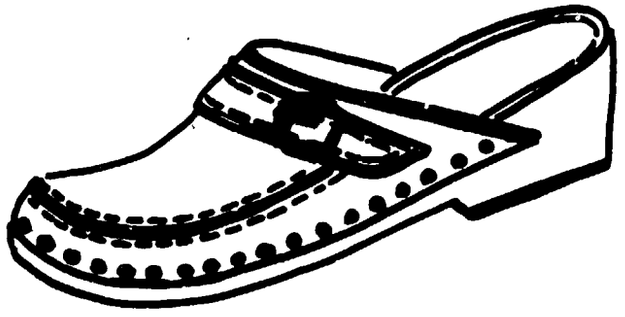
+ Imported material consumption Tsh 55.93 /65.2 %/

++ Tsh 20.08 is for imported material

Annex 5.3



CLOGS



Annex 5.3

CLOGS

Annex 5.3

CONSTING
/Tanzanian cost components/

Style: Clogs /ladies - one pair/

	Qty	Unit	Rate Tsh/unit	Cost	
Upper leather	o.65	sq.ft	23.5o	15.28	
Lining /leather/	o.5o	sq.ft	26.25	13.13	
Woodden sole	1	pair	15.oo	15.oo	
Toppiece	1	pair	1.25	1.25	
Outsole	1	pair	3.9o	3.9o	+
Auxiliary materials		total		9.5o	+
Packaging /bag, carten/				2.5o	+
	Materials subtotal			6o.56	
Labour	46	min	4.oo/hour	3.o7	
Depreciation				4.81	
Overheads				35.45	
	Total production costs			1o3.89	
	Selling price			25o.oo	

+ Imported material consumption Tsh 17.15
/28.3 %/

Annex. 5.4

SAFARI
BOOTS

Annex 5.4

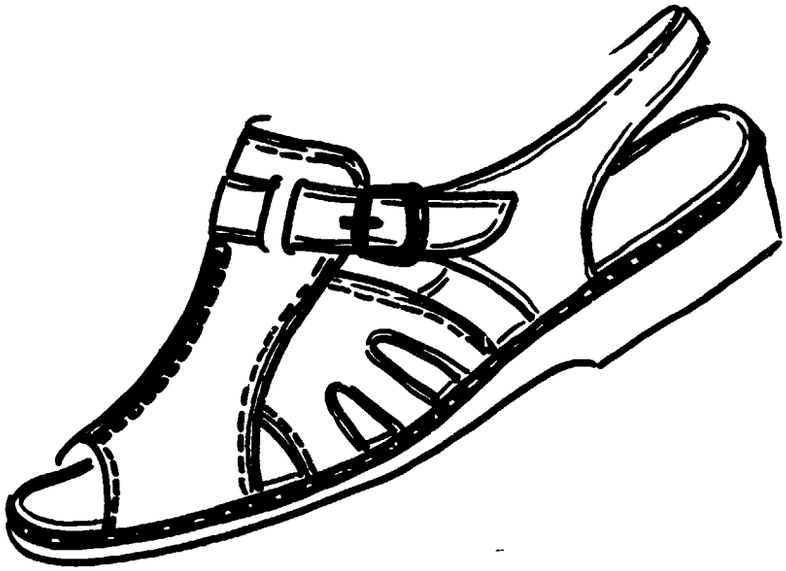
COSTING
/Tanzanian cost components/

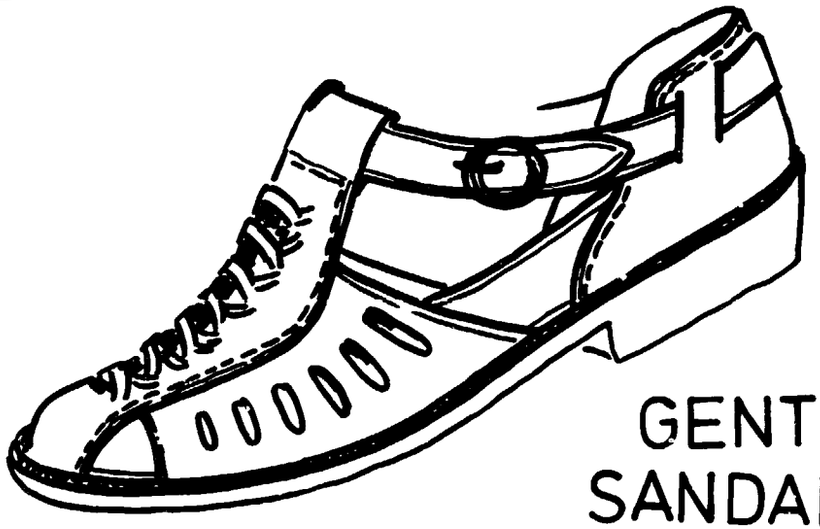
Style: oo2 - Men safari /one pair/

	Qty	Unit	Rate	Cost	
Sport suede /2.o mm/	2.6o	sq.ft	22.oo	57.2o	
Cow lining	o.82	sq.ft	19.oo	15.58	
Stiffener /textilebase/	o.25	sq.ft	3.58	o.9o	+
Toe - puff /split leather /	o.15	sq.ft	16.oo	2.1o	
Crepe rubber sole /8 mm/	o.48	kg	3o.oo	14.4o	+
Bend sole /leather 3 mm/	o.28	kg	76.oo	21.28	
Packaging /bag, carton/		total		2.5o	+
Auxiliery materials		total		21.11	+
	Materials subtotal			135.o7	
Labour	64	min	4.oo/hour	4.27	
Depreciation				4.81	
Overheads				38.48	
Total productions costs				182.63	
Selling price				3oo.oo	

+ Imported material consumption Tsh 38.91
/28.8 %/

Annex 5.5

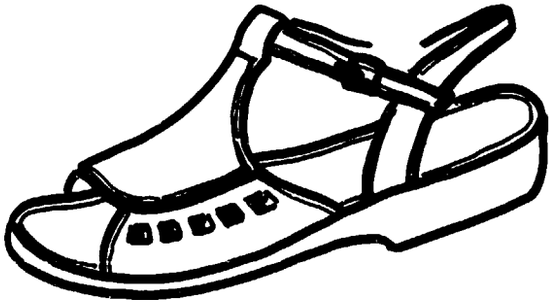




GENTS
SANDALS

Annex 5.5

LADIES/GIRLS SANDALS



COSTING

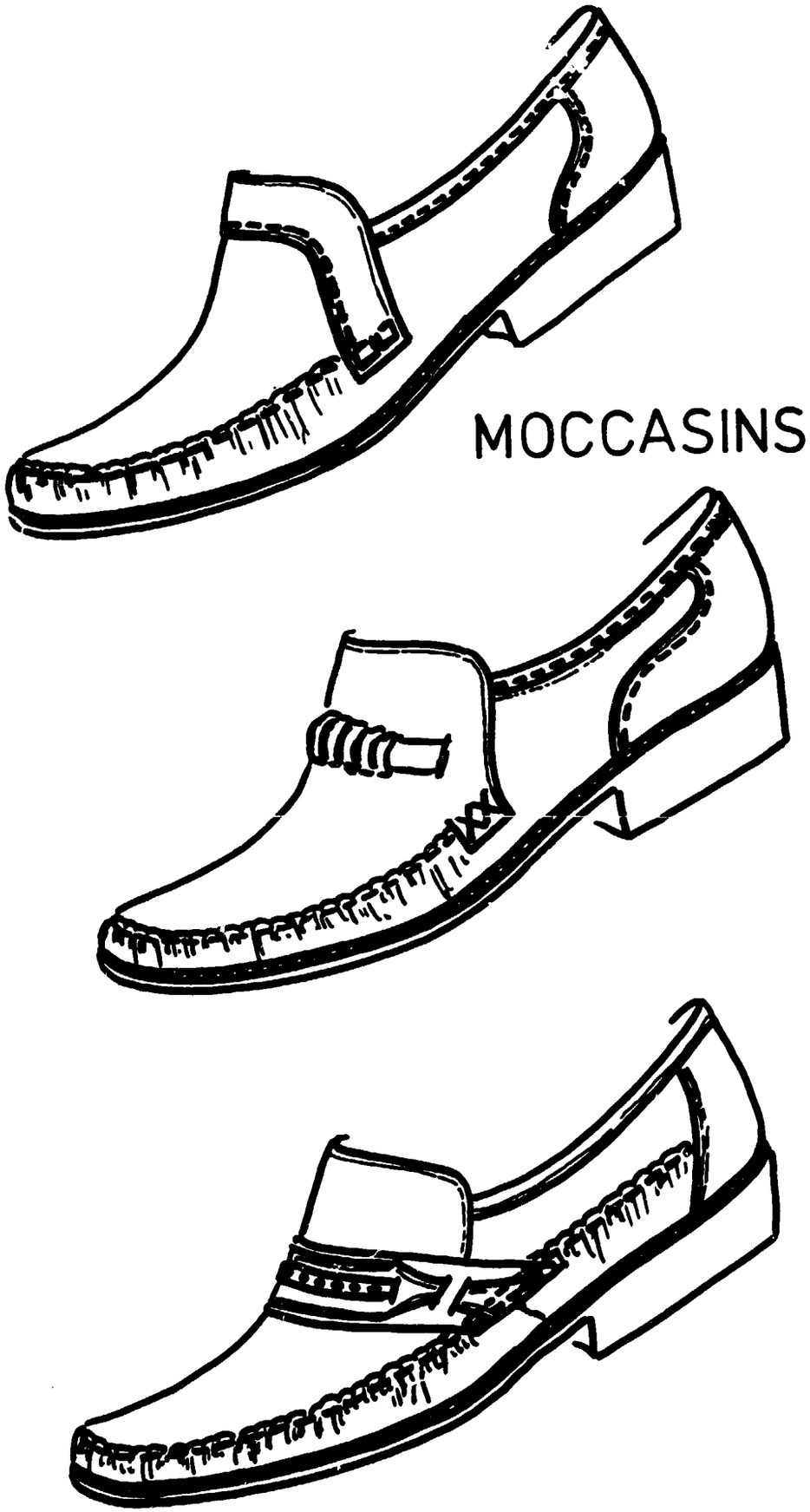
/Tanzanian cost components/

Style: Ladies/girls sandal /one pair/

	Qty	Unit	Rate Tsh/unit	Cost	
Upper leather /plain/	o.56	sq.ft	22.13	12.39	
Lining	o.6o	sq.ft	2o.oo	12.oo	
Sock lining	o.4o	sq.ft	2o.oo	8.oo	
Insole /two layers/	o.o8	m^2	26.8o	2.14	+
Sole /PU unit /	1	pair	15.5o	15.5o	+
Auxiliary materials		total		21.2o	+
Packaging /bag, carton/				2.5o	+
	Materials subtotal			73.73	
Labour	56	min	4.oo/hour	3.73	
Depreciation				4.81	
Overheads				38.48	
	Total productions costs			12o.75	
	Selling price			26o.oo	

+ Imported material consumption Tsh 41.34
/56.1 %/

Annex 5.6

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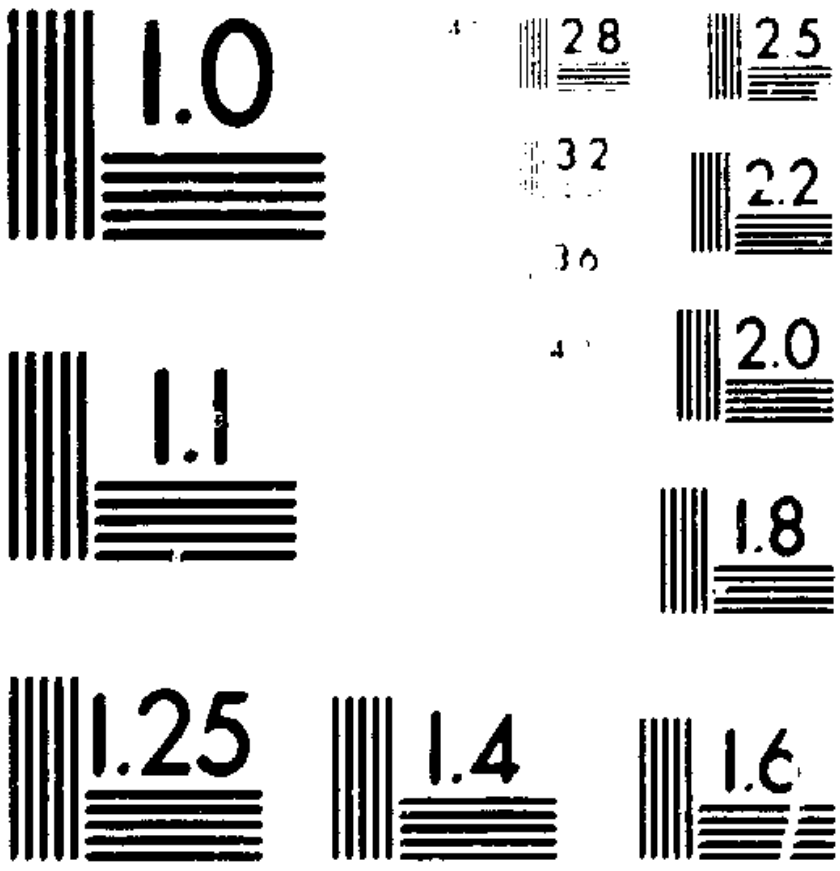


Annex 5.6

Annex 5.6

COSTING

/Tanzanian cost components/

Style: Moccasin /one pair/

	Qty	Unit	Rate Tsh/unit	Cost
Upper leather /goat/	2.9	sq.ft	26.25	76.13
Sock lining	o.3	sq.ft	2o.oo	6.oo
Insole /reg. leather/	o.24	kg	68.oo	16.32
Stiffener /leather board/	o.15	sq.ft	3.58	o.54 +
Sole + Heel /leather/	o.4o	kg	76.oo	3o.4o
Toppice /neolit/	o.16	sq.ft	3.5o	o.56 +
Leather Welt	1.3o	m	4.6o	5.98
Auxiliary materials		total		2o.5o +
Packaging /bag, carton/		total		2.5o +
	Materials subtotal			158.93
Labour	94	min	4.oo/hour	6.26
Depreciation				4.81
Overhead				4o.98
	Total production costs			21o.98
	Selling price			5oo.oo

+ Importated material consumption Tsh 24.1o

/15.2 %/

Annex 5.7

LADIES
FASHION
SANDALS

COSTING

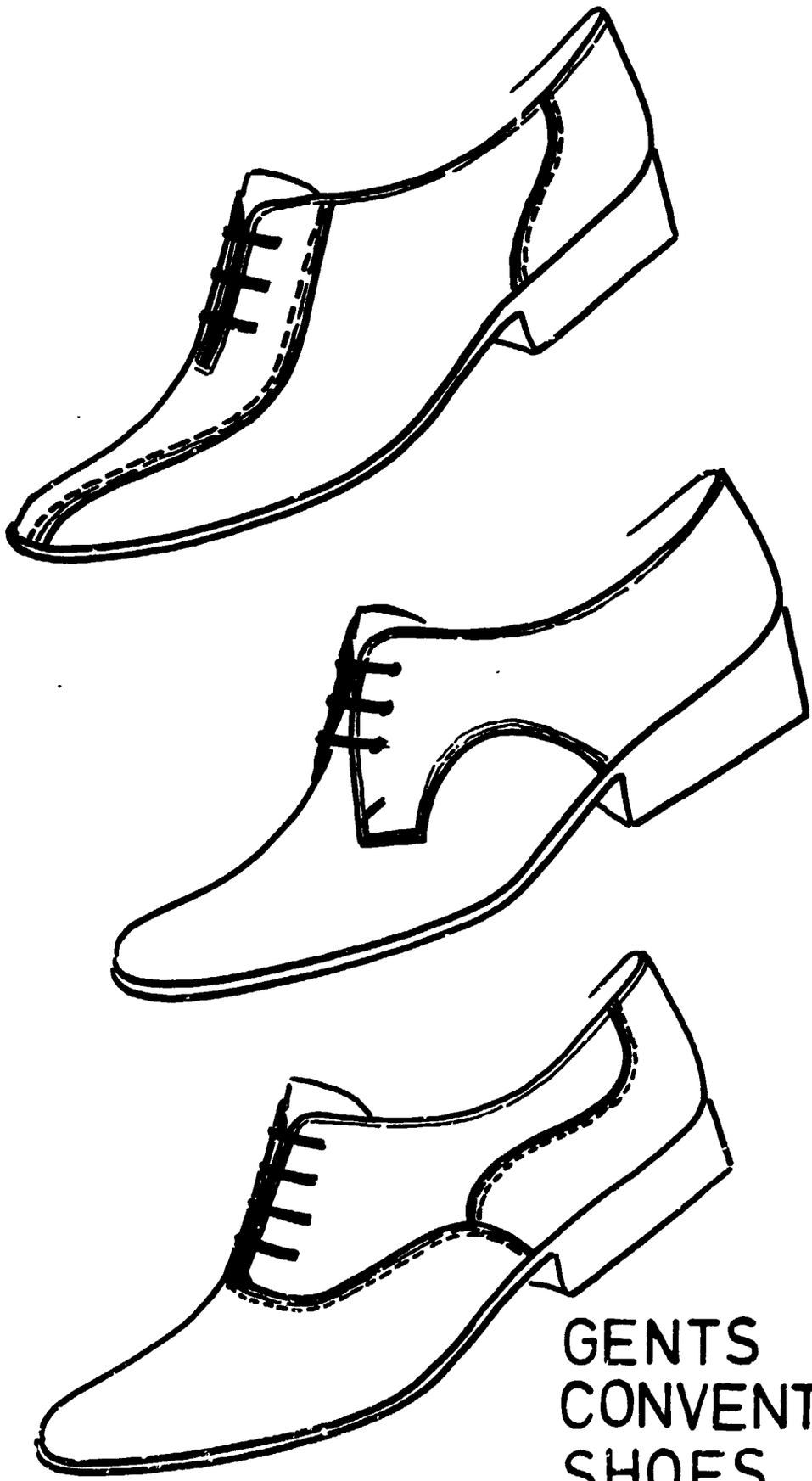
/Tanzanian cost components/

Style: High fashion ladies sandale /one pair/

	Qty	Unit	Rate Tsh/unit	Cost
Upper leather /calf/goat/	1.28	sq.ft	26.25	33.6o
Lining + sock	1.2o	sq.ft	26.25	31.5o
Buckles/decoration	1	pair	6.oo	6.oo +
Insole	o.o5	m^2	26.8o	1.34 +
Cardboard /hard/	o.2o	sq.ft	1.2o	o.24 +
Steel shank	1	pair	o.96	o.96 +
Outsole /leather/	o.18	kg	76.oo	13.68
Heel	1	pair	8.oo	8.oo +
Toppiece	1	pair	1.2o	1.2o +
Auxiliary materials		total		16.2o +
Packaging /bag, carton/		total		2.5o +
	Materials subtotal			115.22
Labour	74	min	4.oo/hour	4.93
Depreciation				4.81
Overheads				4o.98
	Total production costs			165.94
	Selling price			48o.oo

+ Imported material consumption Tsh 36.44
/31.6 %/

Annex 5.8



GENTS
CONVENTIONAL
SHOES

COSTING

/Tanzanian cost components/

Style: 63oo9 - Conventional shoes /one pair/

	Qty	Unit	Rate Tsh/unit	Cost	
Cow leather /printed/	1.83	sq.ft	22.oo	4o.26	
Cow lining	1.84	sq.ft	19.oo	34.96	
Stiffener /textile base/	o.12	sq.ft	3.8o	o.46	+
Toe puff /thermo/	o.14	sq.ft	3.44	o.48	+
Hard cardboard	o.24	sq.ft	1.2o	o.29	+
Steal shank	1	pair	o.9o	o.9o	+
Insole /alfacell/	o.6o	sq.ft	4.54	2.72	+
Sole /leather/	o.4o	kg	76.oo	3o.4o	
Toppiece /neolit/	o.16	sq.ft	3.5o	o.56	+
Leather welt	1.3o	m	4.6o	5.98	
Auxiliary materials		total		19.26	+
Packaging /bag, carton/		total		2.5o	+
	Materials subtotal			138.77	
Labour	135	min	4.oo/hour	9.oo	
Depreciation				4.81	
Oveheads				4o.98	
	Total production costs			193.96	
	Selling price			46o.oo	

+ Imported material consumption Tsh 27.17 /19.6 %/

Annex 6.1

ESTIMATES OF PRODUCTION COSTS

Unit:M Tsh

Period	Start - up				Targeted production
Phase	1	2	3	4	5
Capacity utilisation	17.5	4o	55	75	9o
Materials /direct/*	58.8	138.1	2o4.2	297.o	37o.7
Labour +	2.6	6.3	9.4	13.8	17.6
Utilites	o.6	1.3	1.8	2.5	3.o
Tooling	1.4	3.1	4.3	5.8	7.o
Maintenance	2.3	5.3	7.3	1o.o	12.o
Transporting+	1.8	4.1	6.1	8.9	11.2
Factory overheads	4.5	1o.2	14.1	19.2	23.o
FACTORY COSTS	72.o	168.4	247.2	357.2	444.5
Adm. oveheads	8.o	9.o	1o.o	1o.o	1o.o
Sales costs	3.o	3.o	3.o	3.o	3.o
Distribution costs	2.9	6.7	9.2	12.5	15.o
OPERATING COSTS	85.9	187.1	269.4	382.7	472.5
Financial costs ++	1.9	4.5	6.6	9.6	12.o
Depreciation	14.o	14.o	14.o	14.o	14.o
TOTAL PRODUCTION COSTS	1o1.8	2o5.6	29o.o	4o6.3	498.5

+ Proportional to the implementation schedule

++ Proportional to the direct material costs

Annex 6.2

WORKING CAPITAL REQUIREMENT

Unit: M Tsh

	Minimum days of coverage	Coeff. of turnover	Start-up period				Targeted capacity
			1	2	3	4	5
Account receivable	3o	12	7.3	16.o	23.o	32.7	4o.4
Inventory							
- local raw materials	2o	18	1.8	6.o	6.8	1o.4	13.6
- imported materials	18o	2	13.6	3o.2	4o.5	54.5	63.o
- spare parts	27o	1.3	3.8	3.8	3.8	3.8	5.5
Work in progress	12	3o	2.4	5.6	8.3	11.9	14.8
- finished goods	24	15	5.3	11.8	17.1	24.5	3o.2
- cash in hand	15	24	1.2	2.2	2.9	3.9	4.6
CURRENT ASSETS			35.4	75.6	102.4	141.7	172.1
Account payable	30	12	5.o	11.6	17.2	24.8	27.8
CURRENT LABILITIES			- 5.o	-11.6	- 17.2	- 24.8	- 27.8
WORKING CAPITAL			30.4	64.0	85.2	116.9	144.3

Annex 6.3

CASH BALANCE SCHEDULE

Cash in hand reqirement: 15 days / coefficient of turnover = 24 /

Unit: M Tsh

	Start - up				Targeted capacity
	1	2	3	4	5
Production costs	1o1.5	2o5.6	29o.o	4o6.3	498.5
Raw materials	58.8	138.1	2o4.2	297.o	37o.7
Utilites	o.6	1.3	1.8	2.5	3.o
Depreciation	14.o	14.o	14.o	14.o	14.o
Reqired cash balance	28.1 1.2	52.2 2.2	7o.o 2.9	92.8 3.9	11o.8 4.6

Annex 7.1

Phase: 1

	Local sale		Export			Imported material required	Subsidy required
	'000 pairs	M Tsh*	'000 pairs	M US $	M Tsh	M US $	M Tsh
Canvas	330	48.84	-	-	-	0,749	-
Jogging	100	26.4o	-	-	-	0.336	-
Clogs	70	14.oo	-	-	-	0.072	-
Safari	200	48.oo	-	-	-	0.472	-
Total	700	137.24	-	-	-	1.629	-

Sales taxes: 27,45 M Tsh

* At 80% of the planned price

Annex 7.2

Phase: 2

	Local sale		Export			Imported materials	Subsidy required
	'000 pairs	M Tsh	'000 pairs	M US $	M Tsh	M US $	M Tsh
Canvas	600	111.00	-	-	-	1.362	-
Jogging	200	66.00	-	-	-	0.672	-
Clogs	180	45.00	-	-	-	0.185	-
Safari	320	96.00	-	-	-	0.755	-
Sandals	180	37.44*	-	-	-	0.483	-
Moccasins	120	48.00*	-	-	-	0.174	-
TOTAL	1,600	403.44	-	-	-	3.631	-

Seles taxes: 80.69 M Tsh

* At 90 % of the planned price

Annex 7.3.

Phase: 3

	Local sale		Export			Imported materials M US $	Subsidy required M Tsh
	'000 pairs	M Tsh	'000 pairs	M US $	M Tsh		
Canvas	740	136,9	10	o.o26	o.255	1.7o3	1.23
Jogging	16o	52.8	60	o.2o8	2.o38	o.739	13.8o
Clogs	12o	3o.o	80	o.215**	2.1o7	o.2o6	13.89
Safari	34o	1o2.o	90	o.758	7.428	1.1o5	14.17
Sandals	23o	59.8	20	o.o72	o.7o6	o.67o	3.45
Moccasins	21o	1o5.o	40	o.439	4.3o2	o.362	11.7o
Conventional	1oo	41,4*	-	-	-	o.163	-
TOTAL	1,900	527.9	3oo	1.718	16.836	4.858	58.24

Sales taxes: 105.58 M Tsh

* At 90 % of the planned price

** Exported only to neighbouring countries

Annex 7.4.

Phase 4

	Local sale		Export			Imported materials M US $	Subsidy required M Tsh
	'ooo pairs	M Tsh	'ooo pairs	M US $	M Tsh		
Canvas	870	16o.95	3o	o.o77	o.755	2.157	3.69
Jogging	124	4o.92	96	o.332	3.254	o.739	22.o9
Clogs	7o	17.5o	13o	o.335	3.283	o.2o6	22.72
Safari	28o	84.oo	17o	1.433	14.o43	1.o62	26.76
Sandals	276	71.76	74	o.266	2.6o7	o.938	12.79
Moccasins	33o	165.oo	12o	1.317	12.9o7	o.653	48.oo
Fashion sandals	13o	56.16*	2o	o.124	1.215	o.327	6.47
Conventional	22o	1o1.2o	6o	o.652	6.39o	o.456	15.69
TOTAL	2,300	697.49	7oo	4,536	44.454	6.538	158.21

Sales taxes: 139.5 M Tsh

* At 90 % of the planned price

Annex 7.5

Phase 5

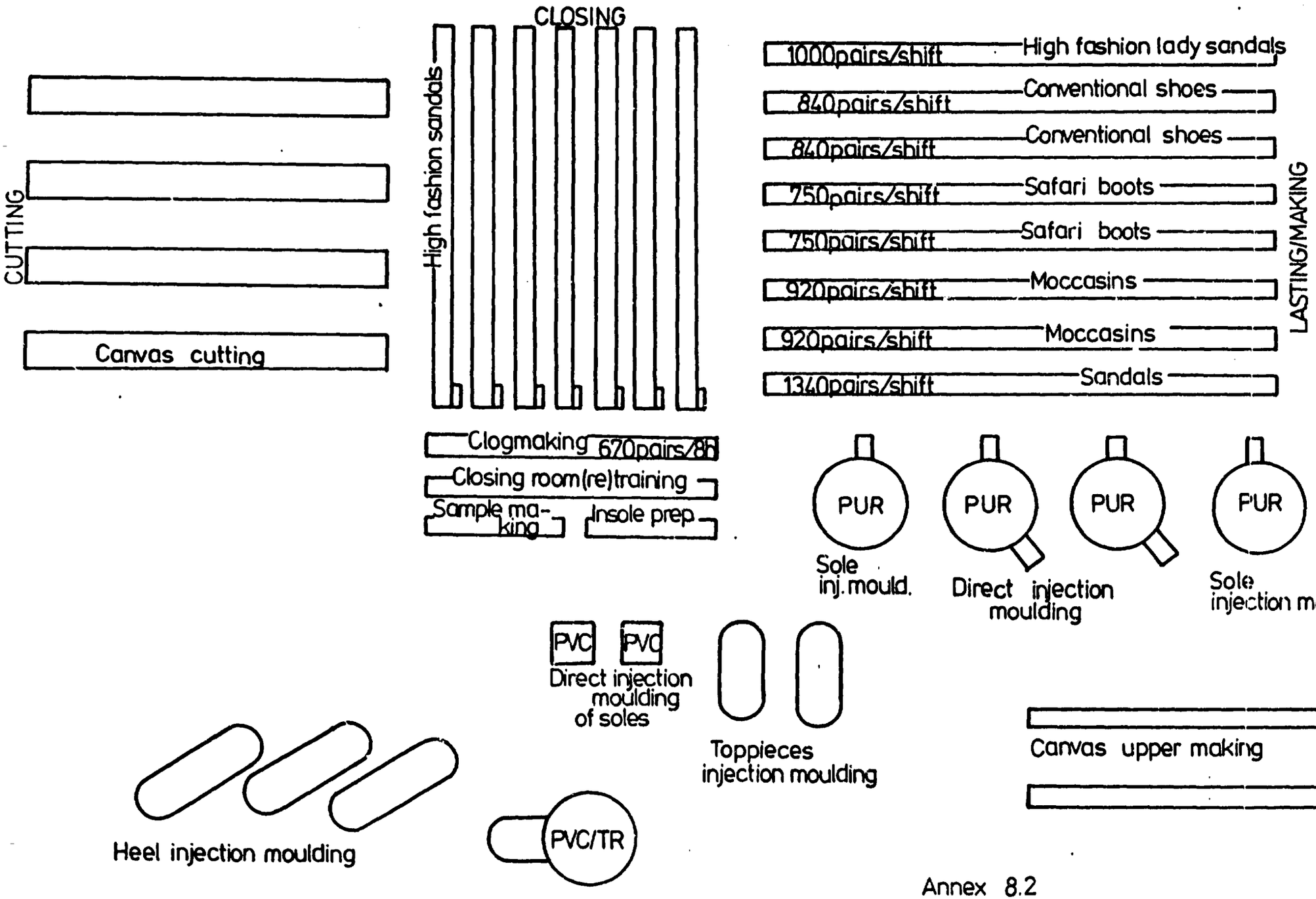
	Local sale		Export			Imported materials M US $	Subsidy required M Tsh
	,ooo pairs	M Tsh	,ooo pairs	M US $	M Tsh		
Canvas	914	169,09	36	o.o92	o.9o2	2.157	4.43
Jogging	124	4o.92	96	o.332	3.254	o.739	25.34
Clogs	68	17.oo	132	o.34o	3.332	o.2o6	23.o7
Safari	234	7o.2o	216	1.821	17.846	1.o62	33.99
Sandals	3o4	79.o4	96	o.346	3.391	1.o72	16.58
Moccasins	25o	125.oo	3oo	3.292	32.262	o.798	87.74
Fashion sandals	21o	1oo.8o	12o	o.745	7.281	o.719	38.8o
Conventional	296	136.16	2o4	2.218	21.736	o.815	53.34
TOTAL	2,4oo	738.21	1,2oo	9.186	9o.oo4	7.568	283.29

Sales taxes: 147.64 M Tsh

CAPACITY ALLOCATION

Unit: Million pairs

	Uppermaking				Lasting					Soling					TOTAL
	Canvas	Moccasin	Conventional	High quality	Round lasted	String/sewn in	Stitch-down	Moccasin	Manual	Direct injection moulded	Cemented	McKay	Stitchdown	Manual	TOTAL
Canvas	0.95					0.95				0.95					0.95
Jogging			0.22			0.22				0.22					0.22
Clogs			0.20						0.20					0.20	0.20
Safari			0.25	0.20			0.45						0.45		0.45
Sandals			0.30	0.10					0.40		0.40				0.40
Moccasins		0.55						0.55			0.15	0.40			0.55
Fashion sandals				0.33					0.33		0.33				0.33
Conventional			0.30	0.20	0.50						0.10	0.40			0.50
TOTAL	0.95	0.55	1.27	0.83	0.50	1.17	0.45	0.55	0.93	1.17	0.98	0.80	0.45	0.20	3.60


CUTTING
Canvas cutting
CLOSING
High fashion sandals
Clogmaking 670pairs/8h
Closing room(re)training
Sample making
Insole prep
1000pairs/shift High fashion lady sandals
840pairs/shift Conventional shoes
840pairs/shift Conventional shoes
750pairs/shift Safari boots
750pairs/shift Safari boots
920pairs/shift Moccasins
920pairs/shift Moccasins
1340pairs/shift Sandals
LASTING/MAKING
PUR
Sole inj. mould.
PUR
Direct injection moulding
PUR
PUR
Sole injection mould.
PVC
PVC
Direct injection moulding of soles
Toppieces injection moulding
Canvas upper making
Heel injection moulding
PVC/TR

Annex 8.2

Annex 8.3

TECHNICAL CONDITIONS

	Annual output '000 pairs	Series			Tooling	
		Average '000 pairs/style	Number of styles manufactured in a year	Number of new styles in a year	New lasts	New moulds for soles
Canvas	950	160	6	2	-	1
Jogging	220	55	4	2	-	-
Clogs	200	25	8	3	-	-
Safari	450	75	6	3	1	-
Sandals	400	27	15	5	1	1
Moccasin	550	92	6	1	1	-
Fashion sandals	330	13	25	15	1	-
Conventional	500	17	30	20	1	1
TOTAL	3600	36	100	51	5	3

Annex 9.1

COSTING

/Tanzanian cost components/

Style: Moccasin upper /one pair/

	Qty	Unit	Rate Tsh/unit	Cost	
Upper leather /goat/	2.9	sq.ft	26.25	76.13	
Lining	o.8	sq.ft	2o.oo	16.oo	
Auxiliary materials		total		8.3o	+
Packaging /bag,carton/		total		1.8o	+
	Materials subtotal			1o2.23	
Labour	43	min	4.oo/hour	2.87	
Oveheads				22.5o	
Depreciation				2.2o	
Freigt etc.				4.3o	
	Total production costs			134.1o	
Possible price /CIF Europe/			US $	6.8o	

+ Imported material consumption: Tsh 1o.1 /9.9 %/

equivelent US $ o.61 / incl. 7o % duty /

Annex 9.2

COSTING

/Tanzanian cost components/

Style:Military/safety boot upper /one pair/

	Qty	Unit	Rate Tsh/unit	Cost
Upper leather /embossed/	3.7	sq.ft	17.38	64.31
Auxiliary materials		total		8.1o +
Packaging		total		1.7o +
	Materials subtotal			74.11
Labour	4o	min	4.oo/hour	2.67
Overheads				21.1o
Depreciation				2.2o
Freight				4.3o
	Total production costs			1o4.38
Possible price /CIF Europe/			US ¢	4.2o

+ Imported material consumption: Tsh 9.8o /13.2 %/

equivalent to US ¢ o.59 /incl. 7o % duty/

Annex 1o

Labour requirement

/ingluding formen/

Production department	Number of shift	Number of workers
Cutting of leather and textile	1	12o
Bottom cutting and prefabrication	1	15o
Closing	1	5o5
Lasting, making, finishing	1	325
Sole and heel injection moulding	3	1oo
Last/wooden sole manufacturing	3	3o
Lace/thread manufacturing	3	3o
Maintenance/toolmaking	1 /3/	7o
Stores	1 /3/	3o
Garages	1 /2/	2o
TOTAL		141o

Shift coefficient: 1.23

Annex 11.1.

Distribution of production equipment

1. CLOSING ROOM

No	Code	Machine	Canvas	Jogging	Clogs	Safari	Sandals	Moccasins	Fashion sandals	Conventional	TOTAL	Existing	Reserve	Balance
Capacity, pair/8h			3,500	820	750	1,700	1,500	2,00	1,200	1,800	13,270			
1.	N1	Stitch marking	2	1	-	2	2	2	2	2	13	13	-	-
2.	C4	Skiving	1	2	2	4	5	8	5	6	33	32	-	-
3.	E12,E1	Flat/single sewing	40	5	4	8	18	21	18	10	124	99	-	-
4.	E3	Post sewing	-	3	-	10	5	8	5	6	37	35	-	-
5.	Q4	Edge folding	-	-	2	-	-	-	5	6	13	21	3	+5
6.	Q5,Q6, Q21	Eyeletting	4	1	-	2	-	-	-	3	10	14	-	-
7.	X4	Lacing	3	1	-	2	-	-	-	2	8	8	-	-
8.	G2	Edge trimming	-	1	1	-	3	-	2	2	9	12	-	-
9.	E10,E33	Fancy seam sewing	-	12	1	-	-	-	-	4	17	14	-	-

/Continued/

No	Code	Machine	Canvas	Jogging	Clogs	Safari	Sandals	Moccasin	Fashion sandals	Conventional	TOTAL	Existing	Reserve	Balance
Capacity, pairs/8h			3,500	820	750	1,700	1,500	2,000	1,200	1,800	13,270			
10	E2	Zigzag	-	2	1	-	-	4	-	-	7	15	3	+5
11	S6	Backseam taping	-	-	-	-	-	2	-	-	2	20	3	+15
12	B7	Bar punching	-	-	-	-	2	2	2	-	6	2	-	-
13	E7	Binding	12	-	-	-	-	10	-	-	22	45	8	+15
14	E29,E30	Moccasin sewing	-	-	-	-	-	30	-	-	30	33	-	-
15	E14	Bartacker	-	1	-	-	2	-	2	-	5	8	-	-
16	E13	Twin sewing/spec/	5	-	-	2	-	-	-	-	7	31	9	+15
17	E30	Interlining press	2	-	-	-	-	-	1	1	4	4	-	..
18	D25	Toe-puff attaching	-	1	-	-	-	-	-	-	1	12	-	-
19	E15	Repaire sewing	1	-	-	1	-	1	1	1	5	10	-	+5
TOTAL			70	30	11	31	37	88	43	43	353	428	26	+60

Annex 11.1. /continued/

2. LASTING, MAKING, SHOE ROOM /without canvas and direct soling/

No	Code	Machine	Clogs	Stitchdown /safari/	Sandals	Moccasin	Fashion sandals	Conventional	TOTAL	Existing	Reserve	Balance
Capacity, pairs/8h			750	1,700	1,500	2,000	1,200	1,800	8,950			
1	H2,H26	Insole attaching	-	2	2	1	1	2	8	-	-	-9
2	H22	Backpart moulding	-	-	-	-	-	2	2	7	2	+3
3	H24	Backpart moulding/sp/	-	2	-	-	-	-	2	1	-	-1
4	R1	Conditioning	-	-	-	4	-	-	4	16	4	+8
5	R3	Moccasin forming	-	-	-	2	-	-	2	8	2	+4
6	I1,I6 J1	Upper roughing	-	-	-	-	1	2	3	1o	2	+5
7	R1	Toe-puff activating	-	-	-	-	2	4	6	8	2	-
8	H9	Pulling over/lasting	-	-	-	-	-	4	4	4	-	-
9	H7	Pulling over/lasting /sp/	-	4	-	-	-	-	2	2	-	-
10	H11	Moccasin lasting	-	-	-	8	-	-	8	8	-	-
11	L8	Side lasting	-	-	-	2	-	3	5	6	1	-
12	S1	Contour pounding	-	8	-	-	-	-	8	16	2	+6
13	L5	Running stapling	-	4	-	-	-	-	4	4	-	-
14	H20	Upper trimming	-	2	-	-	-	-	2	2	-	-
15	E23	Sole stitching	-	4	-	-	-	-	4	2	1	-3

/continued/

No	Code	Machine	Clogs	Stitch down /safari/	Sandals	Moccasins	Fashion sandals	Conventional	TOTAL	Existing	Reserve	Balance
Capacity, pairs/8h			740	1,700	1,500	1,000	1,200	1,800	8,940			
16	M2	Sole/heel trimming	-	4	-	-	-	-	4	4	-	-
17	H16	Heel-seat lasting	-	-	-	2	-	2	4	8	2	+2
18	H2	Side stapling	2	-	-	-	-	-	2	2	-	-
19	R8	Heat setting	-	2	-	2	-	2	6	8	-	+2
20	S8	Pounding	-	-	-	2	-	2	4	4	-	-
21	S4	Heel-seat forming	-	-	-	2	-	2	4	8	1	+3
22	L4	Strap mailing	-	-	1	-	1	-	2	8	1	+5
23	I4	Roughing	-	-	2	4	2	4	10	14	-	+4
24	D18	Adhesive applying	-	4	2	4	2	4	16	16	-	-
25	R12	Sheck activator	-	4	2	4	2	4	16	10	-	-6
26	F2	Sole laying	-	2	2	2	1	2	9	8	1	-
27	G3	Lining trimming	-	-	4	-	-	-	4	4	-	-
28	X6	Last pull	-	2	-	2	-	2	6	6	-	-
29	X8	Channel opening	-	-	-	2	-	-	2	8	1	+5
30	E34	McKay stitching	-	-	-	4	-	-	4	8	2	+2
31	X7	Channel closing	-	-	-	2	-	-	2	8	-	+6
32	J14	Sole polishing	-	-	-	2	1	2	5	12	1	+6
33	F12	Sole edge ironing	-	-	-	2	-	2	4	8	1	+3

/continued/

No	Code	Machine	Clogs	Stitch down /safari/	Sandals	Moccasins	Fashion sandals	Conventional	TOTAL	Existing	Reserve	Balance
	Capacity, pairs/8h		750	1,700	1,500	2,000	1,200	1,800	8,950			
34	I4	Heel polishing	-	-	-	2	-	2	4	4	-	-
35	K2	Heel screwing	-	-	-	-	1	-	1	6	1	+4
36	K4	Heel nailing	-	-	-	2	1	2	5	8	1	+2
37	D9	Sock lining	-	2	1	2	1	2	8	10	2	-
38	R11	Quarter ironing	-	-	-	2	-	2	4	8	1	+3
39	R14	Hot air blower	-	-	-	2	1	2	5	8	1	+2
40	AA6	Finishing	-	-	1	2	1	2	6	30	1	+23
41	P9	Exhauster	-	-	1	2	1	2	6	18	1	+11
42		Boxmaking	-	-	-	2	1	2	5	-	1	-6
43	N6	Box marking	-	-	-	2	1	2	5	8	1	+2
44	N3	Lining scouring	-	-	2	-	1	2	5	6	1	-
45		Carton strapping	-	-	-	1	-	-	1	-	-	+1
		TOTAL	2	46	20	72	22	65	217	344	38	+101 - 26

Annex 11.2

LIST OF SURPLUS EQUIPMENT

N°	Italmacchine code	Item	Manufactuer	Quantity pcs	Unit price US $	Total value US $
1.	B 8	Perforeting machine		5	849	4245
2.	B 13	Hidraulic trolley press	Allevi NPO 160x40	6	6090	36540
3.	B 18	Multiple perforating machine		2	2903	5806
4.	C 20	Leather upper splitting machine		3	4931	14793
5.	C 21	Grooving and channeling machine	Franco Torti	3	2652	7956
6.	C 38	Heavy duty skiving machine	Ellegi	2	1188	2376
7.	C 40	Leather sole skiving machine	Ellegi GL 12 F	2	1188	2376
8.	D 5	Cementing machine	Sagitta RP 66	10	850	8500
9.	E 2	Zig-zag sewing machine	Bernina	5	1072	5360
10.	E 7	Arm sewing machine	Adler 69 - 72 E	15	1800	27000
11.	E 13	Flat bed twin needle sewing machine	Adler 167-2030 SNH 1/2.5	15	2880	43200
12.	E 9	Coloum post bed sewing machine	Adler 68-2025/2.5	20	2701	54020
13.	E 34	Blake sewing machine	Falan 59	2	6845	13690
14.	E 15	Repairing sewing machine	Singer	5	871	4355
15.	F 12	Edge setting machine		3	620	1860

16.	F 2o	Pneumatic toplift Applying machine		2	1652	33o4
17.	G 1	Edge sole trimming machine	Colli	6	1199	7194
18.	H 16	Heel seat lasting machine	Brustia	2	11251	225o2
19.	H 22	Two stations schaping machine	Zeus	3	2933	8799
2o.	I 1	Loose upper roughing machine		2	1o39	2o78
21.	J 1	Roughing machine	Garfas M 53	3	3395	1o185
22.	I 2	Special finishing device machine		24	948	22752
23.	I 5	Disk buffing machine		4	1o52	42o8
24.	J 4	Belt scouring machine		8	1419	11352
25.	J 14	Sole and heels shining machine	Luxor	6	747o	4482o
26.	K 2	Screw inserting machine	Brustia	4	3637	14548
27.	K 4	Heel nailing machine	Brustia	2	6728	13456
28.	L 4	Side nailing machine		5	3o43	15215
29.	L 8	Side lasting machine	Omav	2	3651	73o2
3o.	N 4	Upper and lining numbering machine		8	1423	11384
31.	N 6	Mechanical box marking machine		2	1423	2846
32.	N 12	High frequency embassing machine	Sagitta PC 25	1	54691	54691
33.	P 9	Spray cabinet		8	455	364o
34.	R 8	Rotary drier machine		2	9545	19o9o
35.	R 11	Upper shaping machine	ITM	3	2235	67o5

36.	R 3	Moccasin ironing machine		4	3318	13272
37.	S 1	Lining paunding up machine		6	1895	1137o
38.	S 6	Pneumatic seam and heel schaping press mc.		15	766o	1149oo
39.	V 8	Heel tridimensional copying machine		1	14372	14372
4o.	Q 4	Automatic eyeletting machine	Ellegi GL 15 R	5	1763	8815
41.	Q 12	Welt applying machine		2	3212	6424
42.	X 8	Grooving machine		5	2oo	1ooo
43.	X 7	Groove closing machine		6	312	1872
44.	51	Measwing machine /footage/		2	33637	67274
45.	S 4	Heel seat pounding		3	4932	14796
46.	AA 6	Hand held finishing iron		22	41o+	9o2o
47.	R 14	Hot air blower	Elektronika BC 128 S	2	152o+	3o4o
		TOTAL	Pcs	268		US $ 784303

+ Estimated prices

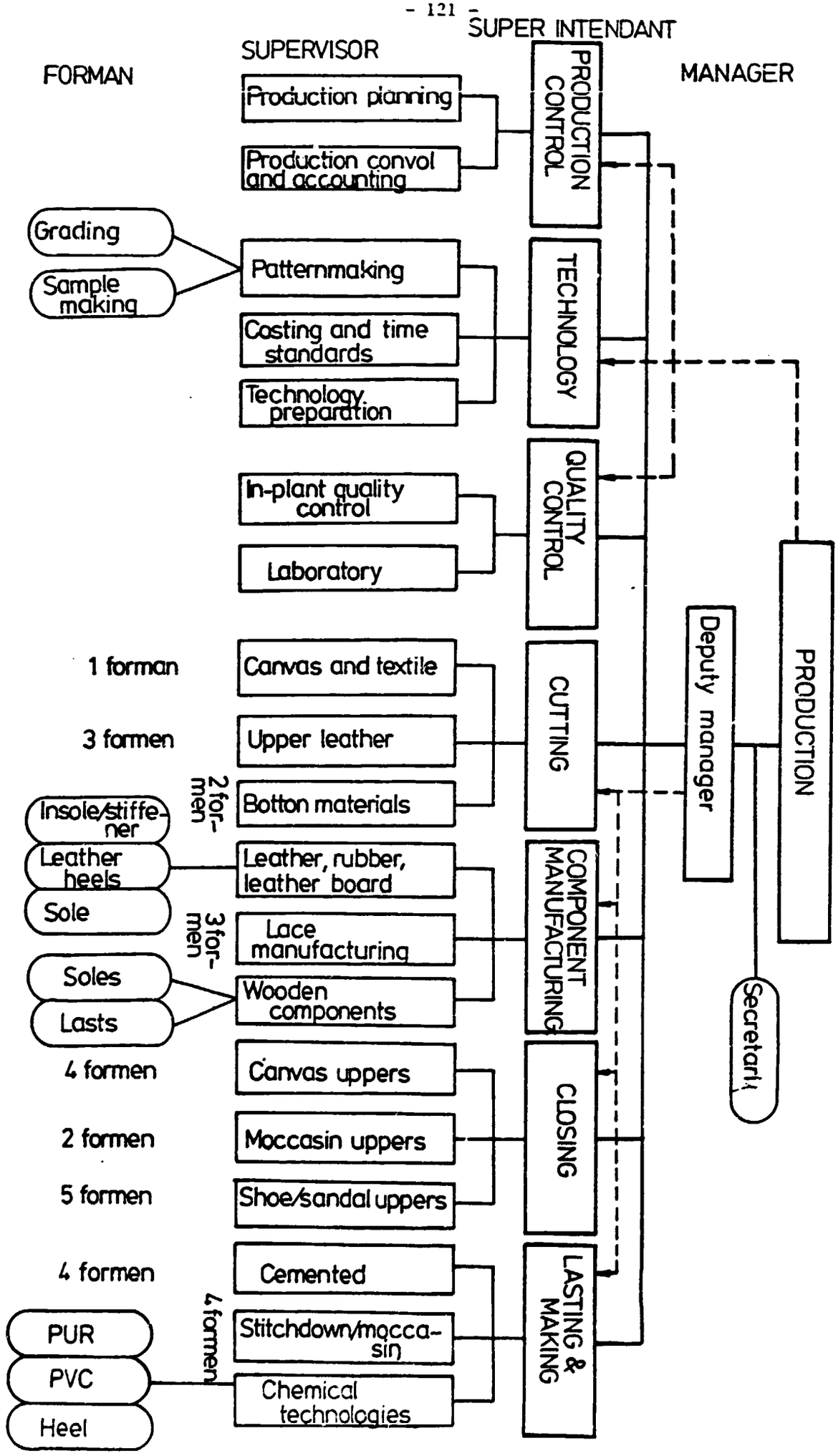
Annex 11.3

List of equipment to be bought for the Morogoro Shoe Company

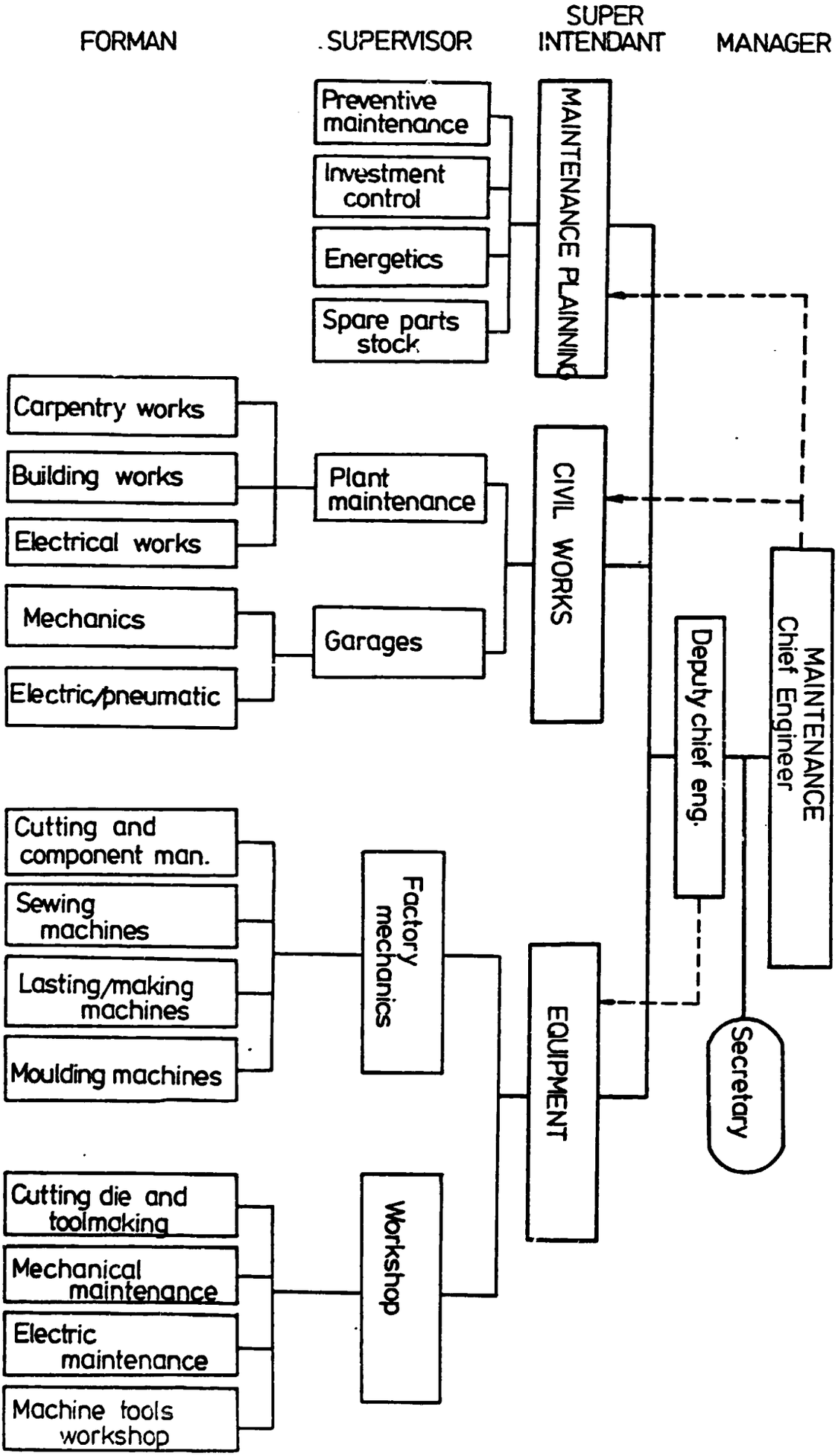
No.	Code	Item	Qty	Unit price US $	Value US $
A.		Shoe Manufacturing machinery			
1.		Leather waiving equipment /KADIC/	4		70000 ++
2.	H 24	Counter moulding machine	1	5347	5347
3.	H 7	Pulling over and lasting machine	2	9328	18656
4.	E 23	Sole sticking machine	3	8641	25923
5.	F 2	Sole laying press	2	3755	7510
6.	R 12	Shook activator	6	1328	7968
7.		Box stapling machine	6	2000	12000 +
8.		Carton making machine	1	3500	3500 +
		Subtotal	21		150904
B.		Last manufacturing special machines			150000 +
C.		Cutting die making equipment			20000 +
D.		Maintenance equipment			230000 +
E.		Additional lasts, injection moulds			180000 +
F.		Communication, office equipment			80000 +
		TOTAL			810904
		Freight, installation etc /21 %/			169096
		TOTAL INVESTMENT		US $	980000

\+ Based on estimated prices

++ Including training on site

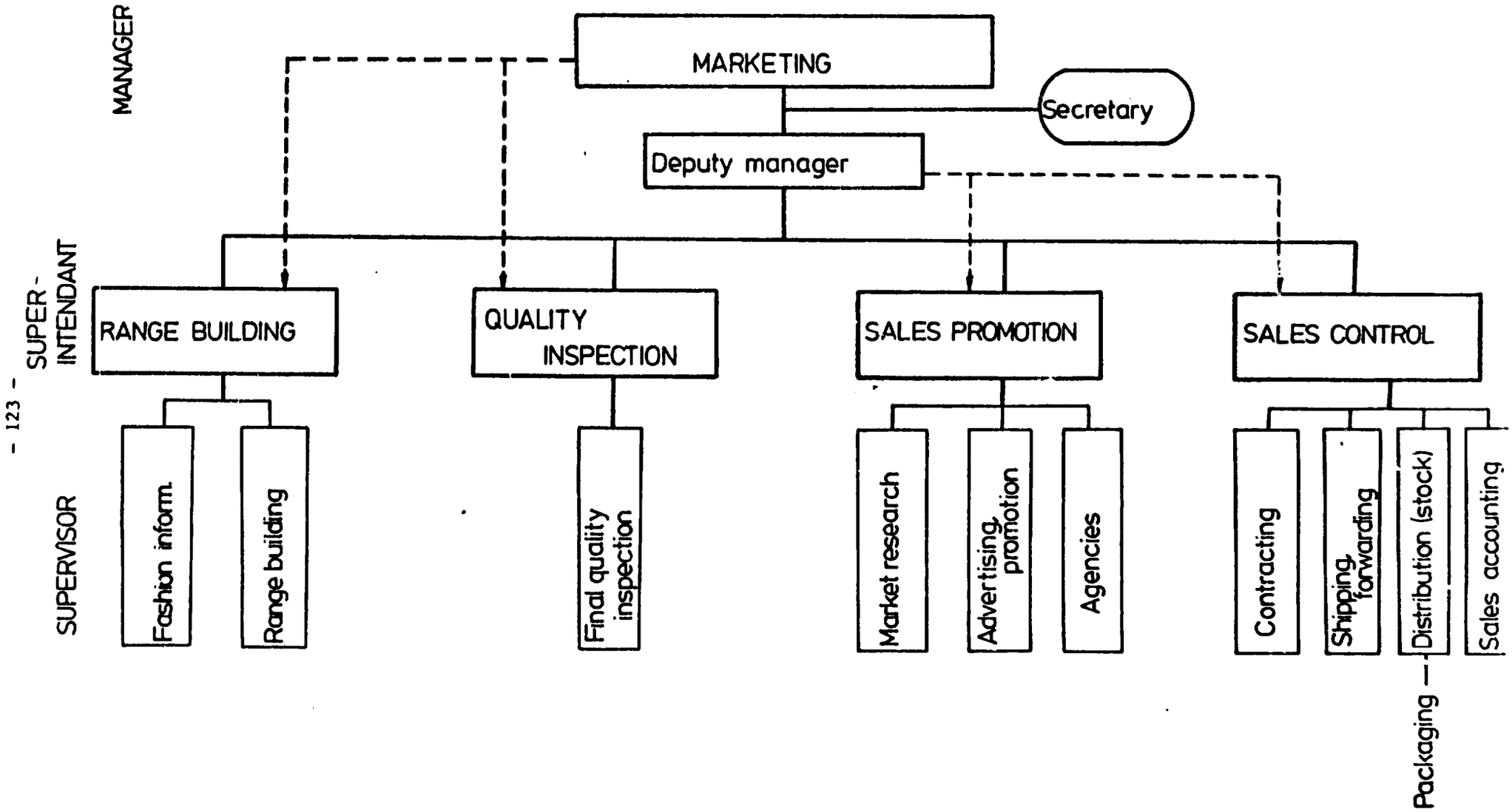

SUPER INTENDANT
SUPERVISOR
FORMAN
MANAGER
PRODUCTION CONTROL
Production planning
Production convol and accounting
TECHNOLOGY
Grading
Sample making
Patternmaking
Costing and time standards
Technology preparation
QUALITY CONTROL
In-plant quality control
Laboratory
Deputy manager
PRODUCTION
CUTTING
1 forman
Canvas and textile
3 formen
Upper leather
2 formen
Botton materials
COMPONENT MANUFACTURING
Insole/stiffener
Leather heels
Sole
Leather, rubber, leather board
3 formen
Lace manufacturing
Soles
Lasts
Wooden components
Secretari
CLOSING
4 formen
Canvas uppers
2 formen
Moccasin uppers
5 formen
Shoe/sandal uppers
LASTING & MAKING
4 formen
Cemented
4 formen
PUR
PVC
Heel
Stitchdown/moccasin
Chemical technologies

Annex 12.1


FORMAN
SUPERVISOR
SUPER INTENDANT
MANAGER
Preventive maintenance
Investment control
Energetics
Spare parts stock
MAINTENANCE PLANNING
Carpentry works
Building works
Electrical works
Plant maintenance
Mechanics
Electric/pneumatic
Garages
CIVIL WORKS
MAINTENANCE Chief Engineer
Deputy chief eng.
Cutting and component man.
Sewing machines
Lasting/making machines
Moulding machines
Factory mechanics
EQUIPMENT
Secretary
Cutting die and toolmaking
Mechanical maintenance
Electric maintenance
Machine tools workshop
Workshop

Annex 12.2

Annex 12.3


MANAGER
MARKETING
Secretary
Deputy manager
SUPER-INTENDANT
RANGE BUILDING
QUALITY INSPECTION
SALES PROMOTION
SALES CONTROL
SUPERVISOR
Fashion inform.
Range building
Final quality inspection
Market research
Advertising, promotion
Agencies
Contracting
Shipping, forwarding
Distribution (stock)
Sales accounting
Packaging