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INDUSTRIAL DEVELOPMENT IN LESOTHO */

by

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PART A - SUMMARY

CHAPTER I of Part A surveys the recent trends in development, trade, and employment and concludes that between 1972/73 and 1977/78, G.D.P. advanced at an average rate of 2.9% in constant prices. Manufacturing output peaked in 1975/76 and by 1977/78 it had fallen back to the 1973/74 level. This appears to be borne out by a reduction in the number of people employed in manufacturing over the same period.

Exports are increasing at 2 to 3% per annum in constant prices, while the comparative figure for imports was 23% per annum.

Industrialisation has proceeded at a slower rate than planned, much of the development taking place in the public sector, while the private sector was less active than hoped for.

The import-export imbalance will rely heavily on industrial development to increase exports and reduce imports by import substitution.

CHAPTER II which deals with industrial policies and measures concludes that existing arrangements have failed to reach their objectives. The whole field of industrial and related policies and measures needs to be reviewed, including policies for development, financing, licencing, profit and pricing, marketing, foreign participation, management and labour, industrial efficiency, protection and incentives, and project selection criteria. These policy areas are discussed in general terms, but considerably more data and analysis is necessary to present authoritive recommendations. A whole series of policy proposals with the logic supporting them should be prepared for Government consideration.

This work would be undertaken by the proposed 'Industrial Development Centre' to be established in the Ministry of Commerce and Industry.

CHAPTER III : Looks at industrial planning and programming as an integral part of national economic planning.

Existing planning is primarily based on medium term Government budgets, but new inputs and thinking for the 3rd Development Plan now under preparation, should at least relate the budgets to detailed economic forecasts and lay the groundwork for integrated sectoral plans. Physical benchmarks and targets are necessary and based on these, new criteria for evaluation of progress should be established together with the basic routines for data collection.

It will be the function of industrial planning based on the Ministry of Commerce and Industry to initiate the required planning procedures in the industrial sector in line with the needs of the Central Planning Office.

CHAPTER IV : Deals with institutional arragnements for industrial promotion, and is a most important chapter.

A major institutional weakness is identified in that the Ministry of Commerce and Industry is not staffed to carry out the functions of industrial development, and proposals are made to rectify this.

It is proposed that an 'Industrial Development Centre' be established within the Ministry of Commerce and Industry, to be supported by expatriate experts, to engage on a permanent basis in planning, policy issues, and economic project evaluation. This 'Centre' would also in the first two years, contribute to industrial efficiency by providing specific industrial training and consulting assistance to manufacturing units, in addition to the training of Ministry staff.

It is envisaged that eventually the functions of industrial training and industrial consultancy would be taken over by a separately constituted Industrial Management Institute.

It is also proposed that LNDC be strengthened by the provision of well experienced businessman with a knowledge of industrial investment and the control of industrial operations to provide council at all levels, and monitor progress in the weaker areas. He would be a financial and business advisor reporting directly to the Managing Director.

Further assistance to LNDC is proposed to advise on the development of industrial estates and extension services likely to be required and considered to be an essential step in promoting Basotho entrepreneurship.

The question of the Lesotho Bank undertaking development bank functions is raised for consideration.

INDUSTRIAL DEVELOPMENT IN LESOTHO

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INDUSTRIAL DEVELOPMENT IN LESOTHO

Summary and Recommendations

It is an important historical fact that the people of Lesotho deprived of their earlier land ownership and compressed into a small land area, have been unable in recent years to raise agricultural production above subsistence level. It is also a historical fact of equal importance that the geological formation of land has not been generous to Lesotho in the distribution of mineral resources on which to base a manufacturing industry, or to provide exports which would give foreign exchange to develop the country.

The two major natural resources are its scenic beauty and the resourcefulness of its people who for 150 years under economic pressure, have left their land and homes to seek arduous employment elsewhere to support their families.

No matter what the difficulties and constraints may be, Lesotho has no alternative but to persist in its efforts to derive the maximum benefits from both agriculture and industry, knowing that neither one nor the other will provide the benefits that would result from a rich oilstrike or a doubling of the area of fertile land. Lesotho will develop in the longer run by its own efforts - by the will and determination of its Government and by the efforts of its people.

Industrial development in African countries has proceeded rapidly or slowly, since independence depending on the resources available, but in every case political, economic and social problems have arisen, and Lesotho with few resources must expect disappointments in its early years of development.

Lesotho's industry is in a very early stage of development, the oldest manufacturing enterprises having started production in 1969. Consequently, it has not been possible for an adequate number of Basotho to accumulate that kind of long-term experience so essential for profitable industrial production and for industrial growth. There is a shortage of Basotho managers and supervisors, and top management in the larger enterprises is mainly foreigners.

Another consequence is that all undertakings are rather small. Of 44 enterprises in the manufacturing and construction sectors, 14 employed less than 20 people in 1975/76, 20 employed between 21 and 100 people, and only 10 employed more than 100 people (most of them in the construction sector).

Further, all firms are working isolated from each other, and there are no linkages between firms, no sub-contracting system, and no industrial complexes.

Production efficiency and profitability in many firms are rather low. Industrial discipline, the feeling for good product quality, and the understanding of the importance of good maintenance result from a long-term process of industrialization.

The social and industrial infrastructure has not yet been built up to a level required for industrial growth. Institutions are understaffed, service industries have not developed, consultancy services are insufficient, and there is no real capital market.

The economic situation in Lesotho has from the beginning been characterized by the fact that there is - and has always been - an acutely dualistic economy in Southern Africa. The regional centres of industrial growth have been concentrated in a few regions in South Africa, and industrial development in Lesotho is really a peripheral area.

In consequence, the competitive power of industrial undertakings is lower in Lesotho compared with firms in the RSA, and the industrial climate is less favourable than in the RSA.

There are other constraints: domestic raw materials are limited, and consequently production to a great extent has to be based on imported materials, there is no real labour market, transport is complicated and expensive, the supply of electricity is not stable, and communication by telephone sometimes unstable.

There are in the manufacturing sector, in January, 1979 about 30 enterprises employing less than 2 000 people. There appears to be a negative industrial growth, since in 1973/74, 39 enterprises were reported to employ 2,106 people in the manufacturing sector.

These problems should not be overstressed, because they are symptomatic of early industrial growth, but at the same time they must be faced squarely and action taken which in the fullness of time will give rise to a healthy industrial sector.

The Government of Lesotho mindful of the needs and the problems has requested that assistance be given by the United Nations Development Programme to identifying possible industrial projects and to review the industrial sector of the economy.

Industry is comprised fundamentally of a number of successful projects but industrial growth arises out of Government action and policies, from discreet and informed allocation of resources, from planning and programming and above all from the development and application of human resources.

Part A of this report deals with the overall aspects of industrial policies and measures, planning and programming and manpower development. In summary it may be said that the existing policies and measures have been successful in attracting Basotho and foreign investors into manufacturing industry only to a small extent and a re-appraisal is called for. The report indicates possible variations in the incentives offered under the Pioneer Industries Encouragement Act, but insists on the need for a detailed study of the results

of existing policies and measures, as a basis for policy changes and the preparation of both a short and a long term strategy. Industrial licencing and the basis on which licences are issued, is not contributing to the implementation of Government policy. The 'screening' of proposed projects and the calculation of 'added value' which looks at a project from the point of view of the economy instead of the entrepreneur, is considered to be an essential function of the Ministry of Commerce and Industry. It is suggested that the industry section of this Ministry be strengthened and given expatriate support to enable it to satisfactorily perform its functions. At the same time the Ministry would develop a capacity for systematic industrial planning.

Naturally, in planning industry, much emphasis has been placed on creating employment, with too little attention to the basic requirement that each industry must be financially viable. The institutional arrangements for industrial promotion are reviewed in the report.

The two main industrial development institutions, Lesotho National Development Corporation (LNDC) and Basotho Enterprises Development Corporation (BEDCO) have suffered the usual reverses experienced by this kind of organisation in their early years. Both are showing appreciation of their problems and both are living with a legacy of past managerial weaknesses and staff shortages. The commercial facts of life are hard, and it will require two to three years of corrective action to develope a good 'track record' of existing manufacturing units, and to show that new investments promoted are well conceived, planned, implemented and operated.

To do this LNDC requires suitably experienced staff to promote, to appraise commercially to development bank standards, and to control and operate industrial ventures with a high standard of management. This report submits for consideration a proposal that a well experienced industrialist with experience in all the relevant fields should be appointed in an advisory capacity to the Managing Director of LNDC to monitor performance in all these fields.

It is also considered that it would be advantageous for a second financial institution to be available to investors for development banking assistance, for those investors who would prefer not to deal with a government promotional institute in financial matters.

Note is taken that industrial management training and industrial consultancy are both urgently necessary and not specifically catered for, and a proposal is made that initially and temporarily these functions should be the first priority of the new "Industrial Development Centre" suggested to be established within the Ministry of Commerce and Industry.

Every developing country needs foreign private capital to assist in development because internally generated capital plus institutional loans and grants are not sufficient. Private capital will only be forthcoming, either domestic or foreign, if the investment is commercially attractive, but this does not necessarily mean maximising profit in the local enterprise. And so developing countries try to compete with each other by offering a 'package' of inducements, but none of these blandishments will succeed in attracting investors if the 'climate' for investment is not good, and the best advertisement is a good "track record" of existing investments.

Attention is drawn to the need to develop statistical data relative to industry and in particular to assist future planning and monitoring of performance.

These proposals are not thought to be a panacea for all the industrial problems but they do provide the technical arm essential to the identification of problems and create the mechanism for speedily bringing to the attention of senior officers of the Ministry of Commerce and Industry and the Ministry of Finance and Planning, matters of vital importance to the national welfare.

Part B of the report looks at the criteria for selecting industrial projects under changing conditions of the economy and in particular outlines the methodology of calculating "value added" and "domestic content", suggested to be used in Lesotho.

It goes on to review each industrial subsector and indicates projects which are worthy of closer analysis in the near future, singling out food manufacturing industries, leather industries, non-metallic mineral industries, metal industries, wearing apparel, chemical industries and textiles for concentration. Areas of further study and research are indicated throughout.
Arising from this review 45 project profiles have been prepared, which if implemented would require an investment of R.37 million in buildings, machinery, and equipment but excluding land, and a further R.10 million for working capital. Other projects 11 in number not covered by project profiles, are estimated to require R.20 million in capital equipment and R.5 million for working capital.

Part C presents a brief review of the economic background of Lesotho, looking at the history, economy, money, and banking, and employment. Of particular value to those concerned with industry is an extensive bibliography of publications available in Lesotho, all of which were studied and which contributed to background thinking for this report.

Part D indicates where it is recommended that foreign technical assistance would be beneficial to industrial development primarily on the institutional side but provision is specifically made for project studies on blankets and textiles / garments.
Briefly, the proposals cover major assistance to the Ministry of Commerce and Industry in building up an ability to carry out its functions, a transitional but urgent approach to industrial management training and industrial consultancy, a technical review of the needs for industrial estates, and at the appropriate time the establishment of a "Leather Products Centre".

Industrial development in Lesotho is at a critical stage. It is with reluctance that the recommendation for substantial foreign technical support is made, because for the size of the economy there is a heavy preponderance of foreign personnel already in place.

But the proposals in this report are strongly oriented towards training in respect of each operation and function, and it hoped that the Government can provide suitable staff to rapidly assimilate the techniques proposed to be used.

There are successful, profitable, productive manufacturing units in operation in Lesotho, and there is no doubt that the industrial sector can overcome its problems and rise above the present level of output, profitability and technology.

A more detailed summary of each of the four parts of the report will be found immediately after the contents pages of each Part, that is, Part A - page 13, Part B - page 70, Part C - page 192 and Part D - page 216

INDUSTRIAL DEVELOPMENT IN LESOTHO

PART A

INDUSTRIAL DEVELOPMENT

I - RECENT TRENDS IN INDUSTRIAL DEVELOPMENT, TRADE, AND EMPLOYMENT

1. Trends in National Product

The Gross Domestic Product at factor cost by industrial origin at 1972 constant prices for the period 1973/74 to 1977/78 is given in Table A-1. Although some of the figures may be questioned, the Gross Domestic Product at factor prices appears to have shown an annual increase of 2.9%. The value added in mining and quarrying has shown a steady increase as development of diamonds, clay deposits and crushed stone has taken place.
The figures for manufacturing however, seem to indicate a plateau rather than a rising trend. In agriculture, the dominant sector, a steady decline of not less than 5% per annum is recorded. Building and construction shows an increase of about 10% per annum and tourism an increase in the order of 7% per annum.

The indifferent growth of industry may be attributed to the constraints of market access, higher manufacturing costs arising from transport and energy costs, and shortage of managerial and technical staff with a consequent inability to take full advantage of the prevailing lower labour rates.

There are many factors contributing to the decline in agricultural output, amongst which are adverse weather, labour shortages, insufficient use of fertilisers and farm management.

The construction industry is following the pattern observed in many countries in the early stages of development, in line with rapidly increasing government capital expenditure.

Table A-2 is an extension of Table A-1, which enables trends in the structure of the National Income to be seen more clearly, by expressing the sectoral G.D.P'S as a percentage of the total for each year.

TABLE A-1

GROSS DOMESTIC PRODUCT (FACTOR COST)
BY INDUSTRIAL ORIGIN AT 1972 PRICES
1973/74-1977/78 (IN MILLIONS OF RAND)

	1973/74	1974/75	1975/76	1976/77	1977/78
Agriculture	33.3	29.0	28.5	28.5	21.8
Crops	(18.1)	(14.1)	(14.3)	(16.0)	(10.3)
Livestock	(15.2)	(14.9)	(14.2)	(12.5)	(11.5)
Mining and Quarrying	.2	.9	1.3	1.8	1.7
Manufacturing	1.7	2.6	2.7	1.8	1.5
Building and Construction	1.6	.8	2.0	3.5	7.5
Wholesale & Retail Trade	6.1	8.9	9.0	9.7	8.5
Tourism	1.9	2.0	3.3	4.0	5.0
Transport & Communications	1.6	1.7	1.6	1.9	2.0
Ownership of Dwellings	7.1	7.1	6.7	7.1	9.7
Central Government	6.2	5.2	7.0	7.5	10.7
Other	5.0	4.1	3.9	3.6	3.8
Gross Domestic Product (Factor Cost)	64.7	62.3	66.0	69.4	72.3
Indirect Taxes (Net)	6.9	8.1	11.5	16.0	18.9
Gross Domestic Product (Market Prices)	71.6	70.4	77.5	85.4	91.2
Current GDP at Factor Cost (1972: 62.2)	68.9	75.7	87.3	106.3	126.5

Based on

Sources: Kingdom of Lesotho Bureau of Statistics, National Accounts 1975, data provided by Lesotho Authorities, and I.M.F. estimates. Approximate sectoral contributions to GDP are derived from sectoral values in current prices; adjusted by the ratio of the total GDP at 1972 prices to the total GDP at current prices.

TABLE A-2

STRUCTURE OF NATIONAL INCOME

	1973/74	1974/75	1975/76	1976/77	1977/78
Agriculture	51.4	46.5	43.3	41.0	30.2
Crops	(28.0)	(22.6)	(21.7)	(23.0)	(14.3)
Livestock	(23.4)	(23.9)	(21.6)	(18.0)	(15.9)
Mining and Quarrying	.3	1.4	2.0	2.6	2.4
Manufacturing	2.6	4.2	3.9	2.6	2.1
Building and Construction	2.5	1.3	3.0	5.0	10.4
Wholesale & Retail Trade	9.4	14.3	13.6	14.0	11.8
Tourism	3.0	3.2	5.0	5.8	6.9
Transport & Communications	2.5	2.7	2.4	2.7	2.8
Ownership of Dwellings	11.0	11.4	10.3	10.2	13.4
Central Government	9.5	8.4	10.6	10.9	14.8
Other	7.8	6.6	5.9	5.2	5.2
Gross Domestic Product	100.	100.	100.	100.	100.

Source: Derived from Table A-1

2 - Review of Industrial Growth

(i) Several distinctive features have characterised industrial growth from 1970 onwards, when the first national development plan was formulated.

(a) Industrialisation has proceeded at a slower rate than planned, much of the development taking place in the public sector, while the private sector has been less active than hoped for.

(b) The range of industries are relatively disconnected and without linkages, which may be due to the very early stages of industrial development through which Lesotho is currently passing. A start has been made on light consumer goods manufacturing, primarily food processing, textiles, leatherware and similar industries, and there is scope for further development in this area. Mineral based industries are still in process of development, and although known resources are limited, the geological survey of the country will not be completed until 1981. Durable consumer goods manufacture with the exception of furniture has yet to take root and intermediate products industries such as steel, fertilisers and chemicals can have little justification at this time.

(c) Industrial growth seems to have been related to an ad hoc appreciation that a market advantage derives from establishing a particular industry in Lesotho, to serve either the domestic market including the tourist industry, or a demand in South Africa and latterly in Europe. Although studies of sales potential for particular products in all three of these markets are taking place, an exhaustive study has yet to be made, coupled to a critical analysis of incentives, tariff protection or import prohibition once domestic production facilities have been established. Import substitution although inhibited by a small domestic demand will continue to be a possible motivation for industrial promotion as growth in purchasing power advances.

(d) Capital for industry has derived from both foreign investors and the domestic public sector, but the domestic entrepreneurial class is in its initial development stage. Strenuous efforts are being made to increase the number and the skills of entrepreneurs, and increased efforts are being made to attract foreign capital. Although Lesotho is in the unusual position of being a net exporter of capital,, there is evidence that some industries are suffering from inadequate funds for both development and working capital. To a large extent reliance has been placed on the industrial sector to provide jobs in the modern sector but progress during the first half of the second National Plan 1975/76 to 1978 has been less than planned.

(e) Almost all industrial development has been concentrated in Maseru, and Maputsoe, but attention is being given to integrated rural development in which crafts and small industries could contribute.

It is unlikely that Lesotho could develop more than two industrial centres in the foreseeable future, which would be large enough to give stimulation to and induce increased per capita income in surrounding rural areas.

(f) While it is government policy to reduce its financial involvement in on-going industrial projects, and at the same time support new projects, extrication will be difficult unless the operating companies are shown to be financially viable. A concentrated effort is necessary to achieve this.

(ii) A major imbalance in the economy arises from the domicile of about one half of the country's able - bodied men in South Africa, mostly employed in the mining industry, attracted by wages almost double those paid in Lesotho. Much of the earnings of this labour force finds its way to Lesotho, increasing consumer demand, personal saving, and improving the standard of living of their familes. But since most of the workers are from rural areas, the resulting shortage of agricultural manpower hinders development, and there are serious social implications arising from divided familes.

The rapid increase in wages in South Africa is changing the consumer demand pattern and the response of domestic production has probably not been sufficiently fast and there are growing imports of consumer products, construction materials, and metal products.

(iii) Domestic prices are closely linked to inflation in South Africa but in Lesotho prices have risen faster than in South Africa, which is in some measure related to increased transport and electric power costs.

(iv) Industrialisation has not been accompanied by widespread imposition of tariffs, or quantitative import controls, although provision is made in the Customs Union of Southern Africa (CUSA) for member states to protect infant industries for periods up to 8 years.
In conjunction with other measures, the protection of industries both existing and planned will gain further attention.

3. Structure of Output and Value Added in Industry

Although the manufacturing industries are in total only about 30 in number, it has not been possible to obtain the basic data to make an assessment of industrial sectors in terms of output and value added, nor was total information on employment and capital investment available.

However, the format of Tables A-3 and A-4 are included to indicate the statistical data which might be gradually built up as a guide to the relative contribution of different types of industry to the economy. It is appreciated that several of the industrial categories included are not currently part of the Lesotho industrial spectrum but could become so at a future date.

The collection of industrial statistical data should be related to planning needs, in addition to the needs of other users.

TABLE A-3

THE STRUCTURE OF OUTPUT, VALUE ADDED EMPLOYMENT AND AND INVESTMENT BY INDUSTRIAL SECTORS

INDUSTRY	Value of Production	Value Added	Employment	Investment
	100	100	100	100
1. Food Manufacturing Industries				
2. Textile Industries				
3. Paper and Cardboard Industries				
4. Wearing Apparel Industries				
5. Non-Metallic Mineral Industries				
6. Petroleum and/or Coal				
7. Leather Industries				
8. Basic Metal Industries				
9. Metal Industries				
10. Transport Equipment Industries				
11. Rubber Industries				
12. Chemical Industries				
13. Wood & Furniture Industries				
14. Printing, Publishing & Allied Industries.				
15. Electrical Machinery and Equipment Industries				
16. Non-Electrical Machinery Industries				
17. Miscellaneous Manufacturing Industries				

TABLE A-4

LABOUR AND CAPITAL/OUTPUT RATIOS

INDUSTRY	Value Added per Wage Earner (Rands)	Ratio of fixed capital to Value Added
INDUSTRIAL SECTOR		
1. Food Manufacturing Industries		
2. Textile Industries		
3. Paper and Cardboard Industries		
4. Wearing Apparel Industries		
5. Non-Metallic Mineral Industries		
6. Petroleum and/or Coal		
7. Leather Industries		
8. Basic Metal Industries		
9. Metal Industries		
10. Transport Equipment Industries		
11. Rubber Industries		
12. Chemical Industries		
13. Wood & Furniture Industries		
14. Printing, Publishing & Allied Industries		
15. Electrical Machinery & Equipment Industries		
16. Non-Electrical Machinery Industry		
17. Miscellaneous Manufacturing Industry		
TOTAL Manufacturing		

4 - Export and Imports Trends

Exports at constant prices have shown only a 2 to 3% per annum increase since 1972, the recorded figure for 1972 being 6.1 million Rand and an estimated 6.9 million Rand in 1977. Unclassified exports listed under "Other" now amount to about 50% of total exports and some disaggregation of this figure is justified.

During the period 1974 to 1976, imports showed an anual rate of growth of about 47% per annum, based on the recorded figure of 82 million Rand in 1974 and 180 million Rand in 1977. Most of this increase can be attributed to consumer goods, as indicated in Table A-5. Foodstuff and livestock,' 'Beverages and tobacco', and 'Miscellaneous manufactured goods' are almost totally consumer goods, while 40% of manufactured goods classified by materials' and 30% of 'machinery and transport' equipment in the year 1976 were consumer goods. In all about 62% of recorded imports were consumer goods in 1976.

The ratio of export to GDP, although showing an increase in 1973/74 and '76 dropped back to about the 1972 level of 9.8% in 1975 and 1977. In constrast the ratio of import to GDP increased rapidly from 69% in 1972 to 169% in 1976 but appears to have levelled out in 1977.

It is clear that every export potential must be exploited to the full, and that the major responsibility for exports will lie with the industrial sector.

TABLE A-5

IMPORTS AND EXPORTS AT CONSTANT 1972 PRICES
BASED ON RECORDED FIGURES - (MILLION RAND)

EXPORTS	1972	1973	1974	1975	1976	1977*
1. Wool	2.0	3.0	2.9	1.1	1.1	1.5
2. Mohair	1.1	1.4	1.3	1.7	1.3	1.1
3. Diamonds	0.2	.3	.7	.4	.3	.1
4. Cattle	0.7	1.5	1.1	.2	.1	.1
5. Other Live Animals	0.3	.4	.3	.1		.0
6. Foodstuff	0.7	.3	.1	.8	1.2	.4
7. Other (Mainly Miscellaneous Manufactured Goods)	1.1	1.4	1.7	2.6	5.5	3.1
8. Total Exports	6.1	8.3	8.1	6.9	9.0	6.9
IMPORTS (INCLUDING DUTIES)						
9. Foodstuff and Livestock	10.1	15.0	14.0	16.6	24.7	-
10. Beverages and Tobacco	1.6	2.1	2.8	3.9	5.1	-
11. Crude Materials	0.5	.4	.4	.6	.8	-
12. Mineral Fuels & Lubricants	2.4	2.6	4.5	5.4	7.6	-
13. Animal & Vegetable Oils & Fats	0.4	.5	.7	.8	1.0	-
14. Chemicals	2.2	2.6	3.5	4.5	6.2	-
15. Manufactured Goods Classified by Materials	9.1	10.6	14.6	20.0	27.3	-
16. Machinery & Transport Equipment	5.0	6.5	6.9	9.7	14.8	
17. Miscellaneous Manufactured Goods	11.7	16.5	20.1	27.0	29.4	
18. TOTAL Imports	43.0	56.8	67.5	88.8	116.9	120.0

* Provisional

TABLE A-6

PERCENTAGES OF EXPORT TO LOCAL PRODUCTION
AND IMPORT TO AVAILABILITY 1972-1977
(PERCENTAGES)

	Export to Production	Import to Availability
1. Food Manufacturing Industries		
2. Textile Industries		
3. Paper and Cardboard Industries		
4. Wearing Apparel Industries		
5. Non-Metallic Mineral Industries		
6. Petroleum and/or Coal		
7. Leather Industries		
8. Basic Metal Industries		
9. Metal Industries		
10. Transport Equipment Industries		
11. Rubber Industries		
12. Chemical Industries		
13. Wood & Furniture Industries		
14. Printing, Publishing & Allied Industries		
15. Electrical Machinery and Equipment Industries		
16. Non-Electrical Machinery Industries		
17. Miscellaneous Manufacturing Industries		
TOTAL Manufacturing		

The highest share of import is comprised of consumer goods which were 65% in 1974, 65% in 1975 and 62% in 1976. Earlier import statistics were not comparable.

The next highest share is attributable to capital goods, which are showing a slow increase, - 6% in 1974, 7% in 1975, and 8% in 1976.

Construction materials have shown an increase from 2.0% in 1972, 2.2% in 1974 and 2.7% in 1975, to 2.7% in 1976.

Table 6 is intended to indicate the ratio of imports to total supply (production plus import), and the ratio of exports to local production by major industrial sectors, but it was not possible to complete the table because of lack of basic data.

5 - Employment

At the time of independence in 1966, it was estimated that manufacturing industry employed 550 people earning about R200,000 and contributing R300,000 to value added. By 1975/76 the corresponding figures were 1721 employed earning R1,162,000 and contributing R2,928,000 to value added.

Lesotho National Development Corporation (LNDC) The Government's main industrial development agency, made an employment survey of 25 manufacturing enterprises in June, 1978, and recorded 1399 full time Basotho, 34 Expatriates, and 80 part time employees, making a total of 1513 in all. It is estimated that LNDC assisted enterprises account for 90% of manufacturing output and consequently the total number of employees in the manufacturing sector in March, 1979 cannot exceed 2000.

From 1975 to 1978, the first three years of the second National Development Plan, 609 new jobs were created in manufacturing industry, or 14% of the target for the five year period 1975-1980.

The investment cost per job averaged R9000. Achievement of employment targets has lagged behind that of investment, implying that projects have been too capital intensive on average, or alternatively the original estimated cost per job calculations were unrealistic

II INDUSTRIAL POLICIES AND MEASURES

1. Introduction

The degree of emphasis on the role of the industrial sector in the process of economic development is limited by the available natural and human resources and the level of efficiency of their utilisation. Within this limitation the industrial sector contributes to national income and employment, diversification of the economy through export, integration of the sectors of the economy at a higher level of resource utilisation, it should contribute to income distribution but frequently does not do so, and it assists in regional development within the country and intra-regional co-operation.

Lesotho, up to now, is not rich in natural resources, and therefore all available resources must be used efficiently, and in particular those resources allocated to the development of industry.

Industrial policies are closely linked with and must harmonise with other related policies such as:-

(a) Industrial development is to be achieved through large, medium, and small units, and by provisions of industrial areas, industrial estates, village, rural and handicraft industries, depending on priorities to be given to relevant economic factors during succeeding time periods.

(b) Industrial financing policy through domestic and foreign investment, local and foreign credits, and equity/loan ratios previously defined as being permissible and conducive to profitable businesses at an acceptable commercial risk.

(c) Industrial licencing policy for securing planned and integrated development of different industrial sectors, following an established set of priorities.

(d) Industrial profit and pricing policy for stimulating export and to meet domestic needs,

(e) Industrial marketing policies for export promotion, import substitution, to improve the balance of payments,

(f) Industrial location / regional / intra-regional development,

(g) Policy for foreign participation and joint ventures,

(h) Industrial management / labour policies,

(i) Development through public sector / private sector and the balancing of the two to achieve pre-determined objectives,

(j) Research into the use of local raw materials,

(k) Policy on the establishment of local design and engineering consultancy services.

Many of the foregoing are interrelated, and implementation should be constantly reviewed to remedy deficiences and imbalances which may arise.

Industrial development in developing countries usually passes through the following four stages:-

i Local manufacture of consumer goods

ii " " of durable consumer goods

iii " " of intermediate goods

iv " " of capital goods

i Consumer Goods

Lesotho is currently engaged in the first stage of manufacturing consumer goods for which demands have already been developed through imports and for which additional demand will arise with improvement in the standard of living. In the first instance, these industries would be based on primary raw materials when available locally.

Lesotho is also entering into the second stage and is producing consumer goods based on imported raw materials or intermediate goods This second stage of development will take a considerable time, and it will require careful examination both in its diversification and expansion of production of each commodity, to ensure optimum use of resources and maximum national benefit.

ii Durable Consumer Goods

At the same time a limited range of durable consumer goods for which a small demand is currently being met through imports, will be identified as suitable for local manufacture. The manufacture of these goods will normally start with the assembly of completely knocked down (CKD) components, with a phased manufacturing of components locally. The raw materials required are generally semi-manufactured and even fully manufactured products have to be imported as intermediate goods for a considerable time.

iii Intermediate Goods

Normally goods which can be produced from local raw materials and consequently confer maximum value added would be undertaken first but Lesotho is poorly endowed with such raw materials. Next to be considered are those goods based on imported components or raw materials but which nevertheless give a high value added. Here too efforts should be made to produce the components or raw materials locally. Items of low value added, generally should not be considered.

iv Capital Goods

It is difficult to foresee the time when Lesotho might embark on the manufacture of capital goods, and for the present they could not be included as part of the industrial programme.

2. Government Role

The broad outline of the general economic and industrial policies was set out in the First National Development Plan (1970 - 1974).

The main points were as follows:-

(1) To attain an average annual rate of growth of gross domestic product of not less than 5% of which at least 1.9% was to derive from non-agricultural activities (industry, commerce, tourism).

(2) To promote as far as possible non-agricultural production activities, putting special emphasis on small-scale indigenous industries, ----

(3) To prepare the full exploitation of the country's water and mineral resources ----------

(4) To create 10,000 - 15,000 new employment opportunities, mainly in non-agricultural activities

It was estimated in 1967 that value added in manufacturing was R300,000 - about .7% of G.D.P, with employment at 550.

In the second plan (1975-1979), while continuing with the same general policy, the policy guidelines included the following:-

(1) Increase of 46% in total output (gross domestic product at factor cost)

(2) Expansion of non-agricultural output as rapidly as possible, with special emphasis on the development of indigenous industries and commerce.

(3) Development of water and mineral resources ----------

(4) Encouragement of private investment in industry.

(5) Expansion of employment opportunities to absorb a minimum of 30,000 persons out of the anticipated increase in the labour force. It was expected that most of the employment opportunities would arise in industry, commerce and tourism.

It was stated that - "While everything feasible will be done to foster the expansion of private enterprise, government will not hesitate to take a leading investment role".

Although these are early days in the development of industry in Lesotho, the private sector has shown only limited interest in investment in industry, and much of the investment to date has been made by the public sector. The objectives of the policy have been to create employment and to demonstrate to the private sector that industry in Lesotho can be profitable but employment opportunities have been disappointing and overall profitability cannot be considered satisfactory.

More recently a policy has been adopted that industrial units owned by the public sector should be sold to private investors when the opportunity arises. It seems probable that the process of selling off these industrial units may take several years and in the meantime every effort should be made to place these units on a sound business footing. Private investors are discouraged by obsolete equipment where used plant has been bought, by short payment periods, and by excessive payrolls.

3. Protection and Incentives

Both direct and indirect incentives are offered to foreign and to private investors in industry.

The major legislation providing incentives to investors is the Pioneer Industries Encouragement Act (1969) under which a Board may award to "Approved Manufacturers" either a 100% tax exemption up to 6 years duration or a generous range of deductions against taxable income. The budgetary implications of these awards are kept under review, and the Act was subject to amendment in 1977/78.

It is difficult to assess what contribution these tax concessions have made in attracting investors to Lesotho, for despite what appear to be reasonable tax allowances, private investment in industry has been slow.

In a consultants report dated June 1978 the reactions of a group of South African businessmen to possible investment in Lesotho were analysed, and only 45% of the correspondents considered that a tax holiday was important.

Basically investment is a business decision based on maximising profits, and if an investor receives better incentives elsewhere which in themselves tip the balance, resulting in higher net profits, the investor will take the better opportunity.

The possibility exists that incentives being given by South Africa to investors in designated development areas close to Lesotho, for example reduced transport rates, may be regarded as discriminating against Lesotho products.

In this report it is not being suggested that tax incentives for investment should be increased, but there is a need to learn whether what Lesotho is offering is indeed adequate.

The following variations in incentives may be considered under the pioneer status:-

(a) The time period for the tax holiday could be scaled in relation to the capital investment made, and may be considered up to ten years in certain cases.

(b) Assuming the maximum period under (a) to be 5 years, an additional year could be awarded where an industry will achieve a specified minimum local content.

(c) Losses incurred every year throughout the tax relief period could be allowed to be notionally calculated and aggregated as deduction in the post-pioneer period.

Normal company income tax is 37 1/2% of taxable income, accrued or received from sources within Lesotho, for which purpose the usual expenditure deductions are allowed.

Other indirect incentives include access to E.E.C markets, access to the South African market, and the provision of factory sites or factory buildings on a leasehold rental basis. Loan and equity participation may be arranged.

Other possible indirect approaches are discussed under Chapter IV which deals with institutional arrangements.

The Customs Union Agreement with South Africa, Botswana and Swaziland provides for the imposition of duties to protect new industries, but this has been little used todate. It also provides for the drawback of any customs duties paid within the four countries, in respect of goods subsequently exported outside the four countries but this too has not been made use of. Import and export prohibitions are also permissible for agricultural products, but not for industrial products.

4. Government Control

An important direct measure at the disposal of the Government in regulating and controlling industry and effecting its policies is through granting or refusing issuance of industrial licences. Every new industry is required to have a licence. Up to now permission has been given to practically all applications for the establishment of industrial units, and in the past the appraisal of projects from a marketing, technical, and financial viewpoint, appears to have been optimistic and economic / social appraisal has not been the normal practice.

It is recommended that the function of economic / social appraisal and checking that a project conforms with government industrial policies and industrial objectives of the National

Development Plan be undertaken by the Ministry of Commerce and Industry. For this purpose and for other purposes the Ministry staff will need to be strengthened, and attention is drawn to the chapter on "Institutional Arrangements for Industrial Promotion".

Industries in which foreign capital is involved should all be 'screened', joint venture agreements and other agreements studied, and provision made for the phasing out of expatriate employees. Provision should be made for the participation of Lesotho capital either at the outset or at a later date.

5. Industrial Licencing

(i) Limitations and disadvantages

(a) Free enterprise and competition are inhibited, particularly when imports are also restricted to assist local manufacture.

(b) To prevent 'cornering' of licences by manufacturers, licences could automatically expire after 6 months when no evidence of serious efforts to construct and start up, are apparent.

(c) 'Cornering' of capacity by existing manufacturers by expanding beyond the sanctioned capacity. Government would need to check on the installed capacity.

(d) An accurate assessment of market conditions present and future must be made by either the Ministry of Commerce and Industry or a Government Agency.

(ii) Industry coverage

(a) Banned industries

This would include industries where excess capacity may exist, or industries which would be contrary to established Government policies

(b) Key industries

This includes industries, the development of which are given priority by the Government in accordance with established Government policies and the requirements of the industrial plan.

(c) Merit industries

Those industries not considered as part of the national plan, but which may be included on their merits.

(iii) Conditions of licence issuance

(a) Submission of evidence of the technical and financial feasibility of the project

(b) Details of source of financing and the terms under which financing is secured.

(c) Terms and agreements on foreign collaboration.

(d) Location of plant to be agreed with the Ministry.

(e) Managerial and technical ability of the entrepreneurs.

(iv) Licencing of projects with foreign partners

The following principles may be used as a guide in considering projects with foreign partners.

(a) Encouraging foreign capital in capital intensive projects.

(b) Where Lesotho majority is maintained in the equity capital, foreign management may be allowed under contract for a specified period of time.

Where foreign interests hold a majority of the equity capital provision should be made for Lesotho participation in equity in the future.

(c) When manufacturing is dependent on imported intermediates emphasis should be given to creating local production of these items, and long term dependence on importation discouraged.

(d) Where foreign collaborators are to supply specialised equipment and machinery, the option should be left open to obtain this capital equipment from other sources.

(e) Encouragement should be given to the transfer of technical know-how, and provision made for the continuous introduction of new development, and at the same time the cost should not be excessive. However, provision should be made for obtaining technical know-how from alternative sources.

(f) Ensure that Lesotho executives and technicians are given maximum training, and agree a time scale for the replacement of expatriates as far as possible, to be subject to extension if necessary. The recruitment of suitably qualified Basotho for training should be Government assisted in view of the shortage of persons of this type.

(g) Technical collaboration agreements should not exceed 10 years duration, including any annual payments for royalty, know-how, patents, etc.

(h) There should not be any restriction imposed by foreign partners on the export of locally manufactured products.

Attention is drawn to the following relevant UNIDO publications

1. Guidelines for the acquisition of foreign technology in developing countries (sales No. E73.II.B1)

2. Manual on the establishment of industrial joint-venture agreements in developing countries (sales No. E71.II.B23).

6. Price Control

Price controls are notoriously difficult to apply and monitor, and although there are price controls on some basic agricultural products, no general attempt has been made to control the prices of industrial products.

The limited size of the industrial sector and the high percentage of industries controlled by or associated with Government agencies, means that the Government has access to price information.

7. Export Promotion

There have been no specific incentives to encourage exports, but the following possibilities could be given consideration.

(a) Deduction for tax purposes of promotion expenses overseas or in specific cases within Southern Africa.

(b) Accelerated depreciation allowance when exports are 20% of sales value

(c) An allowance related to the increase in exports

Proposals are under study for the establishment of an export financing scheme to provide capital to local companies who are required to provide credit to customers for an abnormally long period.

8 Regional Development and Industrial De-centralisation

There are no specific policies or measures for regional industrial development - most industries are located at Maseru but Maputsoe is being developed as a secondary centre. While there is a logical wish to spread the benefits of industrialisation to the country as a whole, it is unlikely that more than two industrial growth poles could be sustained in Lesotho. Clusters of industries remain as an isolated group with little regional impact and incapable of supporting the necessary industrial and urban infrastructural facilities.

This in no way prejudices the development of rural industries, and handicrafts

9. Industrial Efficiency

This section relates only to units of production which are in furtherance of an industrial policy which aims at establishing efficient production. It does not relate to those units established for social or political reasons, but it should be observed that in an economy endeavouring to attract foreign capital and foreign entrepreneurs, industries in this category should not be so numerous as to adversely affect the investment climate.

A strong policy of furthering industrial efficiency, results in a higher rate of growth in the industrial sector thus contributing more to national income, and through low prices and cost, stimulates demand for industrial products both domestically and for export.

The important causes of inefficient production of industrial establishments include one or more often a number of the following:- inadequate labour training, inefficient industrial organisation and management, lack of adequate working capital, high cost of marketing, high cost of raw material, discriminatory agreements with foreign organisations, and monopolistic production and marketing.

The existing policy measures and actions in promoting industrial development may be applied with flexibility including a time schedule for reduction of protective measures and incentives. The time schedule for each industry would be in accordance with a planned improvement in productivity. At the same time assistance may be offered for improving productivity in industry.

The following policy measures may be considered:-

(i) Tariff and other protection and promotion measures may be granted for a specified period with a provision for de-escalation.

(ii) Promoting efficiency in production units by offering assistance to industry for improving productivity. This might be achieved partially by using existing organisations, for example by better application of the facilities of the National University.

A new productivity centre may be established eventually, but as a first step towards the development of these services, an "Industrial Development Centre" established to strengthen the industry side of the Ministry of Commerce and Industry, could undertake the initial consultancy and training work within the framework of the Centre.

10. Monopoly Practices

In Lesotho, because of the smallness of the market, several industries may unavoidably be monopolies, and the question will arise as to whether existing plants should be encouraged to expand or whether new production units should be created. One option is to encourage the development of more than one production unit over a time horizon of say 10 years, where future demand indicates this to be possible. A monopoly regulatory machinery may be established to control prices and other monopolistic practices. The major function of such a regulatory body is to protect the consumer from excessive monopolistic practices while the policy measures adopted should not impede the flow of investment, and a 'fair' return on investment should be ensured.

11. Criteria for Economic Project Evaluation

There are many studies on economic project evaluation, the purpose of which is to make an assessment of the value of a project to the economy either in money value or as a ratio, to give a comparative rating of the projects under consideration.

Most of the industrial projects in Lesotho are of small to medium size, and static criteria relative to a single operating year should

be adequate for the day to day comparison of projects. Dynamic criteria relative to the estimated life of a project, using discounting techniques, are neither necessary nor practical when dealing with a number of small/medium enterprises.

It is suggested that calculations of value added as a percentage of the sales price, and the domestic content (domestic expenditures) as a percentage of the sales price could be a suitable basis for the economic rating of industrial projects. These would be based on the fifth operating year. 'Acceptable' minimum percentages of value added, and local content applicable to Lesotho would be arrived at after a series of calculations for specific projects but indicative values would be 30% and 50% respectively.

Other ratios to measure the use of resources to save foreign exchange, provide employment, contribute to company savings and 'protection' ratios may also be used.

Attention is drawn to the UNIDO publication - "Manual for the preparation of industrial feasibility studies", (Sales: E78.II.B.5), which deals with feasibility studies in general and has a chapter on financial and economic evaluation.

III - INDUSTRIAL PLANNING AND PROGRAMMING

1. Background of Overall Planning

Development planning, at least in concept, started in 1966 when Lesotho became an independent kingdom, but it was necessary to reorient Government staff and policies to the development needs of the country.

By 1969 the initial re-organisation allowed the preparation of the first five year development plan covering the period 1970/71 to 1974/75. During the first plan the Government succeeded in its declared objectives of strengthening the Central Bureau of Statistics, focussing the attention of the civil service on development needs, and reviewing salaries and wages in both the public and private sectors.

The Central Planning and Development Office, (CPDO) established in 1967 was re-organised and strengthened in 1974.

CPDO is charged with the preparation of long-and short- term plans, evaluation of proposed and ongoing projects, dialogue with donors, contact with the people, and research on development issues.

There are five sections under the supervision of the Director and his Deputy, each headed by a Senior Planning Officer. Three of the sections are concerned with activities in specific sectors of the economy: Agriculture, Industrial Resources and Economic Infrastructure, and Social Infrastructure. The staff of these sections maintain contact with the technical ministries and are responsible for all aspects of planning, project preparation operations, evaluation, monitoring, correspondence, co-ordination of meetings, donor visits, etc. relating to on-going and proposed development projects. Another section, Financial Resources and Economic Co-operation, is concerned with overall

programming matters in all sectors and is the focal point for relationships with donors. The fifth section, Research takes a broad view of development, maintaining a library and a data collection system, which can supply background information to the other sections. The planning staff * consists of twenty Basotho and eight expatriates (1.4).

Sectoral Planning Units were established in the Cabinet, and the Ministries of Agriculture, Works, Education, and Interior, but manpower limitations prevented similar units from being set up in other ministries.

The Second Five Year Development Plan (1975/76 to 1979/80) started with the advantage of knowing the problems which arose during the first plan, and specifically drew attention to the inadequate progress in building up institutions for development. The Central Planning Office was to be further strengthened to undertake additional studies, to support other organisations in project preparation, and to monitor projects and the overall plan.

The Central Bureau of Statistics was to be strengthened to undertake a new range of studies. Up to date it has not proved possible to set up a National Consultive Council between Government and the private sector on economic and social problems. Nor has the planned economic and social research unit within the CPDO become fully established.

Throughout, the Budget and Development Planning Committee (BDPC), has been the highest authority at the official level specifically concerned with development activities. The Senior Permanent Secretary is the chairman and the link with the Cabinet, and the other members are the Permanent Secretaries of Planning, Finance, Works and Agriculture. The Committee finalises recommendations and development expenditures for submission by the Minister of Finance for Cabinet approval.

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*Refer to the list of documents in Appendix C - 4

At the project level, officials of Planning and Finance combine in the Projects Committee, which recommends approval or non-acceptance of project proposals and possible funding.

The approach to the formulation of the second plan was essentially empirical. The key factors were the estimated volume of capital available from all sources for development expenditures, and the relationship between the development outlay and the increase in total production. Based on experience and evaluation of the first plan, allocations were made by the planning staff to the seven major sectors of the economy: Agriculture and Rural; Industry, Commerce and Tourism; Natural Resources; Economic Infrastructure; Education; other social infrastructure, and Government services.

No attempt was made to plan the optimum use of resources allocated to each sector, either by a crude programming based on expert judgement or by cost-benefit calculation. Projects have tended to be hurriedly prepared following an indication of donor interest. It is reported that in some sectors capital investment has been related to some quantitative assessment of proposed investments, but this is not the case in the industrial sector.

There appears to be no clear indication of what might be considered "core" projects, which are not to be affected by any change in the availability of resources e.g. the integrated programme for rural development, industrial development in the private sector, primary education, and health. These are distinct from "non-core" projects which might include mining, roads, airports, hotels etc.

Implementation

Investment during the first plan at 85% of planned investment and some 8000 jobs created as compared with 10,000- 15,000 planned was an acceptable performance.

However, studies made at the end of the second year of the second plan indicated a serious shortfall in both investment and job creation, and further, capital had not been available to start new projects and to-refinance problem projects should this be desirable.

Evaluation of performance and national progress is on an ad hoc basic and largely related to annual budgetary comparisons. For example what progress is being made in bringing electricity to small towns as compared with planned installations, and what percentage of the population is served? How much of the investment in each sector is going into infrastructure which may not contribute to national output for some years? The availability of technical staff is no doubt a constraint when endeavouring to make a measurement of the success of investment.

2. Planning and Programming the Industrial Sector

The second plan objectives for the industrial sector are:-

The creation of 4500 new jobs in manufacturing, not including rural industry and handicrafts.

The creation of 2500 jobs in construction and civil engineering

The promotion of small scale local industry.

The plan states that it is Government's policy to leave the development of manufacturing to the private sector, but if the private sector fails to move quickly, Government will not hesitate to take the initiative itself.

It is suggested that, as important as job creation is, individual industries must contribute to national well being. The main objective could be:-

" To develop and expand those industries which will contribute to a maximum increase in the national income"

Secondary objectives could be:-
"To increase employment opportunities"

"To realise foreign exchange savings"

"Improve income distribution"

To increase employment opportunities requires a high rate of investment in small and medium sized industries, both in expansions and new industries. The main objective implies that projects must be ranked in order of contribution to value added, that they will be the subject of skilled financial appraisal, and operating efficiency will be maximised.

3. Evaluation

The necessary data for evaluation performance in the industrial sector does not appear to be available in the Central Planning Office. At minimum, the output in volume and money terms for each factory on a year by year basis should be available together with any changes in the capital structure. For new investments, a breakdown of credits granted under the following expenditure centres would provide a measure of performance against planned targets.

(a) Assistance to private industry

(b) Investment in existing public industries and commercial enterprises

(c) New public investment

(d) Long term credit to private industries

4. The Machinery for Planning

The machinery for planning as outlined in the second plan, would be adequate if the planning bureaux in the ministries , were

staffed and trained, if the central planning office was up to strength, and the bureau of statistics likewise.

However, there is a need for a review of the definition of the responsibility and authority of executive planning units and their mutual relationship. The C.P.O. cannot exercise executive responsibility for the implementation of projects which rightly rests with the executing agencies, but supervision of the execution of projects could better be undertaken by a supervisory unit set up in the C.P.O. The functions of C.P.O. would be limited to formulating the aggregate plan and its targets, approving development projects and annual plans, and entrusting the respective public agencies with the task of execution, while maintaining supervision over the expenditures of the funds allocated to each department.

There is thus a clear-cut responsibility of the agencies for implementation of approved programmes, and to a large extent the preparation of sectoral targets, policies and programmes would be the work of the ministries. Depending on how well prepared and well staffed the ministries and functional departments are, their contribution can be large or small.

The proposal to appoint suitably qualified district development secretaries which unfortunately has not been possible, is seen as a vital link between C.P.O. and rural areas as a means of communicating the views and ideas of rural people. Eventually joint teams from C.P.O. with representatives from other ministries will be necessary to really study what can be done in rural area development.

IV - INSTITUTIONAL ARRANGEMENTS FOR INDUSTRIAL PROMOTION

1. General

The institutional arrangements for industrial promotion in Lesotho are all of recent origin and they will continue to be in a formulative development stage for some years.

It is fundamental that the policy body of each sector of the economy represented by a Government Ministry, with a Minister in the Cabinet, is staffed adequately to keep abreast of all domestic and external matters contributing to policy formulation. The industry sector of the Ministry of Commerce and Industry is staffed by three persons, and consequently much of the basic work relating to industry is done elsewhere.

The planning of industrial development which is a continuous exercise, has been undertaken by the Central Planning Unit, through its Industrial Resources division, and only when a new National Development Plan is under preparation is a foreign industrial planner sought to assist the Ministry of Commerce and Industry in the exercise.

Some of the essential functions of industrial promotion in its broader sense have yet to begin and other have only just started.

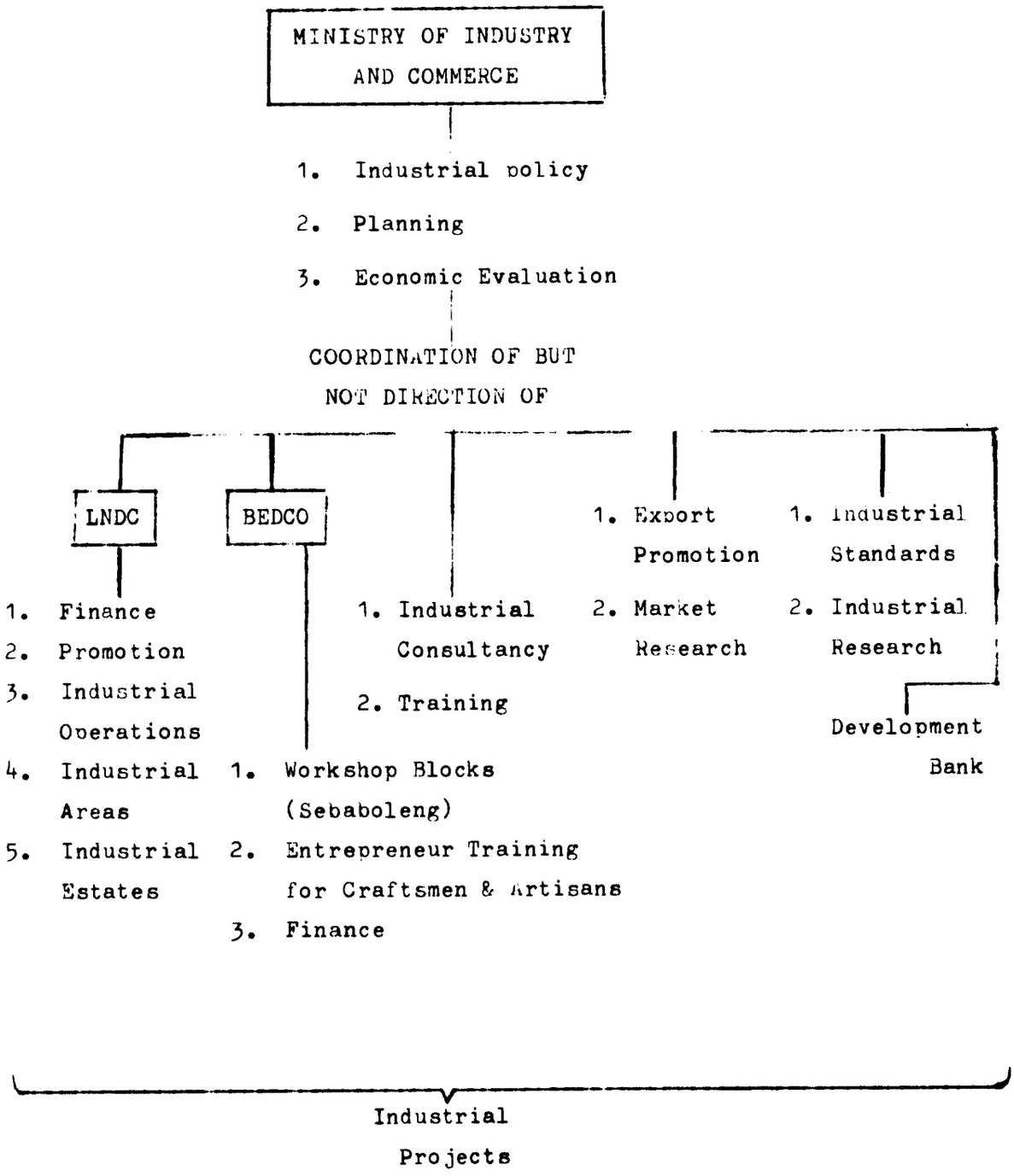
In this chapter these functions will be examined and suggestions put forward for consideration for their short and long term development.

One of the major institutional weaknesses has been the physical inability of the Ministry of Commerce and Industry to provide the 'core' training area for personnel, to staff the necessary agencies. In each developing country a "nursery" for future leaders in industrial development, will be found, from which it is understood that personnel will move out at the appropriate time. The Ministry of Industry and Commerce is well aware of this problem and they have sought to establish an Export Promotion

Centre, with the help of UNCTAD. Correctly, this is a part of the Ministry until the need for a separate organisation arises.

It is assumed that policies, planning and co-ordination as distinct from the executing functions of LNDC and BEDCO will be based on the Ministry, but of course, other administrative arrangements could be made to handle these functions.

A functional chart indicates those areas requiring further attention, and the need for action and the linkages between the functions will be more apparent as each institution is considered individually.


MINISTRY OF INDUSTRY AND COMMERCE
1. Industrial policy
2. Planning
3. Economic Evaluation
COORDINATION OF BUT NOT DIRECTION OF
LNDC
1. Finance
2. Promotion
3. Industrial Operations
4. Industrial Areas
5. Industrial Estates
BEDCO
1. Workshop Blocks (Sebaboleng)
2. Entrepreneur Training for Craftsmen & Artisans
3. Finance
1. Industrial Consultancy
2. Training
1. Export Promotion
2. Market Research
1. Industrial Standards
2. Industrial Research
Development Bank
Industrial Projects

2. Ministry of Commerce and Industry

The Ministry is primarily responsible for the coordination of industrial development activities, control and licensing of industrial establishments, industrial legislation, tariff and tax policy, and planning and budgeting industrial development activities.

The Ministry has not, however, been organised for and has not been given either the capacity or the capability to meet the needs of industry. The development functions of the Ministry need to be substantially strengthened.

(a) Policy

The Chapter entitled "Industrial Policies and Measures" provides an outline of the areas in which Ministry staff should be well informed and able to answer queries emanating from the Minister.

(b) Planning

The Chapter entitled "Industrial Planning and Programming" indicates the coverage and skills in these functions to be developed by Ministry staff, and this knowledge will assist when advising the Minister on policy measures.

(c) Economic Project Evaluation

This operation, also discussed in Part B Chapter I will keep Ministry staff fully informed on current projects, with the ability to relate the projects to planning priorities including capital investment, labour, value added etc.

Policy measures, planning and economic evaluation are all closely linked.

(d) Industrial Statistics

The Bureau of Statistics has been engaged on the initial assembly of industrial statistics, and the type and presentation of these should relate to the needs of both the Ministry of Commerce and Industry, and the Central Planning Office.

The design of a questionnaire to collect annual industrial statistics is closely related to the data required for project evaluation, planning and monitoring actual performance during a plan period.

(e) Export Promotion

An export promotion unit has been established within the Ministry with the assistance of UNCTAD, which initially was concerned with the institutional requirements. The second (current) phase of the project is mainly concerned with market research for specific products or companies, and the importance of reliable market data cannot be overestimated.

This unit, with UNCTAD support and information sources should make a significant contribution to knowledge on potential exports to the E.E.C., in the light of changing import regulations by the E.E.C.

The South African Market with its official and unofficial constraints, the interaction of the limited industrial development near or in the "Homelands", the de facto control of certain markets by powerful companies or associations, and end-user reactions to Lesotho-made products have yet to be studied.

The domestic market in Lesotho is small and although some products may be produced economically in small quantities, the real market for Lesotho's manufacturing industries is the South African market with growing possibilities for EEC markets, U.S.A., Canada, and possibly Japan.

The value of exports by destination in 1976 in thousand rand was estimated to be as follows (4.2)

	Total	South African Market	Other Export Markets
Handicraft	1110	470	640
Manufactures	3340	2440	900
Agricultural Products	1800	1880	
Diamonds	455	455	
	6705	5165	1540

(f) Proposed "Industrial Development"Centre

The Ministry of Commerce and Industry, because of the early stage of development, has not been able to build up staff, and it is in a relatively weak position as compared with the Central Planning Office and the industrial executing agencies - LNDC and BEDCO. It is not possible to contribute to industrial policy and planning without the requisite staff, and if this Ministry is to function, a start must be made.

Further, the economic evaluation of projects on a systematic basis is necessary, once the application of financial and other resources impose a choice of actions. It is, of course, possible to undertake such calculations at any point - at LNDC or at a Development Bank, but logically it should be located where it would support planning. It would also be an important contribution to upgrading the Ministry staff.

The industrial base is still small and separate organisations to provide the functions of export promotion, industrial consultancy and industrial training cannot be justified. But the need to exercise these functions, is apparent now. The requirement is immediate and urgent.

A small industrial technical unit is required to conduct on-going planning, economic project evaluation and upgrading of industrial efficiency through training and in-plant consulting assistance.

It may be considered that to incorporate these functions within the Ministry of Commerce and Industry at the outset would impose a strain on both the staff and office accomodation, and in that case the unit might possibly be located at the Planning Office with the intention of transferring it to Ministry as soon as conditions permit.

Local staff would need to be recruited to include persons with an industrial engineering background, industrial economists, or graduates in business administration, if they are available, and if they are not available then persons with the best available backgrounds would have to be trained. An industrial planner provided by UNIDO has joined the Ministry and three additional foreign experts would be required to help establish the "Industrial Development Centre". It must be appreciated that at this stage, this is a technical indentification of a need, and the question of funding would need to be taken up with appropriate organisations.

The closest liaison with the export promotion unit would be essential from the outset.

Apart from the specific functions already mentioned, the initial emphasis would be on the training of competent staff for the "Centre" itself and for other agencies of Government

(g) <u>Standards and Industrial Research</u>

The need for standards will become more important when industrial, agricultural and perhaps mine products are increasingly exported, to ensure that goods produced and exported are in accordance with specific standards. The checking that standards are adhered to would at that stage require laboratories to cover the various products.

It is not proposed to consider the planning of these facilities in this report but only to indicate that Lesotho might require in the not too distant future to provide standards and laboratory coverage for construction materials (cement blocks, ceramics) clothing, wool, hides and leather, chemical industries including drugs, and foodstuffs (flour, canned products).

Industrial research is a very broad term but as young as industry is in Lesotho, it was found necessary to establish a clay products centre to test the suitability of clays for heavy clay products manufacture. Other needs will arise.

3. Lesotho Bank - National Development Bank

The Lesotho Development Bank is not as yet engaged in development banking functions, but some foreign investors may prefer to deal with a bank on financial matters rather than with a direct government agency. From a development banking viewpoint, efficient project appraisal would be essential, and since this would normally be less optimistic than studies made by entrepreneurs, it would provide a second check on the viability of a project.

Although it was intended that the bank would undertake development financing activities, this has not been possible due to the non-availability of medium and long term funds. If such funds were to be made available the bank would require experienced competent staff to handle the business.

A United Nations expert was initially appointed to build up the development bank practice, but it appears that this was to be primarily oriented towards agriculture rather than industry.

This organisation could well be expanded to provide a second source of development finance for industry and perhaps be granted an I.F.C. line of credit.

Until the bank developed a staff to undertake project appraisal work, the bank could be assisted by the "Industrial Development Centre" which basically should have a competence in this field.

Additionally the Lesotho Bank was established to operate as a commercial bank with the object of mobilizing savings for investment in Lesotho, within the liquidity ratio requirements of the Government of Lesotho. The bank has in fact provided short term loans and overdraft facilities to the maximum extent possible under its charter. This activity has provided competition to the other commercial banks in Lesotho, both of which are now extending credit to local people to a much greater extent than prior to the establishment of the Lesotho Bank.

4. Lesotho National Development Corporation

(a) History

Lesotho National Development Corporation (LNDC), a Government owned company establisned in 1967 to promote and finance industrial, commercial, tourism and mining enterprises, is the principle institution for promotion and long term financing of large and medium scale enterprises in its field of operations.

It is the main channel for Government investment in industry through equity participation, loan guarantees, and provision of physical facilities at industrial areas in Maseru and Maputsoe.

In March 1977, the World Bank, reported on the findings of an earlier mission to support an IDA credit of US$ 2.5 million to the Government of Lesotho of which US$ 2.2 million was to be on-lent to LNDC. The report covered the history and the problems of LNDC and the policies, procedures, organisation, and portfolio.

In October 1977, the Managing Director of LNDC produced critical and analytical reports on "Investment Promotion" and "Operations Policy", of LNDC, indicating future corrective action.

The problems have been adequately identified and it is proposed merely to record the main findings before passing on to a discussion of some broader issues.

1. Shortage of both Basotho and expatriate staff

2. Shortage of working capital.

3. Inadequate appraisal of projects.

4. Inadequate follow up and control of operations.

(b) Organisation

There has been a major revision of the organisation and an influx of new staff, the immediate effect of which has been to strengthen the project appraisal department. The newly formed promotion department which includes company promotion in addition to project promotion, is not fully operational. The Operations Division which is charged with all investment follow-up is under strength and calls on the Finance Division and project appraisal staff to provide assistance.

Since the earlier weaknesses are well understood and a new organisation with new personnel is under formation, the management team has an opportunity to gradually bring success and efficiency into its various functions.

However, it is thought that a well experienced businessman with knowledge of industrial investment and the control of industrial operations, could provide valuable council at all levels, and monitor progress in the weaker areas. Such an appointment would be "advisory" rather than 'in line executive' and would be directly responsible to the Managing Director.

(c) Legal status and basic requirements

In forming LNDC as a semi-official body linked to central Government for determining objectives, finance, and programmes, Lesotho has opted for a structure, no doubt compatible with political and administrative considerations, which should provide the best possible opportunity for development.

Although LNDC have suffered some unfortunate but salutary experiences with foreign entrepreneurs and expatriate staff, there are two basic requirements in dealing with industrialists, which should be maintained:

1. Industrialists applying for assistance should be given the impression that the officials who deal with them are there solely to help them.

2. Industrialists should be assured that any information concerning the new industry , will never be passed on for any reason to any other official body, or to any other industrial company, that is, LNDC should act as a bank in this regard.

LNDC in its capacity of promotion has to be a supportor and advocate of a new project but in its capacity as a source of long term credit, it has to be a judge of the projects viability. This is by no means impossible of achievement but at least the functions of promotion and project appraisal should be kept independent and as far apart as possible, organisationally.

LNDC is a organisation connected to the Government, but legally distinct, and while the composition of it's Board of Directors does include some non-Government members, a representative of local banking interests could be useful addition.

(d) Promotion

General Promotion

General promotion propaganda is probably not very useful in the case of Lesotho, and the results are likely to be poor in relation to the high cost, because it is aimed at a large number of people whereas the people who may be interested are relatively few in number.

Therefore all efforts should be brought to bear on organisations and individuals who have to decide what investments would be profitable to them. Further, the industrial 'Track Record' must be improved, so that successful profitable enterprises can be the basis of a campaign to correct impressions gained by possible Basotho entrepreneurs and foreign entrepreneurs alike.

LNDC's "Investment Guide to Lesotho" is good publicity and excellent for handing to probable investors, although a shorter brochure outlining the Government's industrial strategy could be stimulating and be given wider circulation.

Specific Promotion

A decision to make an investmentin Lesotho will be determined primarily by commercial considerations and the first essential requirement is to study the market for a particular product, domestic, South Africa, and the European Common Market.

Initial research should concentrate on:-

(a) The industrial sub-sectors where potential markets exist within the trading areas.

(b) In which of these industrial sub-sectors, Lesotho seems to have an advantage.

When potential opportunities have been identified, contact could be made with foreign and local entrepreneurs who may be interested in making investments. When these groups have indicated their interest, and in co-operation with them, work could then start on market research, and the technical and financial assessment of projects, and of these,it is in the field of market research that LNDC could provide the most assistance.

(e) Project Planning and Implementation

LNDC's activity in project planning and implementation will normally be limited to providing advice on factory availability and site location, assistance with formalities, and financial assistance covering preparing, submitting and supporting

applications to whichever financial institutions the industrialist may choose for the loans needed for the project.

(f) Training

A Management Training Unit supported by the Swiss Government was established in LNDC in 1977 to offer training courses, mainly in business management. These courses are mostly related to accounting, financial management, and marketing, but all the courses are of very short duration. They are aimed at top management and senior accountants.

(g) Company operations

Operations in on-going enterprises are in many cases not profitable. In 1977 the World Bank studied 16 LNDC subsidiaries and 12 associates with particular reference to financial performance. For the year ended March 31,1976, only 4 out of 16 subsidiaries and 5 out of 12 associates showed profit. The unsatisfactory performance was said to be mainly due to poor and discontinuous management, inadequate capitalization, poor marketing programs and inadequate management information. (3.5)

A study of nine LNDC subsidiaries which was undertaken by a firm of consultants in April 1978 arrived at similar conclusions. Of the nine companies, no less than seven had an accumulated loss. Our findings are in line with those of the World Bank and the consultants, but we have also found some enterprises working under good management having a high production efficiency. Low utilization of production capacity is in many firms a cause for high production costs. The reason for this could be breakdown of machinery due to bad maintenance, inadequate supply of raw material, disturbances in supply of electricity, shortage of spare parts, and exceptional difficulties when it comes to repair and overhaul of machinery. Shortage of working capital in many firms makes it impossible to keep a safety stock of raw materials.

Industrial Areas, Industrial Estates and Workshop Blocks

For the purpose of this report the following definitions are made for the three terms, industrial areas, industrial estates and workshop blocks:-

(i) An industrial estate is a planned grouping of industries offering standard factory buildings erected in advance of demand, and a variety of services and facilities to the occupants. In developing countries its role is to promote small scale industry.

(ii) An industrial area is a tract of land offering only sites, provided with power, roads, water, sewerage etc. With other measures, the industrial area offers an inducement to all sizes of industry. It may contain within its total area, an industrial estate.

(iii) A workshop block with some common service facilities is a variation of the industrial estate used for the promotion of artisans and craftsmen.

LNDC is charged with the responsibility of developing industrial areas and industrial estates and a sister Government company, Basotho Enterprises Development Corporation (BEDCO) promotes workshop blocks as one of its many activities.

LNDC has opted to develop industrial areas on which factories to customers requirements and specifications are built, owned and rented by LNDC at 15% of the capital cost per annum. Shortage of capital and uncertainty of demand are given as the reasons for not developing an industrial estate incorporating standard types of pre-built factories, with some supporting services.

It is suggested that the industrial estate may be worthy of further consideration, bearing in mind that it can be constructed in phases after a careful assessment of market demand, and further that it is a strong incentive to local entrepreneurs to make their first venture into manufacturing. The availability of standard factories for rent or hire-purchase is, for people with limited financial resources,

a major incentive to engage in industrial operations. Such factories might be standardised in areas of 5000, 7500 and 10,000 square feet, or such areas as found to be most in demand, effecting economies in design and construction cost. They could be individual factories, duplex, (back to back), terrace type, or nest type factories in which a single building shell divided into 2 halls is divided into occupational areas with adjustable partitions.

The existence of industrial extension services is another inducement to entrepreneurship, since without this assistance, people with little or no technical and managerial knowledge would hesitate to take up an industrial occupation.

As light engineering industries are established, a demand will arise for common service facilities such as toolroom, a maintenance and repair shop, forging, casting and moulding, to serve not only the industrial estate but other factories in the industrial area.

The activities of BEDCO should not preclude LNDC from providing this important contribution to the promotion of small industries, because BEDCO's activities are directed mainly to operations just below small industry level.

5. Basotho Enterprises Development Corporation

BEDCO, established in 1975 to promote the establishment of Basotho owned small scale enterprises, was also reviewed by IDA and reported upon in March 1977. The Governments of Lesotho and of Canada have provided the capital inputs and a loan of US$ 0.3 million to the Lesotho Government, has been made by IDA for on-lending to BEDCO.

BEDCO is strongly training oriented, endeavouring to encourage artisans and craftsmen to develope into small scale entrepreneurs, and when they are sufficiently well established to move them to new premises in the main industrial areas.

BEDCO promotes the development of Basotho enterprises through one or a combination of several of the following activities:-

- Direct equity investments
- Provision of short, medium or long-term loans
- Provision of infrastructural facilities such as industrial estates, commercial centres and services for hire

- Provision of extension services through training, advice and guidance in management, marketing, accounting and other technical fields.

- Establishment and operation of new manufacturing projects for the purpose of training Basotho in new technical skills.

The entrepreneurs receive assistance from BEDCO staff personnel in various fields, such as marketing, raw materials supply, costing book-keeping and on-the-job-training.

The development of an industrial/commercial estate at Sebaboleng Maseru, has been the major investment in real estate. In this development the workshops, 24 in number, are of the "workshop block" type designed for the activities of artisans and craftsmen but not designed as factories, and there are eight commercial outlets. The estate is in its second stage of construction and will aftercompletion cover an area of 1600 m^2 for workshops, 670 m^2 for commercial activities and 500 m^2 for BEDCO Head Office. The total number employed on the estate is 430

A new building shell under construction could be used for small industries or for more small workshops subject to interior design decisions.

Four new small artisan/crafts centres are to be built in other areas of the country under the Canadian Aid Programme. Britain has also agreed to finance at a cost of R1.11 million, four artisan industry centres at Qacha's Nek, Quthing, Thaba-Tseka and Mokhotlong subject to the preparation of a suitable project document.

It has been stated that BEDCO is moving towards the expansion of existing Basotho owned industries and away from Basotho owned new industries, because suitable entrepreneurs could not be found. The question must be asked - why do Basotho entrepreneurs prefer to continue investment in real-estate and trading instead of venturing into industry, and what has to be done to change this outlook? BEDCO is trying to find, without much success 5 to 6 entrepreneurs per month who would contribute 25% of the equity capital in new projects.

It is interested in establishing a foundry, a machine shop and sheet metal work, which would more usually be located at an industrial estate, but in the absence of an industrial estate and given BEDCO's leaning towards training, at least a start is being made.

BEDCO is a very young organisation but within its field, active and progressive. Financial control of all operations are being established, and in this connection, estimates of the cost of training in each enterprise on an annual basis, would prove invaluable in assessing the viability of each enterprise as training subsidies are reduced and eventually cease.

BEDCO Trading, a wholly owned subsidiary buys bulk materials, and handles sales of textiles, shoes and small leather goods.

Additionally four subsidiary companies are operating in the fields of brickmaking, stone crushing, construction and coal distribution.

V. TECHNICAL TRAINING AND MANPOWER DEVELOPMENT

1. National Manpower Development Secretariat (NMDS)

Many governmental and educational organisations are involved in manpower development in Lesotho. Several are concerned with both training development and promotional activities. The coordination of all these activities is the responsibility of the National Manpower Development Secretariat. (NMDS). Some of the responsibilities of NMDS are:-

- to promote the quantitative and qualitative development of training within the economy;
- to monitor the current training demand and supply situation in all occupational fields;
- to assess future training needs in various fields;
- to keep records on training needs in various fields;
- to keep records on trainee entrants, dropouts, completions;
- to conduct statistical collection, analysis and research on training, carry out follow-up surveys, etc.
- to establish a central selection body for entry to formal institutions.

All formal training institutions and future fields of training development would eventually be co-ordinated by NMDS.

2. National University of Lesotho

The National University of Lesotho is providing a Business Studies Programme offering training to Certificate and Diploma levels. The Certificate course is designed mainly to prepare students for entry-level employment in small-scale industries. The emphasis in the Diploma programme is to prepare commercial employees for upgrading to supervisory positions. (1.10)

Institute of Extra Mural Studies - National University of Lesotho

This Institute has set up Business Training Courses in Maseru and at Quthing which provides a syllabus covering the subjects normally provided for junior management training. In all the Institute has provided training at nine different centres, and provides courses in 4 fields.

1. Supply and distribution of goods
2. Business management and techniques.
3. Financing, banking and credit facilities.
4. Personnel management and training.

It is noteworthy that no courses have been conducted in Maseru since 1977.

While this Institute is no doubt performing an essential service in bringing basic business studies to centres outside the capital city, it is not at the present time in a position to give training specifically oriented towards industry.

3. Lerotholi Technical Institute

Craftsman level training is provided by the Lerotholi Technical Institute, in electrical installation, basic electronics, carpentry and joinery; plumbing, pipefitting and sheetmetal automotive mechanics and maintenance fitting. A substantial number of the craftsmen have left to work in South Africa.

Plans are being laid to develop this unit into a polytechnic but it is not yet in a position to provide background training for industrial technicians.

4. Institute of Development Management

The Institute of Development Management, supported by the Canadian International Development Agency seryes Botswana, Lesotho and Swaziland, each country making an equal nominal annual contribution towards the operating costs.

The Institute organises courses and workshops in several fields including industry, directed mainly towards senior management It also undertakes consultancy activities in certain fields and some research studies.

In 1979, the Institute has organised six major programmes none of them specifically directed towards industry, although four of them have a relevancy.

(i) Development Management - one year

(ii) Personnel Management - 3 x 8 weeks (24)

(iii) Finance Management - 2 x 8 weeks (16)

(iv) Training Management -(3 x 2) + 3 weeks (9)

The programme on Finance Management could have particular interest for the Ministry of Commerce and Industry, LNDC and BEDCO.

For 1979, 43.2 weeks of courses are planned, 20% of which are to be conducted in Lesotho, and none are specifically concerned with industry, although some have a relevancy.

In 1977, 80.6 weeks of courses took place, 18% of which were conducted in Lesotho, and 32% could be said to have a specific interest to industry.

Industrial management training is not a major feature of the activities of the Institute.

5. Industrial Management Institute

It has been seen that none of the educational and training institutes in Lesotho are meeting the management training requirements of industry, but both LNDC and BEDCO are endeavouring to make a contribution in this field.

A suggestion has been made that an "Industrial Development Centre" be established at the Ministry of Commerce and Industry, and included in the initial terms of reference it is proposed that the unit provides both industrial management training and industrial consultancy. However, when these functions are established, and the demand and usefulness appreciated, they should be taken over by an institute established for this purpose.

It is envisaged that at the appropriate time a small industrial management institute should be established, with the functions set out in Appendix A-1. The planning and training of local staff for this institute would be an important initial task of the "Industrial Development Centre".

APPENDIX A-I

Functions of Industrial Management Institute

It has been suggested in the body of the report that the initial groundwork of providing consultancy to industrial establishments and industrial management training should be undertaken by an "Industrial Development Centre proposed to be built up within the Ministry of Commerce and Industry. At an appropriate time, an Industrial Management Institute - an agency of the Ministry would be established.

1. Consulting Assistance to Industry

Management and technical consulting assistance would be one of the main services of the Institute, provided to industry of any type or size in both the public and private sectors.

It involves studying and analysing the problems of a company, recommending improvements and assisting the management of the company to implement the proposed changes. There would be four main divisions to this service.

(a) Finance and accounting - Modern cost accounting systems using budgetary control and where advantageous standard costs would be established where these are lacking.

(b) Production engineering services - This is an analysis of production problems with the object of achieving higher productivity.

(c) Marketing and market research - Existing sales patterns and sales organisation are surveyed, together with a survey of market demand and competitive products. Recommendations are made to increase sales or to reduce cost of sales.

(d) Organisation and personnel administration - The overall organisation of a company and the motivation of the personnel are reviewed, to improve communications, lines of authority, and staff attitudes.

2. Management training and development

This is the second main service which would be offered by the Institute.

(a) In-Factory Training - This training would be conducted as part of the Institute's consulting service to an individual enterprise. It mainly consists of special training given to selected employees of the client's company related to the design and operation of new management systems. This training is given at the client's factory by the Institute's professional staff.

(b) Management Training Courses - Seminars and courses would be held, designed for middle management including accounting, production management, organisation, and marketing. The courses although intended primarily for industry would also be attended by trainee members of the Institute's staff and selected personnel from government agencies. Instructors would be drawn from the staff of the Institute and from outside specialists.

3. Financial Evaluation Service

The financial evaluation service would be provided to any institution granting industrial loans, to assist in the appraisal of applications for loans received from industrial concerns.

This service involves the study and preparation of a report on the economic viability, financial projections, and management capabilities.

The specialist staffing for this work would follow an identified demand for the service.

4. Recruitment

The Institution could be given responsibility for the recruitment, and perhaps part-financing of the training of technicians and management staff for industry over a five year period.

INDUSTRIAL DEVELOPMENT IN LESOTHO

PART B

DEVELOPMENT OF INDUSTRIAL SUB-SECTORS

I Project Identification

II Review and Development of Industrial Sub-Sectors

1. Food manufacturing industries
2. Leather industries
3. Non-metallic mineral industries
4. Metal industries
5. Wearing apparel
6. Chemical industries
7. Wood and furniture industries
8. Printing, publishing and allied industries
9. Textile industries
10. Rubber industries
11. Paper and cardboard industries
12. Basic metal industries
13. Transport industries

III Project Profiles Nos. 1-45

Appendix B-1 List of Lesotho industries (December 1978)

PART B - SUMMARY

CHAPTER I : Deals with the methodology of project identification including policy priority categories, selection criteria and industrial complex design. It proposes that value added and domestic content be the two main criteria for assessing the contribution made by each project to the economy.

CHAPTER II : Reviews the existing level of industrial development under 13 industrial sub-sector categories, (See Page 83) and indicates where specific projects might be considered. In all, 56 potential projects are identified and these are listed in pages 135, 136 and 137. A study of each industrial sub-sector in this way, not only indicates potential projects, but it brings into focus many areas where more precise studies are essential. The projects themselves are only the first indication of potential and each project requires further in depth study, including market analysis. Additional market research is shown to be necessary in many areas, and eight fields of study are listed on page 219. It is considered essential to develop local market research activities, but specific market studies using foreign experts are proposed for blankets and for textile/garments.

Leather industries are as yet little developed and although proposals are made for the establishment of a UNIDO supported leather centre, (See Page 96) there are two conditions precedent to its further consideration.

(a) The plans for an industrial tannery at Maseru and the plans for an abattoir, should be further advanced.

(b) Clarification of whether the monopoly apparently given to Lesotho Shoes (Pty) Ltd would preclude shoe production (400 pairs a day) at the proposed leather centre.

Particular attention is drawn to the discussions on sandstone production (Page 98), bricks (Page 102), gemstones (Page 104), agricultural implements (Page 108), wool processing (Page 125), and blanket manufacture (Page 126).

CHAPTER III : Consists solely of the project profiles, 45 in number, which provide first approximate figures of employment fixed capital and working capital. All figures are estimated, some from more reliable basic data than others, and they are adjusted to the costs likely to obtain in the 1980-82 period.

There is also a list of 11 projects for which it has not been possible to prepare project profiles, but for which estimated capital costs are provided.

I PROJECT IDENTIFICATION

I Policy Priority Categories

It is not intended to discuss policy priority categories as between one sector of the economy and another, but only priorities within the industrial sector.

(1) Firstly it should be a priority that a number of small and medium sized industries should be given preference over a single large industry of comparable total capital investment, because small and medium sized industries have a lower capital investment per worker.

(2) A venture, the products of which are planned to be exported either wholly or in part would take precedence over a venture to supply only the domestic market. In the case of products to be exported to South Africa, care should be taken that a net gain in exports will result.

(3) Projects coming within the category of "Core Projects", which are not to be affected by any change in the availability of resources would take precedence over "non core" projects. For example, in the industrial sector private sector projects might have priority over public sector projects.

Until such time as economic evaluation of projects has been established on a routine basis and minimum acceptable figures for value added and local content derived, policy guidelines could be formulated.

From the national economic viewpoint, those industries are most profitable which yield the highest value added at lowest resource cost. Very approximately, and merely to provide an indication of what is likely to occur, the following tentative initial groupings are proposed.

A. <u>High value added and relatively low prices</u>

Food processing
Leather industries
Construction materials
} Non-metallic mineral based industries

B. <u>Low value added and relatively low prices</u>

Textiles - cotton
Garments
Pharmaceuticals

Rolled Steel ?
Assembly operations
Vegetable oils

C. <u>High value added and relatively high prices</u>

Manufactured durable consumer goods
e.g. Space heaters, Air conditioners, etc.
Steel wire, nails, screws

D. <u>Low value added and relatively high prices</u>

Radio TV,
Paints
Refrigerators
Paper

Cement from clinker

The contribution of particular industries to national economic growth, per unit of resources used, diminishes from the top to the bottom of the table.

Selection Criteria

To some extent the establishment of policy priority categories are in themselves selection criteria, since they are industrial sub-sectors which are considered to be desirable developments in the economy. But even when ranking industries in some sort of a logical priority on the basis of a numerical assessment, it is not possible to encompass all criteria in a single numerical index.

It is not only a matter of providing foreign exchange or financing a project, but in Lesotho management skill, technical know-how and access to markets are probably more important criteria.

Evaluation is a guide and while a decision to go ahead with a project is a political decision; its success or failure is determined, not by political considerations, but by ensuring that it operates under conditions where success is possible.

It is proposed that the two main criteria to be used when ranking projects in the order of their contribution to the economy should be "value added" and "local content". From time to time other criteria may become equally important, for example protection ratios under a protectionist policy, or savings in foreign exchange, and the more usual criteria are included for reference.

In those indices making use of operating costs, a single year is selected when the plant has reached full output, and this particular year is assumed to represent the operating conditions throughout the plant life.

1. Use of Resources to save Foreign Exchange

(a) $\frac{\text{Annual Foreign Exchange Saving}}{\text{Total Capital Employed}}$ = Measure of the contribution the project makes to the saving of foreign exchange per unit of capital employed

(b) $\frac{\text{Annual Foreign Exchange Saving}}{\text{Foreign Capital Employed}}$ = Measure of the contribution the project makes to the saving of foreign exchange per unit of foreign capital employed.

2. Use of resources to provide employment.

$\frac{\text{Total Capital Employed}}{\text{Total number of employees}}$ = Capital employed per worker

3. Use of resources to provide surplus

$\frac{\text{Operating profit after interest but before tax}}{\text{Total capital employed}}$ = Measure of the contribution to savings per unit of capital employed. (This does not include employee savings)

4. Value Added

% Value added = $\frac{100 \times \text{Total Value Added}}{\text{Total Cost + Profit}}$

This is a simple ratio of the expenditures contributing to the value added as defined for the purpose of national accounts to the sale price, on the basis of a single "normal" operating year.

5. Domestic Content

% Domestic Content = $\frac{100 \times \text{Domestic Expenditures}}{\text{Total Cost + Profit}}$

This is a simple ratio of the total of domestic expenditures to the sale price on the basis of a single "normal" year.

6. Protection Ratios

A number of ratios have been suggest all of which make some comparison of exfactory prices with equivalent cif prices. This method has two main difficulties:-

(1) The derivation of the cif price from the foreign fob price(s) plus freight and insurance.

(2) Unstable market conditions which result in highly variable ratios.

$$\% \text{ Nominal Protection} = \left\{\frac{\text{Total of all import taxes}}{\text{Equivalent c.i.f. Prices}}\right\} 100$$

$$\% \text{ Net Nominal Protection} = \frac{\left\{\begin{matrix}\text{Total of all} \\ \text{Import Taxes}\end{matrix}\right\} - \left\{\begin{matrix}\text{Taxes on Imported} \\ \text{Component/Materials}\end{matrix}\right\}}{\text{Equivalent c.i.f. Prices}} 100$$

Normally the ex-factory price will have included the necessary taxes/duties in the raw materials and components to be incorporated in the product, and the minimum total protection required on the cif price is:-

$$\left\{\frac{\text{Ex-factory Price - c.i.f. Price}}{\text{c.i.f. Price}}\right\} 100$$

It is of course essential to calculate the expected tariff considered to be necessary, and subsequently the statutory tariff may be modified to meet changing conditions. However as a single criteria to assess the merits of a project relating to another, as a basis of decision to proceed or not to proceed, it is less informative than the static value added considered together with the static domestic content.

It would take time to build up comparative figures of value added and local content, although indicative figures for the latter could be obtained from discussions with manufacturers.

Schedule of Expenditures Included in Value Added, Domestic Content, and Foreign Exchange

	Total Cost	Value Added	Domestic Content	Foreign Exchange Costs
1. Raw material and bought out components				
a) Domestic	x		x	
b) Foreign	x			x
c) Duties on imported goods and components	x		x	
2 Consumable stores (includes packing)				
a) Domestic	x		x	
b) Foreign	x			x
c) Duties on imported consumable stores	x		x	
3. Repair components				
a) Domestic	x		x	
b) Foreign	x			x
c) Duties on repair components	x		x	
4. Wages/salaries including social benefits				
a) Lesotho	x	x	x	
b) Foreign	x	x		x
5. Salaries of staff including social benefits				
a) Lesotho	x	x	x	
b) Foreign	x	x		x
6. Insurance of all employees	x	x	x	

	Total Cost	Value Added	Domestic Content	Foreign Exchange Costs
7. Services				
a) Water	x		x	
b) Electricity, Fuel	x			x
8. Depreciation of Machinery				
a) Domestic	x	x	x	
b) Foreign	x	x		x
9. Depreciation of Buildings	x	x	x	
10. Royalty and Payments	x	x		x
11. Administration expenses (excluding staff)	x		x	
12. Selling expenses (excludes staff)				
a) Domestic	x	x	x	
b) Foreign	x			x
13. Interest				
a) Domestic loan	x	x	x	
b) Foreign loan	x	x		x
14. Rent	x	x	x	
15. Other Expenditure				
a) Domestic	x	x	x	
b) Foreign	x	x		x
16. Profit				
a) On Domestic Capital	x	x	x	
b) On Foreign Capital	x	x		x
Total				

3. Criteria and Objectives of Industrial Complex Design

One of the main objectives of this section of the report is to attempt to use industrial complexes as a means of project selection. An understanding of industrial complexes as a group of industrial activities with strong technological interdependences and the strength of forward and backward linkages between interdependent units can provide important guidelines.

Both time and the availability of data does not permit the application of imput-output techniques based on technical and trade co-efficients, nor the simultaneous approach based on a model which maximises inter-industry linkages.

The problem at this stage is to try to identify subsidiary, ancillary and auxiliary industries, as well as users and process industries, for a few leading industries selected on other grounds. For this purpose, technical flow diagrams and material balances are the techniques to be used, to illustrate and provide consistency checks rather than to identify new projects.

Project planning will therefore follow the normal sequence. Project identification on the basis of sectoral studies, existing proposals, intuition etc; project design and evaluation, and finally to check whether a project can be smoothly fitted into one of the few industrial complexes envisaged.

4. Design of Flow Charts for Industrial Complexes

The following charts provide broad details of the three industrial complexes chosen, - the agro-processing and food complex, the leather and textile complex, and the electrical - mechanical engineering complex.

The flow charts indicate the type of unit and its production capacity. The projects are further sub-divided into already existing projects, projects under construction, planning, or consideration, and new project proposals. The arrows between the projects indicate input-output linkages, and where possible the linkages in physical terms are given (Tons/Day or Tons/Year).

The types of projects are distinguished as follows:-

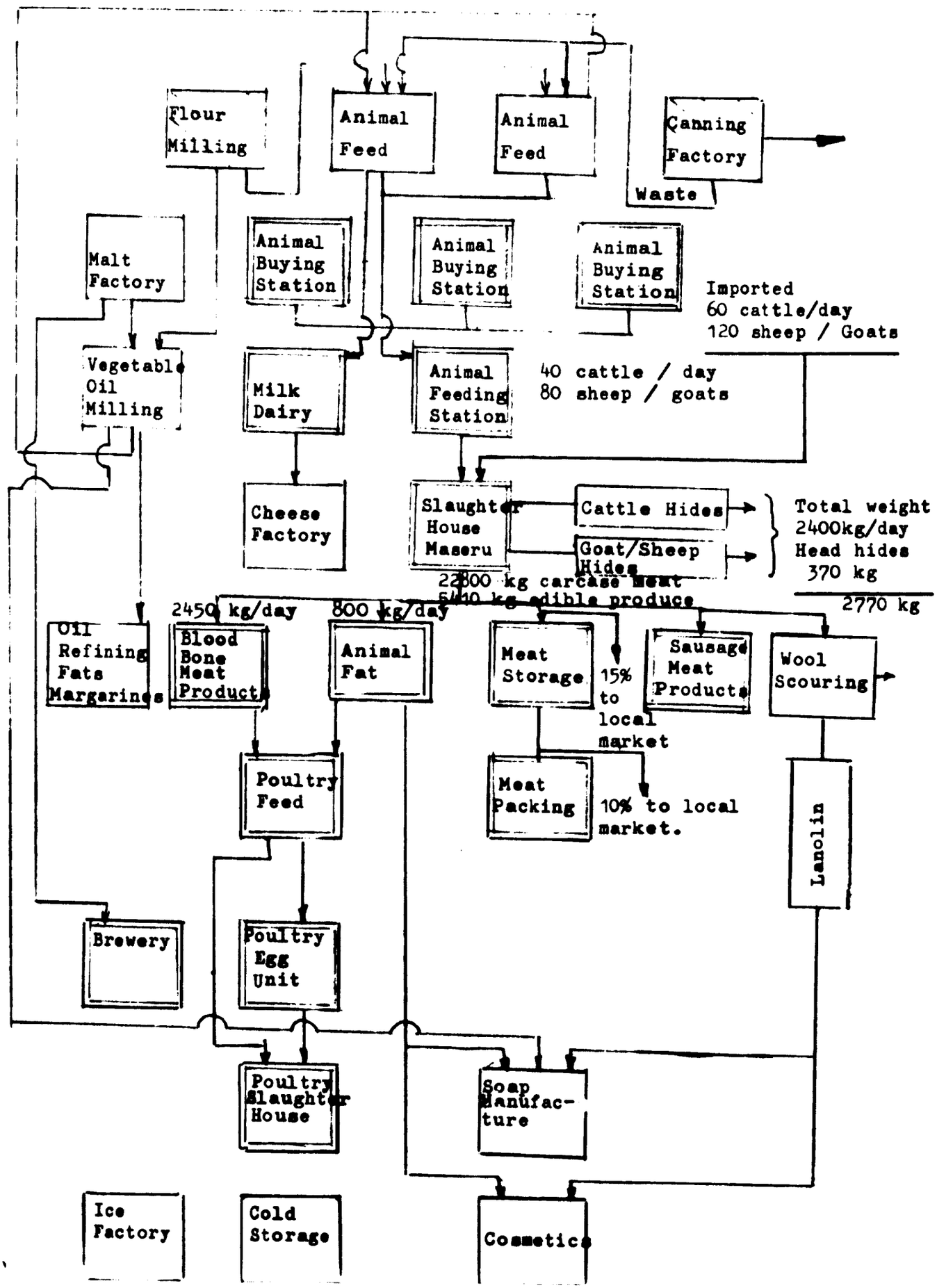
(a) Already existing project - Hatched

(b) Projects under construction, planning or consideration - Double framed

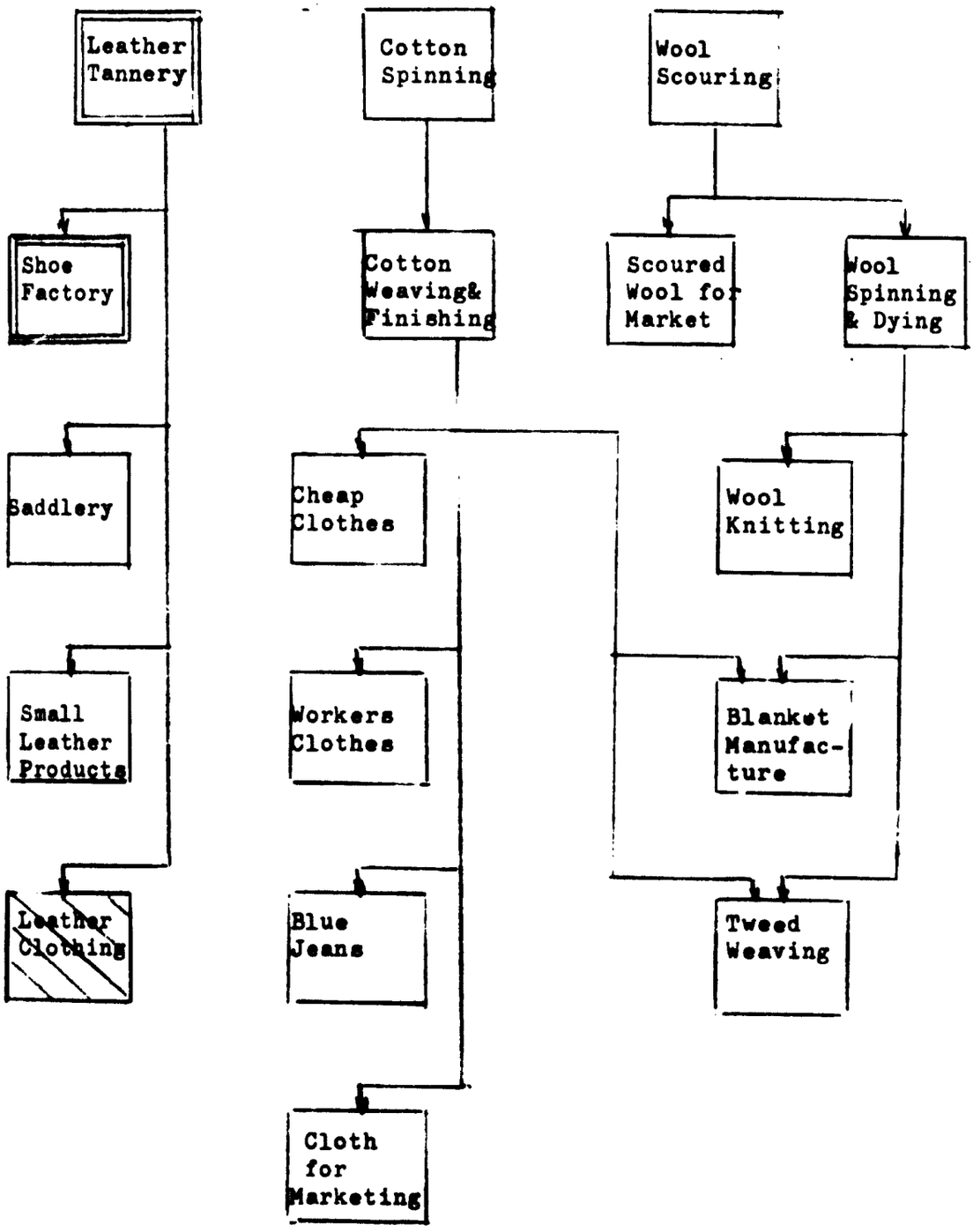
(c) New project proposals or project ideas - Single frame

Utilities including water, power and fuel have not been investigated.

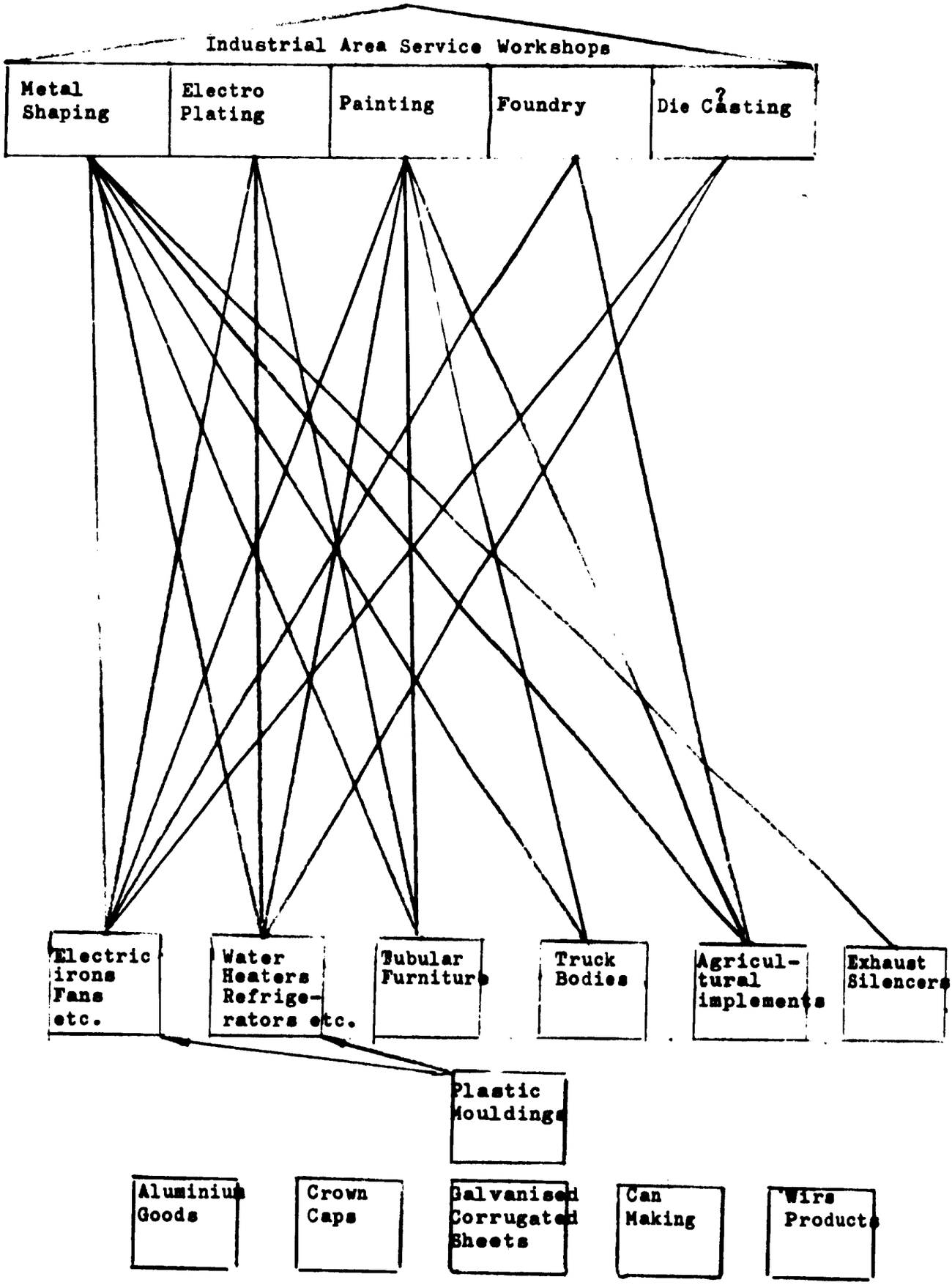
Agro-Processing and Food Complex (1)



Leather and Textile Complex (2)



Mechanical and Electrical Engineering Complex (3)



II - REVIEW AND DEVELOPMENT OF INDUSTRIAL SUB-SECTORS

In this chapter the possible areas of development are reviewed for each of the following industrial sub-sectors.

1. Food manufacturing industries
2. Leather industries
3. Non-metallic mineral industries
4. Metal industries
5. Wearing apparel
6. Chemical industries
7. Wood and furniture industries
8. Printing, publishing and allied industries
9. Textile industries
10. Rubber industries
11. Paper and cardboard industries
12. Basic metal industries
13. Transport industries

The status of current developments is given, possible new projects indicated and wherever possible project profiles are presented. The project profiles 45 in number, are intended as a first approximate guide to capital investment output, production costs, and personnel employed.

1. Food Manufacturing Industries

Animal Products

(a) Cattle, Sheep and Goats

Discussions on the establishment of an abattoir commenced in 1972 when the Danish Government offered to provide 20 million DK towards the cost of the project. In January, 1979 there are several unresolved problems.

(1) A feasibility study has yet to be prepared. The abattoir is a relatively small unit, designed to slaughter 100 heads of cattle and 200 sheep/goats per day, but even so, doubts have been expressed that it may be too big to handle locally produced livestock, and in a preliminary design study, it was assumed that 60% of the animals would be imported.

(2) A livestock procurement system is to be set up but a proposed feedlots programme may not be in line with either the market demand for meat products or a proposed cannery/processing line which is based on second grade meat.

(3) A meat marketing report is awaited.

(4) The processing method for inedible by-products is the subject of experiment.

Obviously an abattoir based on local animal husbandry or even should it be based on imported live animals, is a most desirable industry provided that:-

- it is shown to be profitable;
- good management is secured;
- the border remains open to animals movement.

A joint venture with an organization able to provide market outlets would be advantageous. This project should not be hurried forward until it has been adequately studied and co-ordinated despite the slowness of negotiations to-date.

(b) Poultry

It has been estimated that Lesotho in 1977 was importing 50% of its egg requirements and during the same year 269,000 day-old broiler chicks and about 286,000 carcases were imported. The expansion of the poultry industry has already been studied with a view to making the country self sufficient. Small scale egg production is planned to increase from 150,000 to 250,000 birds, and it is proposed to establish broiler farming and processing of 1.04 million birds annually rising to 1.56 million. Three processing plants are envisaged, the major plant at Maseru to handle 750,000 birds per annum and two small plants at Leribe and Mohale's Hoek each to handle 250,000 birds per annum. Although the co-ordinated egg-broiler system has been planned, a project profile (No. 1) for the 750,000 birds per annum unit has been prepared. Subject to a careful feasibility study the poultry industry would appear to be suitable for local businessmen to become involved.

(c) Pigs

In 1976 pig imports amounted to 219 head and it was estimated that 2690 head were slaughtered in the same year. A pig breeding unit housing 100 sows producing 1500 to 2000 piglets per annum is under design, and this should mature in 2 to 3 years time. At this stage it is not possible to consider the processing and packing of pork products, but the export market possibilities are worthy of examination. As a reference for animal feed requirements, the following figures are quoted.

	Feed requirements Tons per year
All progeny taken to bacon weight	500 - 550
" " " to light porker weight	300 - 350
" " sold as weaners	100 - 120

Dairy Produce

The Botšabelo Dairy Farm, close to Maseru has operated as an integrated production, processing, distribution, milk unit since 1973. The potential demand for dairy products has been examined in an LNDC report dated May 1978, proposals made for improving throughput of the farm, and attention drawn to the increasing demand for other milk products particularly butter and cheese.

The operation has been well studied and the project is being actively followed up.

Flour Milling

Lesotho Flour Mills, Maseru, is in course of construction, and based on 1976 estimated consumption a total of 105,612 equivalent tons of wheat were required to be processed to supply the domestic market, made up as follows:-

	Tons	
Domestic supply	35,027	
Imported		
Sifted meal	34,337	Equivalent tons of wheat
Bread flour	28,524	
Cake flour	954	
Bread	5,428	
Wheat unmilled	1,342	
	105,612	

Residues arising from milling are assumed to be 6% bran, 3% pollard and 1% screenings, which related to a throughput of 105,612 tons gives:-

Bran	6330	tons
Pollard	3170	tons
Screenings	1060	tons

While these residues may be used with the admixture of other products to make animal feeds, the possibility of extracting vegetable oil from the bran should be considered.

As a first step in the further consideration of these possibilities project profiles have been prepared for an animal feed mill unit (No. 2) and a plant for vegetable oil extraction (No. 3), since both are likely to be required eventually.

An unusual feature of this flour mill is the fact that it undertakes to pack for both wholesale and retail markets. For example both white and brown bread flour each have six packings - 65 kg hessian 50 kg cotton, 25 kg cotton, 12.5 kg cotton, 5 x 5 kg paper, 10 x 2.5 kg paper, and 25 x 1 kg paper. Incoming wheat is packed in 70 kg hessian bags. When the demand for each of these packs is known, the flour mill packing requirements could form the nucleus of both a bag making industry and a paper industry and this is discussed more fully under the appropriate industrial sub-sectors.

Bread, Cakes, Biscuits

(a) Bread

The Maseru district has a population of 270,000, and many rural retailers collect bread from Maseru, while many families make bread in their homes. In 1976, bread to the value of R1,027,000 was imported together with bread flour valued at R3,308,000. In Maseru there are two small bakeries and a large modern bakery designed to produce 900 loaves per hour. The demand for bread in the Maseru area should be able to support the three bakeries with little or no imports. The bread demand and existing production facilities should be surveyed in the main population areas of Leribe, Mafeteng, Berea, Mohale's Hoek, Quthing, Butha Buthe, Qacha's Nek, and Mokhotlong, with a view to minimising bread and flour imports. Project profiles for bakeries of 900 loaves per hour, 500 loaves and 200 loaves have been prepared. (Nos 4, 5 and 6)

Cakes and Biscuits

The use of flour for making cakes and biscuits is planned at only 3% of the flour used for bread making, but in 1976 the value of bread imported was only twice the value of imported biscuits, the latter amounting to R587,000.

Without undertaking a market study it is thought that a biscuits plant to produce a range of biscuits including cream crackers, marie, cream sandwich, and wafers, with a capacity of 5 tons per day could be sustained. Such a plant is given as a project profile. (No. 7)

Asparagus Production and Canning

The asparagus project has demonstrated the viability of growing, canning and exporting asparagus, together with the canning of beans in the off-season of nine months duration. Experimental growing and canning of other products is proceeding and these include baby carrots, baby corn, strawberries, peaches and tomatoes.

(a) Agriculture

The Thaba-Bosiu Rural Development Project has established asparagus production with the following planned production:

Year	Projected Production (Cans)		
	Tons	Cans	Cases
1977/78	9	18,714	780
1978/79	25	50,624	2110
1979/80	59	118,504	4938
1980/81	96	194,874	8120
1981/82	136	273,626	11401
1982/83	176	354,874	14786
1983/84	217	438,622	18276
1984/85	260	524,874	21870

It has also establish a pilot cannery but not a commercial cannery. Since asparagus harvesting takes place over a period of 3 months (65 working days), other crops must be processed for the remainder of the year.

Approximately 123 ha are planned to be cultivated by 615 growers by 1982/83. Within the project area there are about 6000 ha of soils suitable for asparagus, and an estimated 73,000 ha outside the project area.

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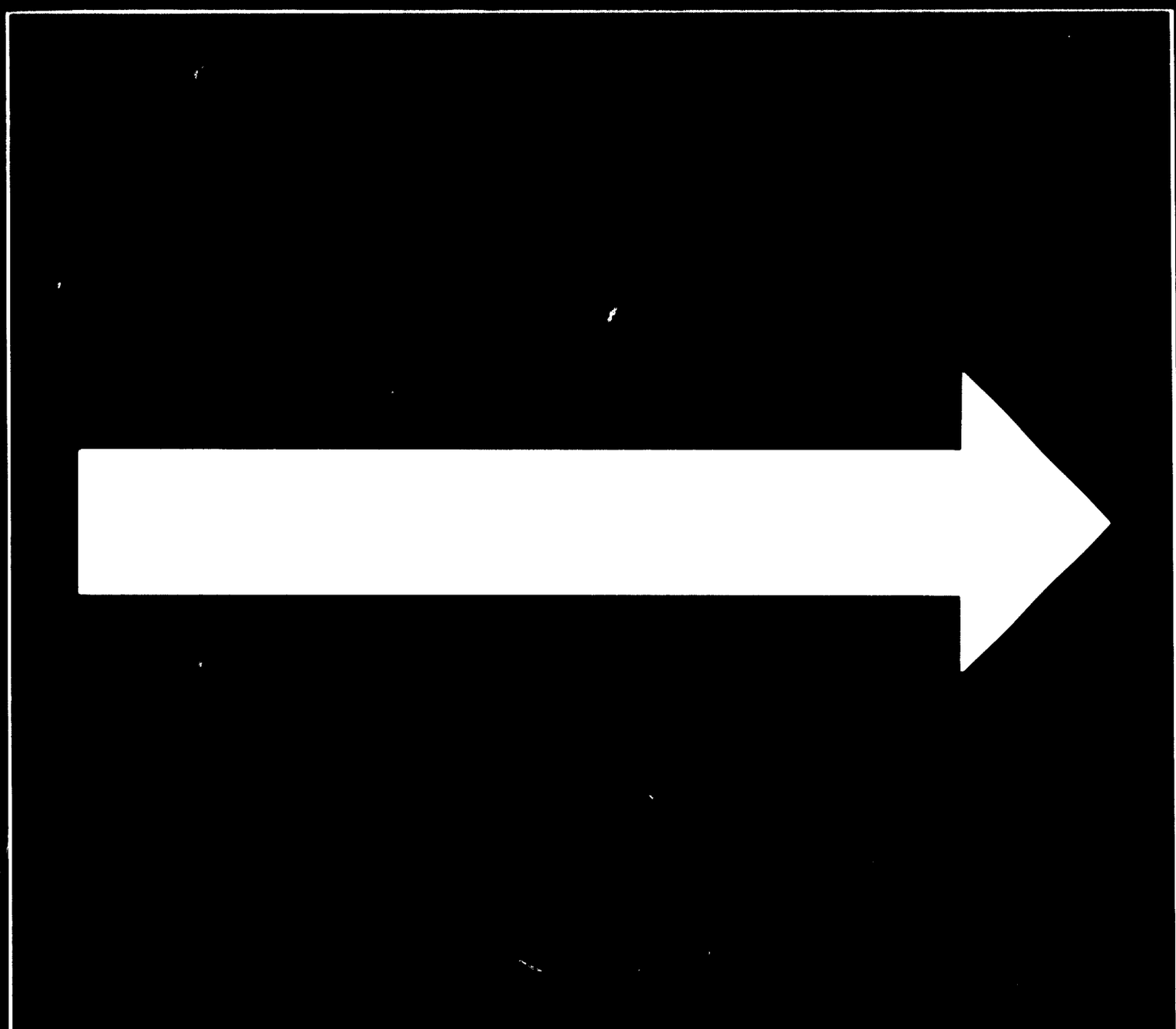

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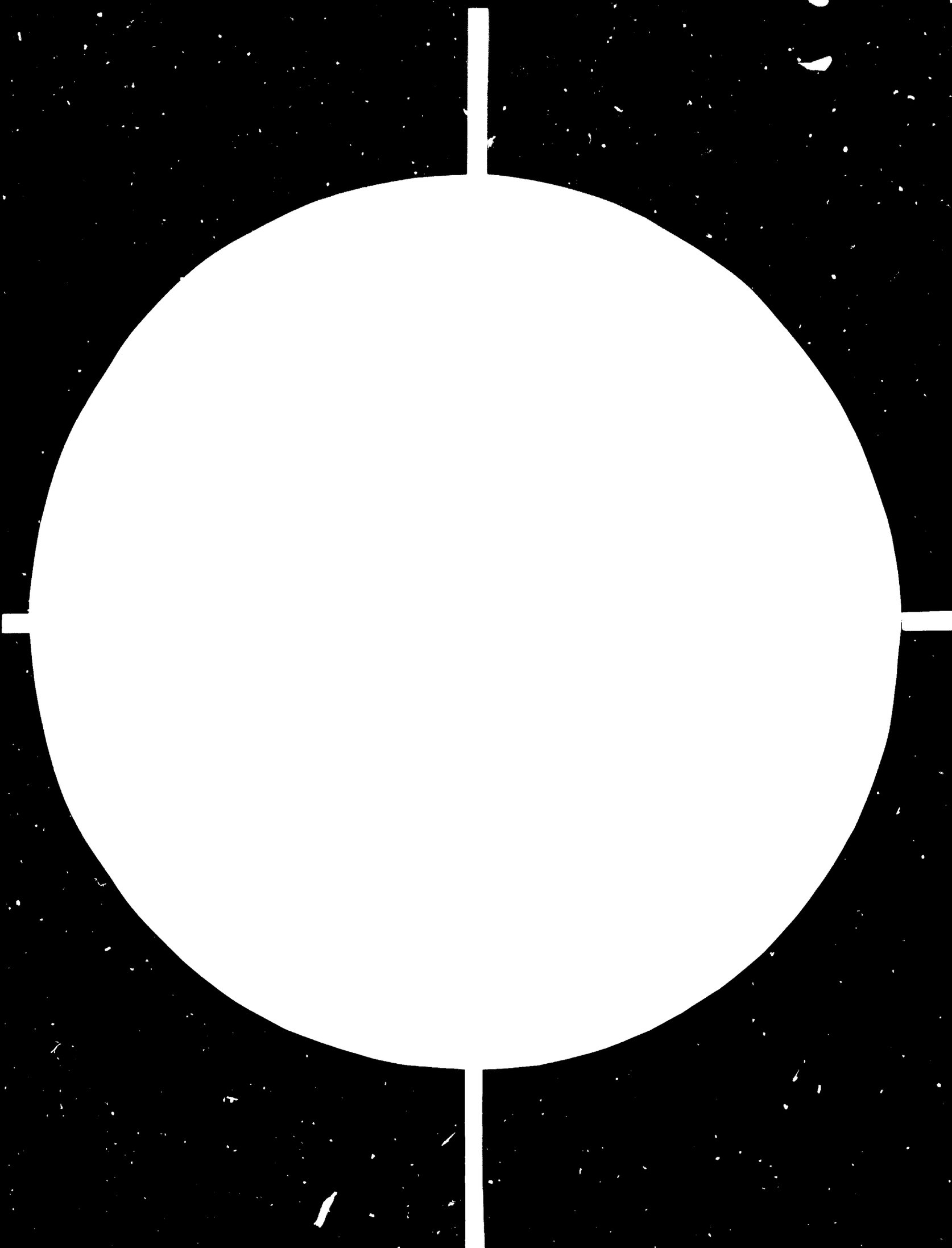
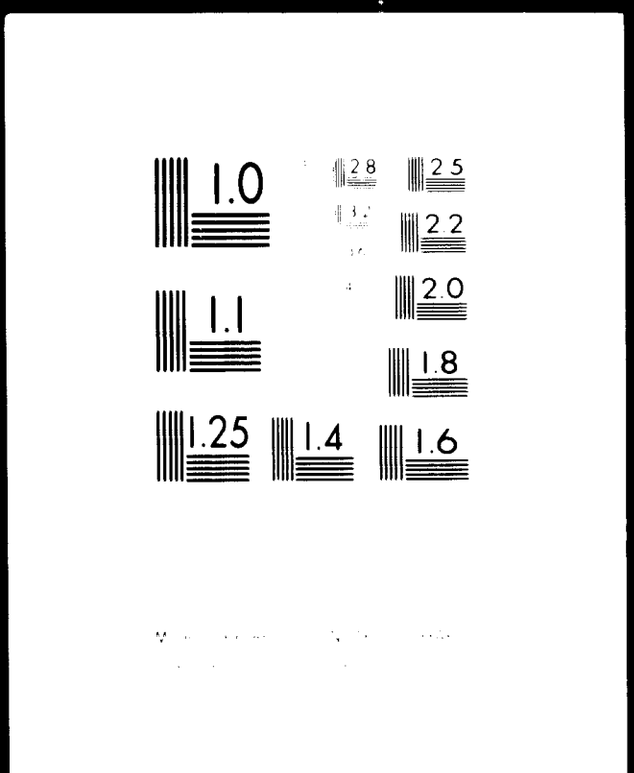




(b) The Cannery

According to an UNCDF consultants report dated 5.5.78 to make the pilot cannery capable of handling a maximum daily intake of about 1400 kg per shift, equivalent to 50 tons throughput during the harvesting season, a capital expenditure of R151,800 is required immediately. In the opinion of the consultants throughput would be met by operating on two shifts. A further R30,000 capital expenditure is envisaged by the consultants to be required by 1981.

The report estimates a loss of R44,400 in 1978/79 when processing 2000 cases of asparagus; 20,000 cases of beans and 49,000 cases of sundry other products. After the capital expenditure of R151,800, the plant would be capable of processing over 4000 cases of asparagus on a shift basis but it would still be losing about R38,000.

By operating more than one shift the report estimates, presumably for the year 1982/83, that when processing 15,000 cases of asparagus, 30,000 cases of beans, and 10,000 cases of other products, a profit of R27,000 would be achieved.

The report fails to present financial projections including annual profit and loss, cash flow and balance sheet, on a year by year basis, to indicate its commercial viability up to 1982/83. Very approximately the cannery should break-even in 1981/82, but prior to this and including 1978/79 it will have lost a further R100,000 approximately.

It must not be forgotten that this was, and still is, a pilot plant and there is now adequate data and experience, at least on the cannery operation to plan other commercial projects for the future.

The agriculturists, no doubt wish to continue research into the canning of products other than asparagus and beans and this should continue to be possible.

A more recent report proposes the expansion of the project to handle throughputs of 1 ton per hour and more, that is 700 cases an hour, for which purpose, in addition to the US $165,000 provided by UNCDF, a further US $583,000 is estimated to be required.

The time may well have arrived to consider a larger scale canning project, and initial studies on the source of inputs and market outlets, would indicate the practicability of the proposal, following which approaches could be made for managerial, technical and financial interest of one of the major canning companies. At that stage a safe financial structure would be agreed and realistic financial projections prepared.

Beer Production

The brewery to be established in Maseru is designed to produce 60,000 hecto litres per annum rising ultimately to 240,000 hecto litres of packaged lager beer. To produce 60,000 hecto litres will require 12,000 tons of malted barley, and quantities of sugar and hops or hop pellets.

It seems unlikely that barley would be cultivated in Lesotho in preference to wheat growing, but low protein brewers barley could be imported to make the malt, and approximately 15,000 tons would be required to produce 60,000 hecto litres of beer. A project profile for malt production has been prepared. (No. 8)

Packaging of the beer is to be returnable bottles of 500 mls and 340 mls capacity and cans, the capacity of which has yet to be decided. The estimated demand for each type of pack is not yet known, but Lesotho is reaching the stage where both a bottlemaking plant and a can making plant are likely to be viable, and these possibilities are discussed more fully under the appropriate industrial sub-sectors, and project profiles prepared.

Based on an analysis of the packs currently being sold in 1976, 30% of the market came in 340 ml cans, 30% in 450 ml cans, 15% in 340 ml non-returnable bottles and 19% in 750 ml bottles.

Fruit juices, Cordials and Aerated Minerals

In 1976 the imports of non-alcoholic beverages were valued at R1,404,000. According to a recent market forecast of consumption of non-alcoholic beverages, a growth rate of 10% per annum in real terms was forecast. It was also thought that 85%, of the soft drinks market was taken up by aerated minerals.

Aerated Minerals

Aerated minerals is a field in which international brand names play as important part, and since consumption in Lesotho is not less than 500,000 bottles per month, it is time to promote a factory in Lesotho. This does not necessarily need to be linked to the proposed brewery project.

Fruit Juices

The basic juices are orange, apple, grapes, in addition to tomato, all of which are available in South Africa. The possibility of importing juices in bulk and bottling them in Lesotho under Lesotho's own brand names should be investigated, and a closer determination of the domestic market made.

Cordials

Cordials and syrups bases may be imported and if not available at competitive prices from South Africa, they are available in the U.S.A. The profile of a small factory to undertake this operation has been prepared. (NO. 9).

2. Leather Industries

The development of the leather industry is in its earliest stages. In 1976, 34,000 cattle and 9000 sheep were imported and in the same year 1200 cattle and 2300 sheep and goats were exported. Again in 1976, hides and skins valued at R37,000 were imported and in the same year exports amounted to R64,000 in value.

In the same year leather and leather products, excluding footwear to the value of R733,000 were imported while footwear imports of all kinds, were valued at R6,633,000.

An abattoir to be constructed outside Maseru plans to slaughter 25,000 cattle and 50,000 sheep and goats, of which it is expected that 10,000 cattle and 20,000 sheep would be locally produced. The proportion of local animals could increase with time. In addition to animals slaughtered at Maseru abattoir, there will continue to be home slaughtered animals sold to butchers in the lowland towns.

Leather Production

It is assumed that animal husbandry for both the imported and the locally produced animals proceeding to the Maseru abattoir will be under controlled conditions, and that hides and skins will be of good grade.

Assuming an average of 25 square feet per hide and a 20% split of the hide, and an average of 5 square feet for sheep and goats the following quantities of leather could be produced.

25,000 Hides at 25 sq.ft.	=	625,000 sq.ft.
50,000 Skins at 5 sq.ft.	=	250,000 " "
20% Split Leather	=	125,000 " "
		1,000.000

A project profile for a tannery of this capacity has been prepared (No.10)

Rural Tanneries

In an ILO/UNIDO report dated October, 1975, suggestions were made that small curing units be stablished at each butchery or slaughterhouse, to collect, treat, and grade the hides and skins.

Production from the curing units would be collected at one of five central cottage tanneries proposed to be located at Roma, Maputsoe, Mohale's Hoek, Thaba and at Maseru (BEDCO). In the first instance these tanneries could be operated without the use of machinery.

Leather from these tanneries would be used for non-industrial leather goods (handicrafts) operating in conjuction with the tanneries, and for export. An alternative outlet for first grade hides and skins would be the proposed Maseru industrial tannery. Rural tannery leather is not suitable for use in a modern shoe factory, but it is suitable for use by local artisans. There is a need to make an attempt to quantify the leather likely to be available from rural tanneries as related to the leather likely to be used in artisan leather goods production.

Footwear Production

The value of footwear imports in 1972-73 was recorded as R641,000 and by 1976 this had risen to R6,633,000. This is a major import expenditure and it may be assumed that the market is price-concious. There is no breakdown of these imports into quantities types and price ranges, and a detailed market survey is essential to establish whether the domestic market would support small to medium sized factories to manufacture specific product ranges. Leather shoes are relatively high priced and Mediterranean and Asian Countries have moved away from leather footwear. As an indication one South-East Asian country with a per capita income equivalent to US$ 1200 had the following numerical market distribution.

Mens Footwear (Total)	%	%
		18.4
Leather Uppers - Leather Soles	2.4	
Leather Uppers - Rubber soles	6.5	
Leather Uppers - PVC soles	2.4	
Textile Uppers - Various soles	7.1	
Ladies Footwear (Total)	%	%
		38.5
Leather Uppers - Resin soles	13.6	
PVC -	13.2	
Others -	11.7	
Childrens Footwear (Total)		43.1
Canvas	26.0	
Others (Unspecified)	17.1	
		100.
Slippers (All types)		36

In particular it should be noted that ladies footwear, is most suited to small factory production because fashions are reputed to change three times a year and consequently short manufacturing runs are preferred.

Lesotho Shoes (Pty) Ltd.

A project currently under consideration is a factory which, it is stated, will produce 1000 pairs of shoes per day employing 100 people but with a capital investment in machinery and equipment of only R85,000. The project does not state what kind of shoes are to be made, although it was learned that initially they would be "Mocassins", neither is the extent of component manufacture indicated.

This does not appear to be a serious entry into the shoe making business and Lesotho should keep open its options to establish other production units to manufacture a full range of shoes.

A project profile for a shoe factory to produce 1 000 pairs per day of leather shoes has been prepared (No.11).

Hand-made shoes

Hand-made shoes may be classified into:

(a) Cheap low grade
(b) Medium grade
(c) High grade

Hand-made shoes in Lesotho are lacking in skills and unless these small units can be upgraded with machines for skiving, folding, making and finishing, they will not compete in quality with imported or locally produced machine made footwear. High grade hand made shoes are made to order for high income groups and these are not produced in Lesotho nor is the potential market demand known.

Saddles and Saddlery

Import of saddlery and harness amounted to R632,000 in 1976 and this is certainly a field in which domestic skills could be developed, using imported leather until such time as locally produced leather of adequate quality is available. UNIDO has under consideration a project to establish a leather products technical development centre which would advance such a project.

Upholstered Furniture

Leather upholstered furniture, is a labour intensive high value product which would support freight costs within Southern Africa and could conceivably warrant export to Europe.

Handbags

Although probably not more than, 5 to 10% of all handbags sold are made of leather, the bulk of them being of plastic, it is a product which has tourist appeal. It is mainly a hand made trade with machines for sewing and skiving, but with good design features the local product could equal the equivalent European product. Plastic handbags are sold for less than a third of the price of leather handbags, but there is a market for both.

The suggested "Leather Products Technical Development Centre" would no doubt include handbags in the product range.

Travel Goods, Brief Cases etc.

Travel goods, apart from brief cases, are mainly made of cardboard, canvas, plastic and paper, combining impact resistance with light weight -very few are made of leather.

Briefcases, used by students and businessmen could become a useful handicraft product.

Small leather goods

There are many small items of leather goods, which are profitable at handicraft level, and the following list is a guide but it is not exaustive.

Desk furniture (Blotters, stationery holders etc.)
Dressing table furniture (jewel boxes etc.)
Drinking glass holders
Night dress and pyjama cases
Table mats
Watch straps
Spectacle cases
Comb cases
Purses
Under arm brief cases
School satchels
Photograph frames
Handbag mirror covers
Magazine covers
Powder puff cases
Lip-stick cases
Lighter cases

UNIDO Leather Products Technical Development Centre

UNIDO have under considerarion the establishment in Lesotho of a footwear and leather products technical centre, with the object of training management, supervisors, and workers in the techniques of modern footwear and leather products manufacture in theory and in practice. The production of footwear, of cement

lasted construction would be expected to reach 100 pairs a day in 9 months and 400 pairs a day in 30 months employing about 40 operatives. Saddles and saddlery items would also be produced.

The present stage of development of the leather industry justifies this project, which would operate on imported leather until the Maseru abattoir and tannery come into operation.

3. Non-Metallic Mineral Industries

Up to the present time the only economic minerals discovered in Lesotho other than diamonds are basaltic rocks and sandstone suitable for construction purposes, river sand which is mostly quartz, and clays suitable for heavy clay products.

Sandstone

Good quality sandstone has been used in Lesotho both for load bearing walls and for decorative purposes and there are numerous deposits of sandstone suitable for extraction. Imports of shaped building stone were valued at R720,000 in 1976, and although other stones may have been included, it is probable that most of the imports were sandstone. This import figure of R720,000 needs to be checked and future demand projected.

In October 1975, a United Nations consultant reported on the availability of sandstone deposits and quarrying techniques, and a saw-fraising machine was supplied to the Mines Department to allow field testing to proceed. It appears that the sandstone project has not developed further, but the machine is still with the Mines Department. The report proposed a development programme of production tests, geological mapping of outcrops, and the setting up of a stone section within the Department of Mines.

It is essential that the Department of Mines promote and co-ordinate this operation, and undertake plane-table surveying of selected areas, but essentially the exploitation phase will require practical production and management expertise.

A short survey by a practical sandstone quarry expert would be necessary to examine the most promising sites and provide a capital estimate of plant requirements, labour requirements and training and estimated operating costs.

Throughout the world the use of cut sandstone has declined giving way to bricks and reinforced conrete structures, but it has not become obsolete.

In the United Kingdom, Berry and Marshall Ltd., of Bradford, are operating four small sandstone quarries producing flagstones, paving and wall stones which are sold to all areas of the U.K. The company also offer the services of a masonry department. It it were possible to interest this type of company to help establish the industry, an efficient operation could be assured at an early date.

Sand

The only known commercial availability of sand is riverbed sand which is recovered for construction purposes. There is an essential need to locate a commercial deposit of quartz sand which could be used for bottlemaking or other sands which could be used for concrete products. The possibility of using by-products of other mineral extraction processes should be kept in mind - for example quartz sand from kaolin extraction.

Crushed Stone

There are adequate deposits of high quality dolerite throughout Lesotho, suitable for concrete production and for use as ballast in road construction.

Lesotho Quality Aggregate Industries (Pty) Ltd was established in 1978 to supply the Lesotho market for crushed stone, and is to provide a one shift production capacity of 110,000 cu. metre per annum or 55 cu. metre per hour in a range of sizes. The company has in view the possibility of producing at the quarry site, ready mixed concrete and various concrete products. LNDC, as the majority shareholder will no doubt press for a market survey to assess the current and future demand for these two products.

Cement Production

The estimated imports of cement for 1977/78 are 51,000 tons and cement consumption is coming into the range where a small plant could be given consideration.

Because Lesotho does not have deposits of raw material to manufacture cement, it would be dependent on imports from South Africa.

The alternatives to be considered are:-

(i) To import the basic raw materials, largely limestone, and undertake all manufacturing processes. Approximately, cement is comprised of two thirds limestone and one third clay, and a suitable clay deposit to provide a minimum of 25,000 tons per annum would need to be located.

(ii) To import clinker and undertake the final grinding process in Lesotho.

Whether Lesotho imports cement, clinker, or limestone the industry will remain dependent on South Africa, and the choice should be a consideration of value added, employment, capital investment, and the availability of management expertise. Limestone could be stockpiled for strategic reasons.

Concrete Products

Although it has been stated that Lesotho Quality Aggregate (Pty) Ltd has in view the possibility of making ready mixed concrete and other concrete products, production of a range of products would be achieved more quickly by having several smaller units, and would help in avoiding a monopoly position.

It would be logical, however, to produce ready mixed concrete adjacent to the quarry, but hand made concrete blocks and other concrete products would probably be produced cheaper in other small production units.

The production of load bearing concrete blocks of the 'Bessemer' type are unlikely to be competitive for some years because the architects have to be persuaded to design them into structures to carry loads - not just to use blocks for filler walls. If and when cement and clay are available, roofing tiles could be made from either, but there will not be a market for both for many years, and eventually a decision would have to be taken on which type should be manufactured. 1976 imports were valued at R618,000.

The whole field of concrete products demand needs a thorough market survey upon which decisions can be taken to establish manufacturing units. The survey should include blocks, poles, slabs, drains, and possibly asbestos cement products such as chutes and ridges.

A project of particular interest to Lesotho would be spun pipes and pre-cast septic tanks for rural areas. Septic tanks are made from 36" to 72" diameter spun pipes by closing the two ends and cutting holes in the cylindrical surface.

To provide an indication of the parameters of small units to manufacture these products, the following project profiles are included:-

(a) Concrete Blocks - 60,000 per month 6" (No.12)

(b) Concrete poles - 2,000 per month (No.13)

(c) Spun pipes and septic tanks (No.14)

(d) Concrete roofing tiles - 1 million per annum (No.15)

Heavy Clay Industries

UNIDO have been directly involved in exploration for clays suitable for the manufacture of heavy clay products and although workable deposits were located, at Leribe, Maseru, Mafeteng, Mohale's Hoek and Qacha's Nek none were primarily kaolinite and therefore it is not possible to consider high quality tableware production. Ceramic clays were discovered in the Mafeteng district which were considered suitable for stoneware pottery.

Additionally, UNIDO established a Clay Products Training Centre, equipped to make basic tests on clays and to test bricks to standards set by the South African Bureau of Standards and trained the national staff to make tests and to operate a small earth drilling machine. This unit, which is well equipped for brick testing, is still in use for testing spot samples of clay collected in the course of geological surveys but there is currently no systematic survey of clay deposits.

Bricks

According to a market survey made in 1976 the total demand for wall masonry amounted to 50.0 million brick equivalent of which 16.5 million was used in the Maseru area. A brick plant is to be erected at Thetsane, near Maseru.

The West German Government has donated DM 2.5 million towards establishing the brick plant, the design of which is currently being prepared by a firm of consultants while a UNIDO consultant is supporting the Government in appraising the design and proposals.

Output of the plant will be around 13 million bricks per annum on a single shift basis, of which about 5 million will be kiln fired and the remainder clamp fired.

It should be noted that although the consultants are proceeding with the plant design, a feasibility study has yet to be prepared, and this latter is an essential pre-requisite.

Although it would appear possible for the new brick factory when operating on a three shifts basis to supply practically all the bricks required in the country, care should be taken not to displace the existing small producers.

Furthermore, as capital becomes available it is probable that artificial drying and additional kiln facilities would be installed, and during the initial years while the expatriate staff are present, the plant will develop other clay products including hollow blocks, sill tiles, floor tiles, roofing tiles, pipes etc.

A project profile (No.16) has been prepared for a brick factory of 1,000,000 bricks per month capacity, to provide an indication of total capital requirements.

Ceramic Products

A clay deposit has been defined at Phoqoane having over a million tons of white to buff firing material which might prove suitable for ceramic wares. This deposit should be sampled and the samples sent to a suitably equipped laboratory for testing for possible production of sanitary ware, wall tiles, and insulators. Upon receipt of a favourable report market studies would be necessary to establish domestic and possible export market.

Project profiles (No. 17,18 and 19) for plants to produce these items have been prepared. A pilot plant for the manufacture of wall tiles using a glazed Basotho motif is in process of being established, and the firing of the tiles is to be done at the factory of Thaba Bosiu Ceramics (Pty)Ltd.

Terrazzo Tiles

The manufacture of terrazzo tiles primarily for flooring in houses can be a small business incorporating both the making of the tiles and contracting for flooring installations. The market demand, the availability of aggregate raw materials and the status of this industry in South Africa is not known and this information would have to be researched. A project profile (No.20) has been prepared to assist in the follow up of this possibility.

Bottle Glass Ware(Milk,Beer, Soft Drinks)

As mentioned earlier Lesotho does not have a quartz or quartz sand deposit suitable for glass production but the alternative of importing the raw materials from South Africa is a possibility. It should be cheaper to import quartz than to import bottles.

When the annual bottle requirements of the beer factory are known and the estimated bottles required for the local production of fruit juice, squash, and aerated minerals has been assessed, a study should be made to determine the viability of a bottle glass ware plant. Bottle making for small tonnages is by discontinuous batch production, but for outputs of 1 00,000 tons per annum a continuous kiln would be used. Lesotho should be approaching a demand of 100,000 tons per annum within a few years and a project profile (No.21) for a continuous plant has been prepared.

Gemstones

(a) Agates

Agates are found in many areas which are sometimes concentrically banded, and suitable for slabbing for pendants and earrings, or for use as round beads for necklaces.

Additionally agates may be sold as polished "Eggs" and smaller pieces of tumbled stones can be incorporated in fibre-glass resin to produce inexpensive small objects.

It is probable that a small cottage industry could be based on agate preparation for the tourist industry, for which purpose from US$ 10,000 to US$ 15,000 would be required to purchase machines. The collection of stones would need to be organized and training given in goldsmith and silversmiths work. In the past one entrepreneur has operated in this field and the reason for discontinuing the business should be ascertained.

(b) Diamonds-Garnets-Ilmenite

The extraction of diamonds has been organized on the basis of allocation of certain areas to hand-diggers and a deep kimberlite pipe is being exploited by De Beers (Lesotho) Pty Ltd using modern equipment.

The heavy concentrate tailings from the De Beers plant contain industrial garnets suitable for abrasive purposes but it is reported that they are not in sufficient quantities to be commercially extractable at the present time. None are gemstones. Ilmenite, an ore of titanium, is also found in the heavy concentrate tailings. Ilmenite is very abundant in nature but it is not used in any great quantity, its chief use being in the form of titanium oxide which is used as a white paint pigment is reported to be not commercially extractable at the present time.

4. Metal Industries

There are many industries based on metal working which might be established in Lesotho, but the absence of indigenous metallic minerals means that there are no obvious products to form a nucleus around which to build up a metal industries sector based on domestic raw materials.

In these circumstances there are two approaches to selecting metals projects. Firstly the basic industrial skills of metal shaping, casting, die-casting, electro-plating and painting can be established as a training-cum-production operation as part of an industrial estate. Secondly, there are industries which have a linkage with the basic skills and/or with other industrial sectors where the increasing domestic demand justifies local manufacture.

a) Basic metal working operations

Metal shaping workshop
Foundry - Forging
Electroplating
Painting.
Die casting

b) Industries related to domestic demand

Can making
Tractor servicing and parts
Tubular furniture
Exhaust silencers for vehicles
Household aluminium goods
Galvanised iron sheets for roofing
Wire and wire products
Domestic hot water heaters (electric)
Refrigerators
Cycles
Truck bodies
Bolts and nuts (cold)
Agricultural cutlery
Agricultural implements
Crown caps (for bottling)
Wind powered water pumps and generators.

The last item is specifically linked to the government policy of improving the welfare of people in the rual areas, and another product in this category, prefabricated septic tanks, is dealt with elsewhere in this chapter.

A detailed study of the planned expansion of the electric power system and the telecommunications system, and an examination of the imports of metal products for the public works department would indicate another possible group of metal products.

Lesotho will only break into the metal industries sub-sector if a concentrated effort is made to do so. This will involve provision of training facilities, donor support, long term finance, technology transfer, and intensive promotion work.

Basic Metal Working Operations

A survey of the services which could be rendered to existing industries and those industries likely to be established up to the end of the third plan would ascertain the extent to which basic metal working operations should be equipped as a service. For example, to what extent is electroplating required, including chromium plating for vehicles? What tonnage would be needed from the foundry to meet total Lesotho requirements of cast iron and cast steel - this to include tractor spares, agricultural implements, earth moving equipment and mining spares? Die-casting could be considered at a later date, rather than initially.

Project profiles have been prepared for a metal shaping workshop (No 22), a foundry (No. 23), an electroplating shop (No 24), and a paint shop (No. 25), but it is probable that these are too large for Lesotho's immediate requirements.

Service workshops are essentially a component of an industrial estate and UNIDO are in the best position to examine the needs and specify the capacity and services required.

Agricultural Implements

In a study made by the consultants, Kienbaum Beratungen GmbH, in 1976, it was proposed that a plant be established to produce the following equipment. The quantities are those estimated to be imported in 1976

	Per Annum
Carts	
Ox, donkey, horse carts in various designs	700
Implements	
Animal-drawn ploughs, planters, cultivators, harrows	4,000
Implements	
Hand operated seed drills, rotary weeder, wheel hoes, chaff cutters etc	2,000

It was estimated that there were 600 tractors doing 15% of the primary tillage and that by 1980 there would be 1500 tractors accounting for more than 50% of primary tillage.
In the first phase the plant would undertake the following manufacturing operations:-

- Cutting, shearing, punching of plates, bars and sections.
- Drilling
- Bending
- Welding, spot welding
- Machining of small parts
- Painting and finishing

In the second phase, suggested to be after three to four years, the plant would engage in the following additional operations:-

- Forging
- Foundry work
- Press forming
- Precision machining
- Heat treatment processes

The possibility exists of advancing the second phase of this project, by establishing, as part of an industrial estate, service workshops which could actually start production of components required by the agricultural implement factory. The agricultural implement factory and the service workshops together could form the nucleus of a metal products industry.

The Kienbaum Beratungen consultants report sets out details of this project which have been adjusted for presentation in a project profile (No. 26)

Agricultural Machinery

Assuming 50% of primary tillage in 1980 is by tractor drawn implements, there remains the possibility of using power tillers which can also be used as a work-horse to pull trailers or implements. In some agricultural operations, power tillers have displaced wheeled tractors.

The demand for tractors, power tillers and other mechanised agricultural equipment for example wheat threshers, requires a market study to indicate whether an assembly operation with manufacturing of some items would be viable.

UNIDO Mission on Agricultural Implements and Machines

Following the decision of Tanzania, Lesotho, and Botswana not to accept the proposal to have integrated production of agricultural equipment, UNIDO have under consideration that a mission might be sent to Lesotho to study the country's specific requirements. Such a mission amongst others would need to recommend on the following matters, in consultation with the Ministry of Agriculture.

(i) The organisation necessary to disseminate technical knowledge and understanding of mechanical equipment

(ii) The provision of service stations and the stocking of spare parts.

(iii) The financing of retail purchases

(iv) Under the stimulated conditions arising from the application of (i) (ii) and (iii) an estimate of continuing market demand for all kinds of implements and machines.

In this connection it should be noted that an agricultural engineer has joined the BASP Agricultural project, with terms of reference covering the practical implementation of agricultural mechanisation.

Windmill Generators and pumps

High speed windmills to produce electric power (14Kw) and low speed windmills for water pumping could certainly be partially manufactured in Lesotho. A realistic estimate of demand and an approach to a reputable foreign manufacturer would indicate whether there is confirmed potential for making these products.

Tractor Servicing and Parts

The establishment of skilled tractor maintenance within Lesotho is essential now that there are around 1000 wheeled tractors in service. In addition other farm machines, implements and carts will be increasing in number, but even at the present time there is a need to have service facilities in the farming areas.

The capacity of the servicing units is likely to be quite small in the initial stages, and might be associated with sales of machines and implements, or even combined with automobile repairs and petrol sales

Exhaust Silencers for Motor Vehicles

An estimate of the annual demand for replacement silencers can be made based on their average length of life (5 years) and the annual vehicle registration statistics.

An operation of this type could start with simple hand operated equipment to produce up to [illegible] silencers per month of all types at which stage machine operations could be introduced. A project profile (No. 27) for a simple hand operated plant has been prepared . It should be possible to export part of the production, assuming prices are competitive, to Southern African countries.

Can Making

It is estimated that initially the brewery will require 90 million cans per annum in the early years of production, and further quantities would be required for food canning (one million) and aerated minerals. These estimates are probably ambitious, but it would appear that a plant to produce five million cylindrical cans per month would be required and consultations with the Metal Box Company should be started with a view to establishing a plant in Lesotho, to coincide with the setting up of the brewery project. Up-to-date data on this project is not immediately available to allow a project profile to be prepared.

Crown Caps (for bottling)

It is estimated that initially the brewery will require 30 million bottles per year, and this type of bottle requires a crown cap for sealing. Additionally, bottled aerated minerals will also require caps, but the quantity is not known.

A project profile (No 28) for a plant to produce 80 million crown caps per annum has been prepared.

Tubular Furniture

The manufacture of tubular furniture - chairs, tables, etc., for the domestic market and for export to Southern Africa is an industry which could be either small or medium sized. The essential requirements are styling and a competitive price structure.

There are two distinct ranges of furniture.

(i) Round tubes bent, welded, and finished either chrome or paint for offices, restaurants etc.,

(ii) square tube (light alloy) and round tube (steel) construction, bent, welded, painted or plated, for domestic use, with good styling and finish.

The production of these items could be started in a small workshop, alternatively it a factory is to be considered with an assured market a small scale industry could be started.

The possibility of producing welded pipes was considered but a modern machine will produce 300 tons of tube per month, or about one million feet, and a careful study of total demand of tubes of outer diameter 5/8", 3/4", 1", and 1 1/4" for all purposes would be necessary to justify an investment of R500,000 in machinery.

Domestic Hot Water Heaters

Domestic hot water heaters are a product for which a demand rapidly builds up as the standard of living improves, and as electricity is brought to the domestic consumer.

A very rough estimate indicates that demand in 1976 was about 400 units, whereas a profitable production unit would need an output of 1000 to 2000 units per annum.

This demand will probably develop over the next few years, and an initial market survey is required to ascertain brands, capacities, and prices.

A project profile (No. 29) for a factory producing 2000 units per annum has been prepared.

Refrigerators

Most countries which have started production of refrigerators, have started with an assembly operation and gradually moved into component production, but often not proceeding to the manufacture of the sealed refrigeration units. The sheet metal work and plastic interiors are produced using relatively simple techniques.

Imports into Lesotho are probably in the 400 to 500 range which is enough to consider local assembly.

Following a closer check on the market, negotiations should be entered into with a well known manufacturer to prepare a study and subsequently establish a factory.

Household Aluminium Goods

The import statistics do not separate household aluminium goods from other household items and it is not possible to make a market assessment without study. Production items could be pans, kettles, tubs, mixing bowls, containers of various types, but output would need to be in the order of a ton a day and a project profile (No. 30) has been prepared for a plant of this capacity.

Cycles

Cycles are not a major import item, total recorded imports amounting to R23,000 in 1976. There was a time when cycles were a very depressed market, but in Europe and North America demand subsequently increased.

The diverse range of styles, colours and attachments, would hardly make it worth while to purchase cycles in the completely knocked down condition for small workshop assembly in Lesotho.

Unless there is a radical change in market demand no action should betaken with regard to cycles.

Truck Bodies

Steel truck body making is a labour intensive operation which could well be undertaken in Lesotho, but in the absence of any inform tion on demand, required capital investment, and the competition to be faced, this can only be an item which might be worth at least a preliminary check.

Wire and Wire Products

It is possible to enter the wire and wire products field in a very small way, and probably this is the right approach for this range of products, starting fromthe end products, - nails, staples, wire netting, wire fencing and barbed wire. Each individual product can be assessed against the demand and the capital cost of the required automatic machine. The wire and galvanised wire, would be imported in the first stage.

One step back in the production chain is to make annealed wires, common wires and galvanised wires starting from 5.5 m.m rod, but here the plant throughput would need to be 25 to 30 tons a day to effectively utilise the plant.

A project profile for manufacturing one or more end products in the first stage would follow analysis of demand and after obtaining quotations for and outputs of automatic machines.

Galvanised Corrugated Sheets

Imports of corrugated sheets are included with other steels in the 1976 import statistics, totalling Rand 2.9 million, but corrugated sheets must be a substantial part of this amount.

Looking at the possible production of galvanised sheets, both plain and corrugated from black sheets from the point of view of the output required to make a plant viable, the indications are that a demand of about R3.5 million would be necessary.

The possibility is worth investigating further, and as a first step a project profile (No.31) has been prepared for a plant of this size.

5. Wearing Apparel

In this section all kinds of clothing are included but footwear is dealt with under "Leather Industries". Lesotho has a successful garment manufacturing industry, - "Gallant Garments Manufactures (Lesotho) (Pty) Ltd. located at Maputsoe. It is producing childrens dresses mainly for export to Europe, with some sales to South Africa. This company has been established in a highly competive field, but it has high worker productivity and low overhead expenditure. It is an offshoot of a Durban company which supplies the materials, and places orders with the Lesotho company to maintain full production. The advantages to the Durban company are, entry to the E.C.C. Market, low production cost and tax remission.

There is no reason why this successful operation should not be repeated over a wider range of products.

Another operation which is having success is the making of knitted garments and a number of small production units have been established with the assistance of BEDCO. An interesting extension of this activity provides families in rural areas with knitting machines, as a means of supplementing family income.

Knitted Products

(a) High Quality Nylon Socks

Double knitted socks, fancy patterns and sportswear manufactured from stretched nylon yarns. One machine will produce 5 dozen gross pairs in an eight hour shift.

(b) Heavy Duty Cotton Gloves

Heavy duty cotton gloves for industrial use of high quality are produced on automatic machines. One machine will produce 8 dozen gross pairs in an eight hour shift.
The same machines will produce high quality light/medium cotton gloves.

(c) Knitted Fabrics

"Circular" knitting machines are used to produce cotton, nylon, rayon, and woollen fabrics suitable for the manufacture of undergarments (singlets, vests, briefs, panties), and slacks. A circular knitting machine will produce about 30 pounds weight of material per 8 hour shift in tube diameters usually ranging from 17" to 28" diameter.

It is usual to find that a factory will diversify into the manufacture of a number of knitted products, with a sales turnover of R500,000 upwards.

There is scope for this level of production just to meet the domestic market, but clearly the objective should be to establish highly efficient low cost production for export.

Shirts

In 1976 shirts and blouses to the value of R2.2 million were imported, whereas a well organised shirt factory could be profitable with a sales turnover of R0.7 million. A project profile (No. 33) has been prepared for a factory of this size.

In the international market shirts are mass produced, and a normal daily output would be around 3500, equal to 1,000,000 per annum. Overseas co-operation in a venture of this size would be essential to produce under well known brand names for assured markets. An indicative project profile (No. 34) is given.

Working Clothes

The domestic demand for working clothes (boiler suits, overalls) manufactured from denim is not known, but it is unlikely to be 250,000 a year, which would be a normal small factory output.

This is an operation which could well be successful in Lesotho and the possibility of exporting to South Africa should be investigated. A project profile (No. 35) has been prepared.

6. Chemical Industries

The chemical industries are likely to remain a relatively undeveloped sub-sector of industry in Lesotho because of the absence of the required minerals and hydrocarbons, coupled with the small domestic market. Even so, some end products, normally classified as chemical products, may be considered for manufacture.

Paints

A paint pilot plant established by LNDC with the support of UNIDO is maturing into a commercial operation. LNDC is finalising the setting of of a joint venture company - Parthenon Paints (Lesotho) (Pty) Ltd., with Plascon Evans of Johannesburg, with a 50/50 equity capital formation.

Production of the full proposed project range is to commence in April/May, 1979, with the exception of distempers.

UNIDO report DP/ID/SER. A/136 dated 13 October, 1977 indicates that the Diamond Exploration Project would undertake preliminary work into the possibility of obtaining raw materials.
The Diamond Exploration Project is not equipped to do this, but zeolite, barytes and talc have been identified in isolated locations. To establish that ore bodies exist in commercial quantities, requires close surveying and drilling, and probably mineral dressing tests to ascertain whether the products would be sufficiently pure. If there is any possibility that economic ore bodies might exist, the Mines Department should be consulted on the next steps to take. The report also mentions that four rock samples collected by Mr. J.M. Sczcepanski were to be sent to Hoechst S.A. Ltd., Johannesburg, for testing, but it has not been possible to trace any record of this arrangement.

Pharmaceuticals

A small factory originally owned by LNDC and at that time making a loss, has been taken over by Private Health Association of Lesotho (PHAL). Phal is a non profit making organisation, supported by four church organisations, which has been working on the improvement of medical services and supplies in Lesotho for many years.

The dutch aid organisation - International Development Association, which has both church and other support is supporting this operation.

The drugs manufacturing unit is being equipped with machinery costing approximately R500,000, and it will employ 25 persons producing initially a range of 40 drugs. About 200 drugs are listed as being essential in Lesotho. The Lesotho Dispensary Association is the body administrating the production unit. Three major European drug manufacturers are providing technical advice, including advice on new drug developments.

Plastic Articles

There are many articles manufactured from plastic which might be produced in Lesotho but the essential need is to establish a market. Import statistics do not offer a guide and the extent to which the South African Market could be penetrated is not known, and in each case a market assessment would have to be made.

Plastic Containers

Plastic containers such as buckets, washing basins, cups, boxes, dishes, bowls, can all be manufactured on the same injection moulding machines from polyethylene raw material.

Other synthetic resins might be used on the same machines including polypropylene, polystyrene, cellulose acetate, polyamide and rigid P.V.C. to make other products.

A plant to produce plastic products is therefore versatile in its application.

A project profile (No. 36), which can only be regarded as a typical, has been prepared.

Special Purpose Machines

Plastic blow moulding machines are used to make bottles and plastic drinking straws are made on a continuous extruder.

Industrial Products

The domestic demand for industrial products such as packaging will relate to the industries to be established. Plastic bottle containers will be required for the brewery and for soft drinks.
Rigid PVC pipes are used as sanitary pipes, for water pipes, electrical conduits, and thin wall pipes for drainage etc. Plastic bags and sheeting have many applications in commerce and industry.
Project profiles (Nos 37 and 38) have been prepared for the following industries.

(i) Polyethelene film and bags (up to 12")

(ii) Rigid PVC pipe (30 tons per month)

The question of manufacturing refrigerator parts has been considered but the number of units likely to be assembled to meet Lesotho's requirements would not justify manufacture.

Plastic cisterns were also considered but the idea discarded because of insufficient domestic demand.

The whole subject of industrial and commercial packaging requires an expert survey to include the food and drink industries, retail stores, and specific products such as candles, garments, etc.

Synthetic Detergent Powder

A small plant to manufacture synthetic detergent powder was proposed in a report dated August, 1977 prepared by NIDC of India, from which the main details appear in a project profile (No. 39).

Washing Soap

A project profile (No. 40) for a small plant to make washing soap has been prepared from the NIDC report.

Insecticides

The demand for insecticides in Lesotho is too small to warrant manufacture, and all raw materials would need to be imported.

Polishing Preparations

Polishing preparations are valued at R3.2 million in the 1976 import statistics, and it appears probable that some of the products being imported could be made and/or packed in Lesotho.

It would be necessary to analyse this total sum into the major product groups to examine the possibilities.

Rosewater

The preparation of rosewater on a commercial basis for export, would of course depend on the successful cultivation of suitable roses in adequate quantities. It would have a high value added and a high local content.

To process 270 tons per year would require a total investment of about R500,000 of which R230,000 would be in working capital and R200,000 in machinery.

Toothbrushes

The market for toothbrushes in Lesotho is probably in the order of 200,000 dozen per annum. Basically it is an assembly operation in which bristles are set into plastic handles to be packed into printed cartons. All of these components should be locally made in the near future. A project profile (No. 41) has been prepared.

7. Wood and Furniture Industries

A successful wood furniture making factory has been established by Maluti Furniture Industries (Pty) Ltd., at Maputsoe. Most of the production of pinewood furniture is exported to South Africa and the company is seeking outlets in Europe. The pine timber is imported from South Africa.

There are also a number of smaller makers of stained and polished wood furniture supplying the domestic market, of which Senqu Construction Co. (Pty) Ltd. is the most notable.

Cane furniture is produced in a small way from materials imported from the far east by Mphata Cane Works.

Lesotho does not have any natural forest reserves from which a whole range of wood products could have been derived.

Pine trees are being planted in woodlots but this is intended for use as domestic fuel to replace the burning of animal dung which latter is needed for use as natural fertiliser.
Additionally the plantings are expected to provide wood poles required for domestic consumption.

8. Printing, Publishing and Allied Industries

An exploratory mission on the printing industry was made in 1975, by a UNIDO expert, and a report outlining the findings was prepared for the Government.

Basically the overall situation has not changed except that the printing office formerly operated by a religious organisation "Christ for all nations" has been discontinued. A small commercial printing unit has also been established.

Government Printing Office

A number of changes have taken place at the Government Printing Office since the UNIDO 1975 report, covering management, training and new equipment. To enable the UNIDO report to be updated, details of these changes have been recorded elsewhere.

About 85% of the printing office output is for Government Departments, and about a half of the remainder is for quasi-Government bodies. Two weekly newspapers are printed - "Mochochonono" and "Lesotho Weekly", each with a circulation of 4000 copies which it is hoped will shortly reach 5000 copies each.

An objective of Government is to launch a daily newspaper, which would require an additional printing press and other equipment and the recruitment of printing, editorial, advertising, circulation, and administrative staff. A daily newspaper of 5000 copies rising to 10,000 copies would utilise the new press for only few hours each day, and other commercial printing, for example exercise books could be produced to employ the press more fully. In 1976, exercise books valued at about R200,000 were imported.

The Printing Office is neither fully equipped nor staffed to undertake competitive commercial printing, although it is the expressed intention to do so. In the commercial world salesmen have to compete for business, but the printing office does not employ salesmen.

In - House Printing

In-house printingcontinues to be undertaken by:-

Mazenod Institute
Morija Printing Works
Printing Unit of the Lesotho University

Commercial Printing

The UNIDO 1975 report suggested the formation of a commercial printing unit linking LNDC, Lesotho National Bank, Government Printing Office, and the Mazenod Printing Unit. This has not gone forward.

In most countries commercial printing is done by numerous small independent job printing and bookbinding companies, with an average sales turnover of around R100,000.

But imports into Lesotho in 1976, excluding exercise books and registers, amounted to only R154,000, according to the statistical bulletin.

It is not unusual for an offset printing press to be used for daily newspaper production and to accept major commercial contracts to spread the overhead costs. Nor would the market demand in 1976 justify more than one major offset press installation.

It is difficult to obtain estimates of market demand under the usual headings of:-

(a) paper/cardboard containers,
(b) books
(c) printed matter in bound form
(d) advertising materials
(e) Labels, forms, invitation cards

But a survey of the country's need would not be difficult or too extensive, to assist in decisions relating to both the expansion of the Government Printing Office and/or the further sector printing.

9. Textiles Industries

Lesotho, a producer of wool and mohair, does not currently process either, but at the same time imported in 1976, clothing of all types valued at R24 million, blankets of all types worth R12.3 million, and fabrics of all types amounting to R5.3 million.

The knitting of fabrics for subsequent manufacture has been referred to under the industrial sub-sector "Wearing Apparel", because it is quite usual for a small enterprise to buy yarns to produce the knitted material and then manufacture garments from the material produced.

Wool Processing

A report entitled "The marketing and further processing of wool and mohair in the Kingdom of Lesotho" dated November, 1976, was prepared by G.H. Oxtoby and J.A. Iredale.

As a first alternative to individual farmers sending small lots of wool direct to the wool auctions in South Africa, wool would move to five bulking stores in which it would be classed and assembled into lots of 10 to 25 bales, as a means of reducing handling costs and possibly obtaining better gross prices. Not only is this an economic device but it is essential to further marketing development and to any plans for wool processing. Implicit in this operation is the basis and timing of payments to farmers, and price stabilisation funds which cannot be dealt with in this report.

Lesotho produces wools which fall into two main groups:-

(i) wools suitable for the "Worsted Process"

(ii) wools suitable for "Woollen Processing"

There is, according to the above mentioned report, practically no market for scoured "Worsted" wools because blending must take pla before scouring. But "Worsted" wools do command a higher price than "Woollen processing" wools, and the farmer should receive the best possible price for his clip. This is important when considering the possibility of scouring wools in Lesotho and the purpose to which the scoured wools might be put.

Wool Scouring

If the market price is to be paid to the farmer for his fine "Worsted" wools, until Lesotho may be able to undertake worsted processing, these wools should be sold in the greasy condition.

The operation of collecting the wool clips, classing, and assembly into sale lots in Lesotho must be undertaken, not only for its selling advantages, but because it seems advisable to scour "Woollen Processing" wools and not to scour "Worsted" wools. The scoured wools would then proceed to the sales room or to any further manufacturing unit which may be established in Lesotho.

It appears to be technically feasible to scour the "woollen processing" wool clip amounting to about 2.0 Mkg per annum, using the emulsion system. Water supply, effluent disposal and technical supervision are critical requirements. Based on the information presented in the Oxtoby/ Iredale report a project profile (No. 42) for a wool scouring unit has been prepared. Assuming a 37% recovery of scoured wool, there would be about 700,000 kg of clean wool available either for sale or for further processing.

Yarn Preparation

The preparation of yarn includes the operations of opening/mixing, blending, carding, spinning and dyeing. The quantities of material passing through these processes will depend mainly on the requirements for blanket production, but the preparation of yarn for other purposes including tweed fabrics, hand-knitting yarns, machine knitting yarns, and yarns for tapestries and rugs, should be considered. Alternatively these relatively small quantities of yarns might be the subject of a separate small production unit.

Blanket Manufacture

A report dated November, 1974 prepared for UNIDO by A. Johnels and G.H. Oxtoby deduced that blanket manufacture would not be an economic operation in Lesotho. The report is based on an assessment that the internal demand in 1973 was in the order of 700,000 blankets of all types and sizes valued at R4.5 million.

Although the breakdown of this total into different qualities and yarn composition was presented, it was not possible to indicate trends in demand. Since 1973 there has been considerable change in the spending habits of the people of Lesotho and the import statistics for blankets reached R12.3 million in 1976.

The report expressed the view that about 400,000 kg of the wool produced in Lesotho would be suitable for making coarse woollen yarns which could be used for blanket manufacture.

It was argued that a mill should not be smaller than 600,000 blankets output, because of economies of scale deriving from larger plants, and based on a mill of that size, estimated product costs showed that the Lesotho mill could compete in five out of the six representative products studied.

Nevertheless, the report concluded that a Lesotho based blanket mill could not be feasible because,

(a) excess blanket production capacity existed in Southern Africa

(b) the major producer in South Africa might cut prices and make it impossible for the Lesotho plant to obtain an adequate share of the market.

It is suggested that another approach to this possible project might be made based on the following premises:-

(i) The project should not endeavour to produce the full range of products at least not in the first instance, but should make only those products requiring a higher percentage of wool, and which have currently a higher profit margin. Broadly this means producing fashion blankets and rugs/shawls. Inside Lesotho the project would rely on the Government's ability to prevent "dumping" to cripple the new industry. Based on the 1973 figures this range would cover 65% of the domestic market in numbers and 83% in value, and would utilise 93% (217 600 kg) of the maximum possible wool usage.

(ii) 65% of the annual demand of 700,000 is only 450,000 blankets and the Lesotho mill would not capture the total domestic market but possibly only 2/3 or 300,000 blankets.

To utilise the full availability of coarse wool (400,000 kg), the plant would need to produce 550,000 blankets in the suggested range.

Obviously, it would be desirable to produce 550,000 high wool content blankets, and a careful market survey to determine possible exports to the Southern African countries would be essential.

(iii) But if such a study indicated that the market share would be likely to be less than 550,000 blankets, then consideration has to be given to the economics of a smaller mill.

It is known that mills have been established to produce, say, 180,000 blankets per annum. It is noted too, that the Johnels/ Oxtoby report did not consider the manufacture of blankets on the non-woven system, and while there may be reason for this, a technical appreciation of this process particularly as related to smaller mills would be appropriate.

(iv) The 1974 report is based on market research which is now five years old and clearly any new study would need to make a complete re-assessment of the market.

In view of the four points (i) to (iv) it is thought that there is justification for a re-study of this project.

Mohair Processing

Mohair, like wools suitable for the "Worsted" process is sold in the greasy condition because blending takes place before scouring. The quantity is small and the Oxtoby/Iredale report recommends sale in greasy state. However, coarser mohair in small quantities could be scoured to meet the needs of the domestic handicraft industry.

Textile Industries - General

The possibility of textiles production in general, that is the making of fabrics of cotton and man-made fibres, for all purposes including clothing, sheeting, toweling and furnishings has not been considered todate. Many countries which do not have domestic raw materials for textile production have successfully entered this market.
Lesotho has an increasing internal demand and the possibility of exports, and female labour availability suggests that the textiles industry might have possibilities. Market research into this industry would need to take into account the development of garment manufacturing parallel with fabric production. A penetrating market survey and demand projection is the first essential requirement.

10. Rubber Industries

Tyre retreading is being undertaken by Maseru Tyre Co. (Pty) Ltd., but the demand has not kept the plant occupied.

Industries such as rubber insulated wires and cables, cycle tyres and tubes, and motor vehicle tyres and tubes could not be supported by domestic demand and there would be little chance of exports. A decision by one of the big international tyre makers such as Dunlop, Pirelli or Goodyear to establish a tyre factory in Lesotho as an international development, would be the only way to enter this business.

The demand and possible manufacture of rubber soled shoes should be considered as part of the overall subject of footwear manufacture following a market survey.

11. Paper and Cardboard Industries

The manufacture of paper pulp is in the hands of those countries having abundant forest areas, but the importation of pulp for further processing and the recovery and reprocessing of scrap paper and cardboard may be undertaken in quite small plants. West European countries have organised the collection of waste paper and cardboard through charitable organisations, for return to the paper mills for reprocessing. The charitable organisations receive payment for the material they collect.

Both paper and plastics are being used in industrial packaging in Lesotho, and the packing of flour in paper bags for retail sale will be a major demand. The Government Printing Department which is already printing weekly newspapers, is planning to expand the printing plant to take in further work.

It has been suggested under the section dealing with "Chemical Products" that a survey of the present and future needs for industrial and commercial packaging should be undertaken. The demand for paper and cardboard arising from this survey could then be added to the needs of the printing industry to give a clearer indication of the total requirements.
The questions to be answered are:-

(i) What type and capacity of paper making plant might be viable?

(ii) Would cardboard production be viable?

(iii) Does demand for cartons of all types warrant a production unit?

(iv) Will the demand for paper bags support a production unit?

Corrugated board box production is not likely to be viable due to the small demand.

The N.I.D.C. (India) report provides details of a paper plant of capacity 5 tons a day using waste paper as raw material, and a plant to produce 75,000 cartons per annum from cardboard, and these have been used as a basis for preparing project profiles (Nos 43 and 44). Additionally a profile (No. 45) is given for a plant to produce 20 tons of paper from chemical pulp.

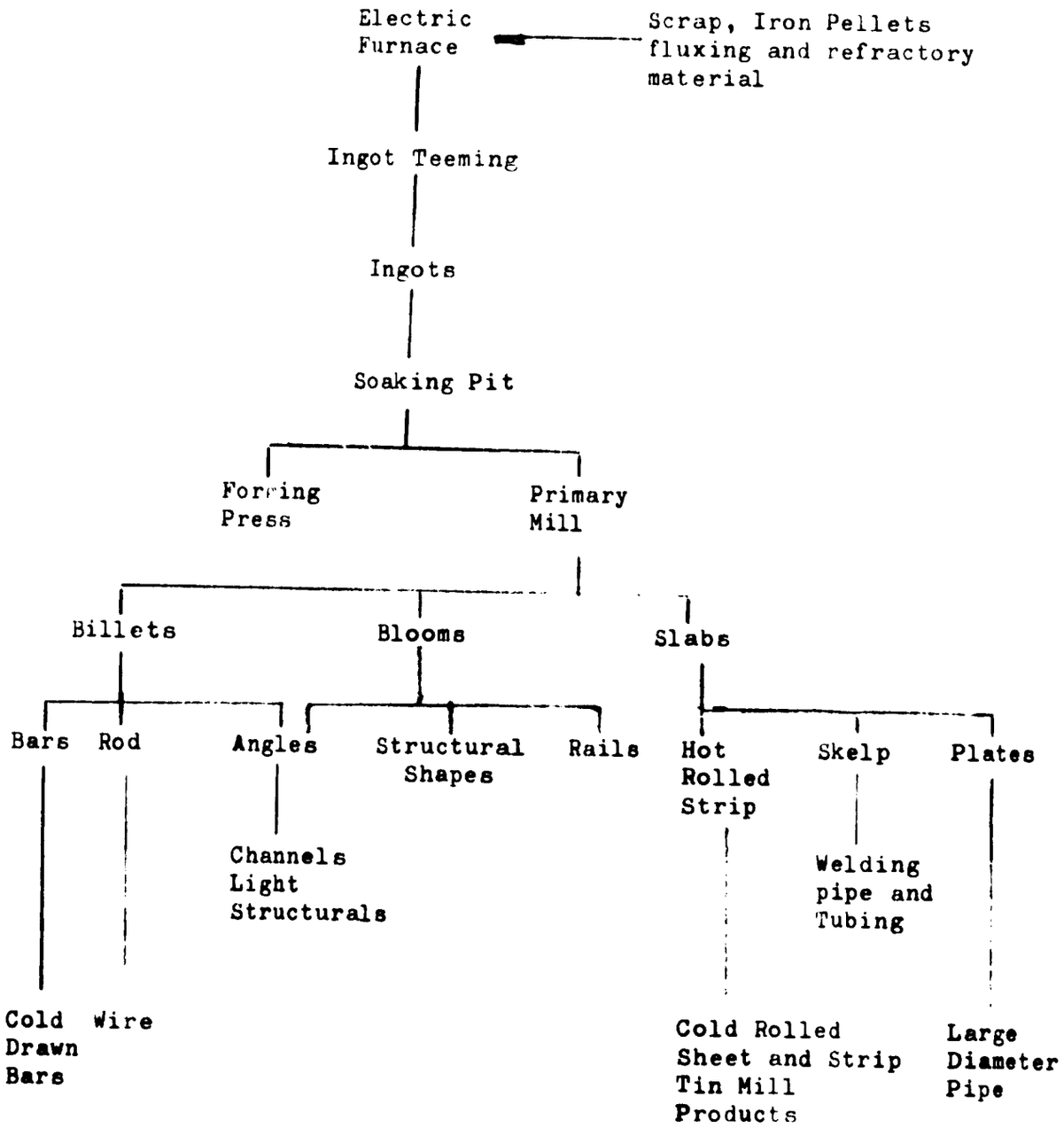
12. Basic Metal Industries

Basic metal industries which includes iron/steel, copper, lead/zinc, and aluminium arise because a country has workable ore deposits, or low cost fuel or electric power. Steel is being made in the Gulf States from imported iron ore pellets, using low cost fuel and power, also aluminium from imported alumina. These plants are located near to the ports where inland freight costs are minimal.

Lesotho has none of these advantages but even so, as demand for iron/steel increases, the possibility of producing intermediate products will arise, and an electric steel making plant using scrap steel and /or reduced iron ore pellets to produce as little as 10,000 tons a year may be considered later. The object of these comments is not to advocate the setting up of a steel industry, but to indicate that the demand for some of the intermediate and end products will reach a level where domestic production may be considered, and in time, backward integration may become possible. This is already being reached in that black steel sheet could possibly be imported to be corrugated and galvanised in Lesotho, and wire products might be manufactured from rod.

A simple flow chart of electric steel production leading to intermediate and end products may help thinking along these lines.

STEEL PRODUCTS FLOW CHART



13. Transport Industries

Transport industries covers the assembly and the manufacture of all transport equipment, including cars, trailers, caravans, trucks, aircraft and water-craft.

Clearly the domestic demand in Lesotho cannot support any one of these industries and entry into any branch of the industry would have to be in co-operation with producers in South Africa.

There appears to be only two possibilities:-

(i) To set up an assembly line with the assistance of a major overseas producer, having first cleared with South Africa the question of exporting to that country.

(ii) To endeavour to make Lesotho into a major supplier of components to the South African transport industry.

Both possibilities would require intensive promotion and political support.

III - LIST OF PROJECT PROFILES

1. Poultry processing 750,000 birds per annum
2. Animal feed mill
3. Vegetable oil extraction
4. Bakery - 900 loaves per hour
5. Bakery - 500 loaves per hour
6. Bakery - 200 loaves per hour
7. Biscuits - 5 tons per day
8. Barley malt - 15,000 tons per annum
9. Cordials
10. Industrial tannery - 25,000 hides, 50,000 skins
11. Shoes - 1000 pairs per day
12. Concrete blocks, 60,000 - 6" per month
13. Concrete poles, 2 000 per month
14. Spun pipes and septic tanks
15. Concrete roofing tiles -1,000,000 per annum
16. Bricks - 1 million per month
17. Sanitary ware
18. Wall tiles
19. Insulators
20. Terazzo tiles
21. Glass bottles - 100, 000 tons per annum
22. Metal shaping service workshop
23. Foundry service shop
24. Electroplating service shop
25. Paint service shop
26. Agricultural implements
27. Exhaust silencers for motor vehicles
28. Crown caps for bottling
29. Domestic hot water heaters
30. Household aluminium goods
31. Galvanised corrugated sheets
32. Knitted products

33. Shirts (small scale)
34. Shirts - 1,000,000 per annum
35. Working clothes
36. Plastic containers
37. Polyethelene film and bags
38. Rigid P.V.C. pipe
39. Detergent powder
40. Washing soap
41. Toothbrushes
42. Wool scouring
43. Paper making- 5 tons per day from scrap
44. Cardboard cartons - 75,000 cartons per annum
45. Paper making - 20 tons per day from pulp

LIST OF POTENTIAL PROJECTS FOR WHICH PROJECT PROFILES HAVE NOT BEEN PREPARED

		Capital Cost Buildings Machines Equipment	Working Capital
1.	Cement, 100,000 tons per annum	12,000,000	1,500,000
2.	Can Making	1,000,000	200,000
3.	Wire Products	500,000	200,000
4.	Blankets	3,200,000	2,000,000
5.	Tractor servicing and parts	500,000	100,000
6.	Tubular furniture	300,000	100,000
7.	Truck bodies	300,000	100,000
8.	Aerated minerals	300,000	100,000
9.	Fruit juices	150,000	50,000
10.	Rosewater	900,000	600,000
11.	Polishing preparations	?	?

The capital figures quoted are only roughly estimated, and can only be indicative

NOTE: A 5 acre farm can supply 1000 birds a day

No. 1

INDUSTRIAL PROJECT PROFILE

Name of Project: Poultry Processing ..... Production Capacity: 300 Birds Per Hour .....

Fixed Capital

	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	5000 m^2	
b) Building (m^2)	2500 m^2	250.000
c) Machinery and Equipment		500.000
d) Transport- and Office Equipment		30.000

Working Capital

a) Raw Material for....Months	150.000
b) Salaries and Wages for...Months	
Other Manufacturing Expenses for...Months	

Annual Cost of Production

	Name	Total:
a) Raw Materials(t,cbm) 1)	Live Birds	2,100,000
2)		
3)		
4)		
b) Electricity	Inst. Capacity kVA 150,000 kWh	
c) Water	5 Gallons per bird 3875,000 galls	
d) Fuels,Oils,Lubricants etc.	100 Galls fuel oil/day	
e) Packaging Materials etc.		12,000
f) Other Manufacturing Input, which ?		20,000
g) Depreciation, Buildings etc.	5 % p.a.	12,500
Machinery, Equipment etc.	10 % p.a.	50,000
Transport Equipment etc.	20 % p.a.	6,000

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Processed chickens	R3.50	775,000	2,700,000
b)				
c)				

Employment

Total: 45 Total: 48,960

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	20	80	19200
" " : un+semiskilled	20	50	12000
2) administrative + supervisory staff			
: low-skilled	4	120	5760
: Highly skilled	1	1000	12000

Number of shifts per Day ....1..... Number of working Days per Year.....300.....

No. 2

INDUSTRIAL PROJECT PROFILE

Name of Project: Animal Feed Mill (Pig and Poultry) Production Capacity: 7 Tons Per Hour (Max)

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	4000 m^2	
b) Building (m^2)	1250 m^2	125,000
c) Machinery and Equipment		100,000
d) Transport- and Office Equipment		30,000

Working Capital		
a) Raw Material for 2 Months		
b) Salaries and Wages for ...Months		600,000
c) Debtors		
Other Manufacturing Expenses for ...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm) 1)	12,000 t (mixed)	3,000,000
2)		
3)		
4)		
b) Electricity Inst. Capacity kVA	kWh	
c) Water	-	-
d) Fuels, Oils, Lubricants etc.	-	-
e) Packaging Materials etc.		300,000
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		8750
Machinery, Equipment etc. 10 % p.a.		10,000
Transport Equipment etc. 20 % p.a.		6,000

Annual Volume of Sales	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Animal Feed	R350	12,000	4,200,000
b)	For laying chickens,			
c)	Pigs, Piglets and young chickens			
			Total: 29	Total: 33,840

Employment Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	14	80	13440
" " : un+semiskilled	14	50	8440
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled	1	1000	12000

Number of shifts per Day 1 Number of working Days per Year 300

No. 3

INDUSTRIAL PROJECT PROFILE

Name of Project: Vegetable Oil Extraction **Production Capacity:** 18 Tons Raw material per day

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	4800 m^2	
b) Building (m^2)	3000 m^2	300.000
c) Machinery and Equipment		500.000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	500.000
b) Salaries and Wages for...Months	
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1) 54.000 Tons Seed	
	2) 55.000 L Solvent	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA	kWh
c) Water	450 Tons/Day	
d) Fuels,Oils,Lubricants etc.	57.000 L/Month	
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc.	5 % p.a.	15.000
Machinery, Equipment etc.	10 % p.a.	50.000
Transport Equipment etc.	% p.a.	

Annual Volume of Sales	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Approx. 2500 Tons			
b)				
c)				

Employment	Total: 21	Total: 26760

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	3	80	2880
" " : untrained/semiskilled	15	50	9000
2) administrative + supervisory staff			
: low-skilled	2	120	2880
: Highly skilled	1	1000	12000

Number of shifts per Day 1 Number of working Days per Year 300

No. 4

INDUSTRIAL PROJECT PROFILE

Name of Project: Bakery Production Capacity: 900 1 lb Loaves per hour

Fixed Capital

	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	2500 m^2	
b) Building (m^2)	5000 m^2	500,000
c) Machinery and Equipment		850,000
d) Transport- and Office Equipment		

Working Capital

a) Raw Material for...Months	0	
b) Salaries and Wages for...Months		200,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production

	Name	Total:
a) Raw Materials (t,cbm) 1)	Wheat flour	1925 Tons
2)	Sugar	90 tons
3)	Fat	117 tons
4)	Yeast	60 tons
b) Electricity	Inst. Capacity kVA 250	kWh
c) Water		
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		2500
Machinery, Equipment etc. 10 % p.a.		85,000
Transport Equipment etc. ... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	1 lb loaves		6,480,000	
b)				
c)				

Employment

Number of Employees and their Annual Income — Total: 95 — Total: 129,120

	Number	Average Monthly income	Total income
1) direct productive: skilled workers	12	80	11,520
" " : unt semiskilled	40	50	24,000
2) administrative + supervisory staff			
: low-skilled	40	120	57,600
: Highly skilled	3	1000	36,000

Number of shifts per Day ..... Number of working Days per Year 300

No. 5

INDUSTRIAL PROJECT PROFILE

Name of Project: Bakery Production Capacity: 500 1lb loaves per hour

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	6,000 m^2	
b) Building (m^2)	3,500 m^2	350,000
c) Machinery and Equipment		600,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	
b) Salaries and Wages for...Months	120,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm) 1)	Wheat flour	1620 tons
2)	Sugar	50 tons
3)	Fat	65 tons
4)	Yeast	33 tons
b) Electricity	Inst. Capacity kVA 150	kWh
c) Water		
d) Fuels,Oils,Lubricants etc.	200 L/Day	
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		17500
Machinery, Equipment etc. 10 % p.a.		60000
Transport Equipment etc. % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	1 lb. loaves		3,600,000	
b)				
c)				

Employment	Total: 59	Total: 92,760
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	6	80	5760
" " : unskilled/semiskilled	25	50	15000
2) administrative + supervisory staff			
: low-skilled	25	120	36000
: Highly skilled	3	1000	36000

Number of shifts per Day ..... Number of working Days per Year 300

No. ..

INDUSTRIAL PROJECT PROFILE

Name of Project: ..... Bakery ..... Production Capacity: ..... 300 .....
1lb loaves per hour

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	5000 m	
b) Building (m^2)	2500 m	250.000
c) Machinery and Equipment		450.000
d) Transport- and Office Equipment		

Working Capital

a) Raw Material for....Months .....
b) Salaries and Wages for...Months .....
Other Manufacturing Expenses for...Months .....

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm) 1)	Wheat flour	975 tons
2)	Sugar	30 tons
3)	Fat	39 tons
4)	Yeast	20 tons
b) Electricity	Inst. Capacity 100 KVA	kWh
c) Water		
d) Fuels,Oils,Lubricants etc.	150 L/Day	
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		12.500
Machinery, Equipment etc. 10 % p.a.		45.000
Transport Equipment etc. ..... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	1 lb loaves		2,160,000	
b)				
c)				

Employment	Total: 41	Total: 74,520
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	4	80	3,840
" " : unskilled	17	50	10,200
2) administrative + supervisory staff			
: low-skilled	17	120	24,480
: Highly skilled	3	1000	36,000

Number of Shifts per Day ..... Number of working Days per Year ..... 300 .....

No. 7

INDUSTRIAL PROJECT PROFILE

Name of Project: Biscuit Making Plant ..... Production Capacity: 5 tons Per day

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)	2000 m^2	R100 230,000
c) Machinery and Equipment		450,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	
b) Salaries and Wages for...Months	100,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials(t,cbm)	1)	
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA 1,300,000 kWh	
c) Water	250 Kg/24 Hr	
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc.....% p.a.		
Machinery, Equipment etc.....% p.a.		
Transport Equipment etc.....% p.a.		

Annual Volume of Sales

Type of Product	Unit Value	Number of Units	Total Turnover
a)			
b)			
c)			

Employment — Total: 16 — Total: 27 000

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	80		4,800
" " : unskilled	50		3,000
2) administrative + supervisory staff			
: low-skilled	120		7,200
: Highly skilled	1000		12,000

Number of shifts per Day .....1..... Number of Working Days per Year 300

No. 8

INDUSTRIAL PROJECT PROFILE

Name of Project: Malt Factory Production Capacity: 12,000 Tons per annum

Fixed Capital

	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2) 10,000 m		
b) Building (m^2) [illegible],000 m	18,000	200,000
c) Machinery and Equipment		2,300,000
d) Transport- and Office Equipment		230,000

Working Capital

a) Raw Material for 4 Months 1,200,000

b) Salaries and Wages for 2 Months ....

Other Manufacturing Expenses for 1 Months 100,000

Annual Cost of Production

	Name	Total:
a) Raw Materials (t,cbm) 1)	Barley [illegible] tons	5,100,000
2)		
3)		
4)		

b) Electricity Inst. Capacity 2000 kVA [illegible],000 kWh (110 - 150 KWH/T Malt)

c) Water 14 cbm/t Malt .... 168,000 cbm

d) Fuels, Oils, Lubricants etc. .... [illegible],000 Lt.

e) Packaging Materials etc. ....

f) Other Manufacturing Input, which ? 300,000

g) Depreciation, Buildings etc. 5 % p.a. 35,000

Machinery, Equipment etc. 10 % p.a. 230,000

Transport Equipment etc. 20 % p.a. 46,000

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Brewing Malt		12000 tpa	8,500,000
b)				
c)				

Employment

Total: 47 Total: 57,000

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	5	80	4,800
" " : un+semiskilled	35	50	21,000
2) administrative + supervisory staff			
: low-skilled	5	120	7,200
: Highly skilled	2	1000	24,000

Number of shifts per Day 1/2 .... Number of working Days per Year 300

NO. 9

INDUSTRIAL PROJECT PROFILE

Name of Project: Cordials Production Capacity: 50,000 Doz. Bottles per year

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	3000 m^2	
b) Building (m^2)	700	R100 70,000
c) Machinery and Equipment		120,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	
b) Salaries and Wages for...Months	160,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	500,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA kWh	
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc.	5 ...% p.a.	3,500
Machinery, Equipment etc.	10 ...% p.a.	12,000
Transport Equipment etc.	...% p.a.	

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Cordials		50,000 Dozen	600,000
b)				
c)				

Employment — Total: 11 Total: 19,660

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	3	80	2,880
" " : untremiskilled	3	50	1,800
2) administrative + supervisory staff			
: low-skilled	2	120	2,880
: Highly skilled	1	1000	12,000

Number of shifts per Day ....1.....Number of working Days per Year...300...

No. 10

INDUSTRIAL PROJECT PROFILE

Name of Project: Industrial Tannery ..... Production Capacity: 25,000 Hides and 50,000 Skins

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	2000 m^2	
b) Building (m^2)	700 m^2	R100 70,000
c) Machinery and Equipment		350,000
d) Transport- and Office Equipment		15,000

Working Capital		
a) Raw Material for 3 Months		
b) Salaries and Wages for ...Months		320,000
Other Manufacturing Expenses for ...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1) Hides/Skins	590,000
	2) Chemicals, Pigments etc	200,000
	3)	
	4)	
b) Electricity	Inst. Capacity kVA kWh	
c) Water		120,000
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		3,500
Machinery, Equipment etc. 10 % p.a.		35,000
Transport Equipment etc. 20 % p.a.		3,000

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Finished Leather		1,000,000 sq ft	1,300,000
b)				
c)				

Employment — Total: 37 — Total: 38,040

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	10	80	9,600
" " : unskilled/semiskilled	25	50	15,000
2) administrative + supervisory staff			
: low-skilled	1	120	1,440
: Highly skilled	1	1000	12,000

Number of shifts per Day ..... 1 ..... Number of ...

No. 11

INDUSTRIAL PROJECT PROFILE

Name of Project: Shoe Making Plant ..... **Production Capacity:** 1000 pairs Cement Lasted Mens Shoe per day

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)	2000 m^2 @ R100	200,000
c) Machinery and Equipment		500,000
d) Transport- and Office Equipment		

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		500,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm) 1)	Uppers (Leather)	2,000,000
2)	Sole Leather	900,000
3)		
4)		
b) Electricity	Inst. Capacity kVA 30,000 kWh	
c) Water		250,000
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?	Sales Costs	200,000
g) Depreciation, Buildings etc. 5 % p.a.		10,000
Machinery, Equipment etc. 10 % p.a.		50,000
Transport Equipment etc. ..... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Mens Shoes	R16	300,000	4,800,000
b)				
c)				

Employment Total: 102 Total: 111,840

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	40	80	38,400
" " : untrained/unskilled	44	50	26,400
2) administrative + supervisory staff			
: low-skilled	16	120	23,040
: Highly skilled	2	1000	24,000

Number of shifts per Day ..... Number of working Days per Year ....

No. 12

INDUSTRIAL PROJECT PROFILE

Name of Project: Concrete Blocks (Hollow) Production Capacity: 60,000 6" Blocks per Month

Fixed Capital		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	2500 m^2		
b) Building (m^2)	350 m^2	R100	35,000
c) Machinery and Equipment			45,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		80,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials(t,cbm) 1)	Sand 6000 cbm	
2)	Gravel 3000 cbm	
3)	Cement 1120 t	
4)		
b) Electricity	Inst. Capacity kVA 1080 kWh	
c) Water	1,200 cum.	
d) Fuels,Oils,Lubricants etc.	60,000 Litres	
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc..5...% p.a.		1750
Machinery, Equipment etc..10...% p.a.		4500
Transport Equipment etc.....% p.a.		

Annual Volume of Sales	Type of Product	Unit Value	Number of Units	Total Turnover
a)	6" Concrete Blocks		720,000	
b)				
c)				

Employment	Total: 12	Total: 20520
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	3	80	2,880
" " : un+semiskilled	7	50	4,200
2) administrative + supervisory staff			
: low-skilled	1	120	1,440
: Highly skilled	1	1000	12,000

Number of shifts per Day ....1.... Number of working Days per Year....300....

No. 13

INDUSTRIAL PROJECT PROFILE

Name of Project: Concrete Poles Production Capacity: 2000 Per Month

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	18,000 m^2	
b) Building (m^2)	6,000 m^2	R100/m^2 600,000
c) Machinery and Equipment		2,200,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for...Months	
b) Salaries and Wages for...Months	300,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials(t,cbm) 1)	Cement	
2)	Fine & Coarse Aggregates	1,600,000
3)	Wire Mesh/Iron Bars	
4)		
b) Electricity	Inst. Capacity kVA 520,00 kWh	
c) Water	27,000 Kg/Month	
d) Fuels,Oils,Lubricants etc.	1300 t/Month	
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?	Misc. Repairs	350,000
g) Depreciation, Buildings etc. 5 % p.a.		30,000
Machinery, Equipment etc. 10 % p.a.		220,000
Transport Equipment etc. % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Concrete Poles	150	24,000	3,600,000
b)				
c)				

Employment Total: 90 Total: 110400

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	23	80	22,080
" " : un+semiskilled	90	50	36,000
2) administrative + supervisory staff			
: low-skilled	3	120	4,320
: Highly skilled	4	1000	48,000

Number of shifts per Day 1 Number of working Days per Year 300

No. 14

INDUSTRIAL PROJECT PROFILE

Name of Project: Spun Pipes and Septic Tanks Production Capacity: 130,000 Ft.

	Unit (m², t, cbm) Per Month	Value in Rands
Fixed Capital		
a) Land (m²)	1000 m²	
b) Building (m²)	500 m² @ R100/m²	50,000
c) Machinery and Equipment		130,000
d) Transport- and Office Equipment		
Working Capital		
a) Raw Material for...Months		
b) Salaries and Wages for...Months		35,000
Other Manufacturing Expenses for...Months		
Annual Cost of Production	**Name**	**Total:**
a) Raw Materials (t, cbm) 1)		
2)		
3)		
4)		
b) Electricity Inst. Capacity kVA	kWh	
c) Water		
d) Fuels, Oils, Lubricants etc.		220,000
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		2,500
Machinery, Equipment etc. 10 % p.a.		13,000
Transport Equipment etc. ... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	9" to 72" Spun Concrete Pipes		130,000 ft	300,000
b)				
c)				

Employment

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
	Total: 18	Total:	26740
1) direct productive: skilled workers	8	80	7,680
" " : un+semiskilled	7	50	4,200
2) administrative + supervisory staff			
: low-skilled	2	120	2,880
: Highly skilled	1	1000	12,000

Number of shifts per day 1 ... Number of Working Days per Year 300

No. 15

INDUSTRIAL PROJECT PROFILE

Name of Project: Concrete Roofing Tiles ..... Production Capacity: 6000 Tiles per 8 hour shift

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	1000 m^2	
b) Building (m^2)	850 m^2	85,000
c) Machinery and Equipment		120,000
d) Transport- and Office Equipment		

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		60,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials(t,cbm)	1)	
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA / kWh	105,000
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		2,250
Machinery, Equipment etc. 10 % p.a.		12,000
Transport Equipment etc. ..... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Concrete Roofing Tiles		1,100,000	200,000
b)				
c)				

Employment	Total: 42	Total: 39,360

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	3	80	2,880
" " : un+semiskilled	36	50	21,000
2) administrative + supervisory staff			
: low-skilled	2	120	2,880
: Highly skilled	1	1000	12,000

Number of shifts per Day ..... 1 ..... Number of working Days per Year 300

No. 16

INDUSTRIAL PROJECT PROFILE

Name of Project: Brick Making Plant (Complete) Production Capacity: 1,000,000 Per Month

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	4500 m^2	
b) Building (m^2)	2000 m^2	R100/m^2 200,000
c) Machinery and Equipment		1,200,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	100,000
b) Salaries and Wages for...Months	
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1) Clay	
	2) Sand	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA	kWh
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc...5..% p.a.		29,000
Machinery, Equipment etc...10..% p.a.		120,000
Transport Equipment etc.....% p.a.		

Annual Volume of Sales	Type of Product	Unit Value	Number of Units	Total Turnover
a)	12,000,000 Bricks			
b)				
c)				

Employment	Total: 58	Total: 68640
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	12	80	11,520
" " : unskilled	36	50	21,600
2) administrative + supervisory staff			
: low-skilled	8	120	11,520
: Highly skilled	2	1000	24,000

Number of shifts per Day .....1/3.....Number of working Days per Year..300...

No. 17

INDUSTRIAL PROJECT PROFILE

Name of Project: Sanitary Ware and Porcelain Insulators Production Capacity: 80 Tons Per Month

	Unit (m^2,t,cbm)	Value in Rands
Fixed Capital		
a) Land (m^2)	20.000 m^2	
b) Building (m^2)	7.000 m^2	700.000
c) Machinery and Equipment		500.000
d) Transport- and Office Equipment		15.000
Working Capital		
a) Raw Material for....Months		100.000
b) Salaries and Wages for...Months		
Other Manufacturing Expenses for...Months		
Annual Cost of Production	**Name**	**Total:**
a) Raw Materials (t,cbm) 1)	Clay, Felspar	70.000
2)	Consumable Stores	130.000
3)		
4)		
b) Electricity Inst. Capacity kVA	kWh	100.000
c) Water 11.000	k. Diesel	
d) Fuels,Oils,Lubricants etc. 690	g. Heavy Fuel Oil	
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?	Sales Costs	170.000
g) Depreciation, Buildings etc. 5	% p.a.	35.000
Machinery, Equipment etc. 10	% p.a.	50.000
Transport Equipment etc. 20	% p.a.	3.000

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	1000 Tons Sanitary		1000 Tons	1,200,000
b)	Ware and Insulators			
c)				

Employment

Total: 118 Total: 119760

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	54	80	51.840
" " : unt semiskilled	54	50	32.400
2) administrative + supervisory staff			
: low-skilled	8	120	11.520
: Highly skilled	2	1000	24.000

Number of shifts per Day 1 Number of working Days per Year 300

No. 18

INDUSTRIAL PROJECT PROFILE

Name of Project: Wall Tiles ..... Production Capacity: 120 Tons Per Month

Fixed Capital	Unit (m^2,t,cbm)		Value in Rands
a) Land (m^2)	11000 m^2		
b) Building (m^2)	3500 m^2	R100/m^2	350,000
c) Machinery and Equipment			1,200,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for....Months		200,000
b) Salaries and Wages for...Months		
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1) Clay etc	150,000
	2) Consumable Stores	50,000
	3)	
	4)	
b) Electricity	Inst. Capacity kVA 480,000 kWh	
c) Water	4400 m^3	80,000
d) Fuels,Oils,Lubricants etc.	440 Tons	
e) Packaging Materials etc.	Repairs, Maintenance	25,000
f) Other Manufacturing Input, which ?	Sales Costs	120,000
g) Depreciation, Buildings etc.	5 % p.a.	12,500
	Machinery, Equipment etc. 10 % p.a.	120,000
	Transport Equipment etc. ..... % p.a.	

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Glazed Wall Tiles		1440 Tons	700,000
b)				
c)				

Employment	Total: 78	Total: 87,120
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	10	80	9,600
" " : unskilled	62	50	37,200
2) administrative + supervisory staff			
: low-skilled	3	120	4,320
: Highly skilled	3	1000	36,000

Number of shifts per Day ..... 2 ..... Number of working Days per Year 300

No. 19

INDUSTRIAL PROJECT PROFILE

Name of Project: Porcelain Insulators ..... Production Capacity: .....

(See Profile No. 17)

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)		
c) Machinery and Equipment		
d) Transport- and Office Equipment		

Working Capital

a) Raw Material for....Months .....

b) Salaries and Wages for...Months .....

Other Manufacturing Expenses for...Months .....

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA ..... kWh	
c) Water		
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc.....% p.a.		
Machinery, Equipment etc.....% p.a.		
Transport Equipment etc.....% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	.....			
b)	.....			
c)	.....			

Employment	Total: Number	Total: Average Monthly income	Total income
Number of Employees and their Annual Income			
1) direct productive: skilled workers			
" " : un+semiskilled			
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled			

Number of shifts per Day .....Number of working Days per Year.....

No 20

INDUSTRIAL PROJECT PROFILE

Name of Project: Terazzo Tile ..... Production Capacity: 100,000 ..
Manufacture and installation tiles per month

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)	500 m^2	50,000
c) Machinery and Equipment		150,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	
b) Salaries and Wages for...Months	20,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	115,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA kWh	
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 ...% p.a.		2,500
Machinery, Equipment etc. 10 ...% p.a.		15,000
Transport Equipment etc. .....% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)				200,000
b)				
c)				

Employment — Total: 31 — Total: 35400

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	15	80	14400
" " : unskilled	15	50	9000
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled	1	1000	12,000

Number of shifts per Day .....1.....Number of working Days per Year.....300.....

No 21

INDUSTRIAL PROJECT PROFILE

Name of Project: ..Glass Bottle Making Plant.. Production Capacity: 30 tons per day..

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	28,000 m^2	
b) Building (m^2)	5,000 m^2	500,000
c) Machinery and Equipment		2,500,000
d) Transport- and Office Equipment		

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		150,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm) 1)	Quartz, 90,000 t	800,000
2)		
3)		
4)		
b) Electricity	Inst. Capacity kVA / kWh	450,000
c) Water		
d) Fuels,Oils,Lubricants etc.	Maintenance/repair	480,000
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?	Misc.	620,000
g) Depreciation, Buildings etc.	5 % p.a.	25,000
Machinery, Equipment etc.	10 % p.a.	250,000
Transport Equipment etc.	% p.a.	

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Glass Bottle	R455/t	9000 t	4,100,000
b)				
c)				

Employment	Total: 100	Total: 106,920

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	19	80	18,240
" " : untrained/unskilled	71	50	42,600
2) administrative + supervisory staff			
: low-skilled	7	120	10,080
: Highly skilled	3	1000	36,000

Number of shifts per Day .....3.....Number of working Days per Year.....300.....

No 22

INDUSTRIAL PROJECT PROFILE

Name of Project: Central Workshop - Industrial Estate ..... Production Capacity: .....

Fixed Capital		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	5000 m^2		
b) Building (m^2)	1000 m^2	R100/m^2	100,000
c) Machinery and Equipment			300,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for 6 Months		200,000
b) Salaries and Wages for 2 Months		5,200
Other Manufacturing Expenses for 2 Months		4,000
	Total:	209,200

Annual Cost of Production		Name		
a) Raw Materials (t,cbm)	1)	Steels		
	2)	Electrodes		430,000
	3)	Hardening salts		
	4)			
b) Electricity	Inst. Capacity 60kVA	60,000	kWh @ 6c/unit	3,600
c) Water		10,000	cu.m @ 50c/1000g	1,000
d) Fuels, Oils, Lubricants etc.		200,000	litre	9,000
e) Packaging Materials etc.				
f) Other Manufacturing Input, which ?	Misc			14,000
g) Depreciation, Buildings etc. 5 % p.a.				5,000
Machinery, Equipment etc. 10 % p.a.				30,000
Transport Equipment etc. ..... % p.a.				

Annual Volume of Sales	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Die and toolmaking			
b)	Welding and heat treatment			850,000
c)	Machining and forging			

Employment		Total: 20	Total: 31,000
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	14	80	13500
" " : untrained/semiskilled	2	50	1200
2) administrative + supervisory staff			
: low-skilled	3	120	4300
: Highly skilled	1	1000	12,000

Number of shifts per Day ....1(2).....Number of working Days per Year..300...

No. 23

INDUSTRIAL PROJECT PROFILE

Name of Project: Foundry-Industrial Estate ... Production Capacity: 1500 tons per annum

Fixed Capital		Unit (m², t, cbm)	Value in Rands
a) Land (m²)	5000 m²		
b) Building (m²)	1600 m²	100/m²	160,000
c) Machinery and Equipment			660,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for 3 Months		160,000
b) Salaries and Wages for 2 Months		6,500
Other Manufacturing Expenses for 2 Months		30,000

Annual Cost of Production	Name		Total:
a) Raw Materials (t, cbm)	1) Cast iron	1400t	560,000
	2) Scrap	250t	70,000
	3) Sand etc		43,000
	4)		
b) Electricity	Inst. Capacity 1100 kVA, 85LF	1,980,000 kWh @ 6c/unit	120,000
c) Water		100,000 cu.m.	10,000
d) Fuels, Oils, Lubricants etc.		200,000 litre	9,000
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?	Misc.		70,000
g) Depreciation, Buildings etc. 5 % p.a.			8,000
Machinery, Equipment etc. 10 % p.a.			66,000
Transport Equipment etc. ... % p.a.			

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Cast iron parts	R1000/t	1500 tons	1,500,000
b)				
c)				

Employment	Total: 35	Total: 38,400

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	12	80	11,500
" " : un+semiskilled	20	50	12,000
2) administrative + supervisory staff			
: low-skilled	2	120	2,900
: Highly skilled	1	1000	12,000

Number of shifts per Day 1 ... Number of working Days per Year 300

INDUSTRIAL PROJECT PROFILE

Name of Project: Electroplating Workshop Industrial Estate ..... Production Capacity: 2.5 tons per day

Fixed Capital		Unit (m², t, cbm)	Value in Rands
a) Land (m²)	3000 m²		
b) Building (m²)	600 m²	R100/m²	60,000
c) Machinery and Equipment			220,000
d) Transport- and Office Equipment			15,000

Working Capital		
a) Raw Material for 3 Months		50,000
b) Salaries and Wages for 2 Months		2,000
Other Manufacturing Expenses for 2 Months		9,000

Annual Cost of Production		Name	Total:
a) Raw Materials (t, cbm)	1)	Ni/Fe metals	170,000
	2)	Chemicals etc	30,000
	3)		
	4)		
b) Electricity	Inst. Capacity 100 kVA LF = .7	420,000 kWh @ 6c/unit	25,000
c) Water		10,000 cbm	1,000
d) Fuels, Oils, Lubricants etc.		100,000 litre	4,500
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?			
g) Depreciation, Buildings etc.	5 % p.a.		3,000
Machinery, Equipment etc.	10 % p.a.		22,000
Transport Equipment etc.	20 % p.a.		3,000

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Electroplated parts	730/t	750 tons	550,000
b)				
c)				

Employment — Total: 14 — Total: 12330

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	5	80	4800
" " : un+semiskilled	6	50	3600
2) administrative + supervisory staff			
: low-skilled	2	120	2900
: Highly skilled	1	1000	1000

Number of shifts per Day 1 (3) ..... Number of working Days per Year 300

No 25

INDUSTRIAL PROJECT PROFILE

Name of Project: Paintshop Industrial Estate ..... Production Capacity: 15000 sq.m per annum

Fixed Capital		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	5000 m^2		
b) Building (m^2)	1000 m^2	R100/m^2	100,000
c) Machinery and Equipment			360,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for 6 Months		85,000
b) Salaries and Wages for 2 Months		2,500
Other Manufacturing Expenses for 2 Months		14,000

Annual Cost of Production	Name		Total:
a) Raw Materials (t,cbm)	1) Paints and varnishes	}	
	2) Other chemicals (thinners)	}	170,000
	3)		
	4)		
b) Electricity	Inst. Capacity 300 kVA LF = .5	1,000,000 kWh @ 6c/unit	60,000
c) Water	25000 c.m		1,100
d) Fuels, Oils, Lubricants etc.	200,000 litre		9,000
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?	Misc		29,000
g) Depreciation, Buildings etc.	5 % p.a.		5,000
Machinery, Equipment etc.	10 % p.a.		36,000
Transport Equipment etc.	% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Painting of parts	R41/m^2	15,000 m^2	620,000
b)				
c)				

Employment	Total: 17	Total: 15,200

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	8	80	2700
" " : unskilled/semiskilled	6	50	3600
2) administrative + supervisory staff			
: low-skilled	2	120	2900
: Highly skilled	1	1000	1000

Number of shifts per Day ..... Number of working Days per Year .....

No. 26

INDUSTRIAL PROJECT PROFILE

Name of Project: Agricultural Implements (first phase) Production Capacity: .....

Fixed Capital (excludes forging, foundry, press forming, heat treatment)		Unit (m², t, cbm)	Value in Rands
a) Land (m²)	2000 m²		
b) Building (m²)	600 m²	R100/m²	60,000
c) Machinery and Equipment			60,000
d) Transport- and Office Equipment			

Working Capital	
a) Raw Material for 2 Months	35,000
b) Salaries and Wages for ... Months	
Other Manufacturing Expenses for ... Months	

Annual Cost of Production	Name		Total:
a) Raw Materials (t, cbm)	1)		174,000
	2)		
	3)		
	4)		
b) Electricity	Inst. Capacity 30 kVA	30,000 kWh @ 6c/unit	1800
c) Water			
d) Fuels, Oils, Lubricants etc.			
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?			
g) Depreciation, Buildings etc. 5 % p.a.			3000
Machinery, Equipment etc. 10 % p.a.			6000
Transport Equipment etc. ..... % p.a.			

Annual Volume of Sales

Type of Product	Unit Value	Number of Units	Total Turnover
a) Carts	R190	700	133,000
b) Implements	R 65	4000	260,000
c) Hand Operated Implements	R 30	2000	60,000
		Total: 40	Total: 81,360

Employment

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	14	80	13440
" " : unskilled	14	50	8400
2) administrative + supervisory staff			
: low-skilled	8	120	11520
: Highly skilled	4	1000	48000

Number of shifts per Day 1 Number of working Days per Year 300

No 27

INDUSTRIAL PROJECT PROFILE

Name of Project: Exhaust Silencers for motor vehicles ..... Production Capacity: .....

Fixed Capital

	Unit (m², t, cbm)	Value in Rands
a) Land (m²)	5000 m²	
b) Building (m²)	900 m² R100/m²	90,000
c) Machinery and Equipment		5,000
d) Transport- and Office Equipment		

Working Capital

a) Raw Material for....Months	
b) Salaries and Wages for...Months	10,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production

	Name	Total:
a) Raw Materials (t, cbm)	1)	
	2)	
	3)	
	4)	77,000
b) Electricity	Inst. Capacity ..... kVA ..... kWh	
c) Water		
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 ...% p.a.		4,500
Machinery, Equipment etc. 10 ...% p.a.		500
Transport Equipment etc. .....% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Exhaust Silencers		12000	100,000
b)				
c)				

Employment

Total: 16 Total: 24,600

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	10	80	9600
" " : unskilled/semiskilled	5	50	3000
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled	1	1000	12,000

Number of shifts per Day .....1.....Number of working Days per Year...300...

No 28

INDUSTRIAL PROJECT PROFILE

Name of Project: ...Crown-cap making Plant.... Production Capacity: 82,000,000 caps per year

Fixed Capital		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)			
b) Building (m^2)	650 m^2	R100/m^2	65,000
c) Machinery and Equipment			300,000
d) Transport- and Office Equipment			

Working Capital	
a) Raw Material for....Months	
b) Salaries and Wages for...Months	100,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm) 1)	Tin plate	
2)	Cork	
3)		
4)		
b) Electricity Inst. Capacity kVA	kWh	
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		3,250
Machinery, Equipment etc. 10 % p.a.		30,000
Transport Equipment etc. ... % p.a.		

Annual Volume of Sales

Type of Product	Unit Value	Number of Units	Total Turnover
a)			
b)			
c)			

Employment	Total: 16	Total: 36,720
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	11	80	10560
" " : unskilled	2	50	1200
2) administrative + supervisory staff			
: low-skilled	1	120	960
: Highly skilled	2	1000	24,000

Number of shifts per Day .....1.....Number of working Days per Year..300...

No 29

INDUSTRIAL PROJECT PROFILE

Name of Project: Domestic Hot Water Heaters Production Capacity: 2000 per annum

3 to 15 gallons capacity

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)	500 m^2 R100/m^2	50,000
c) Machinery and Equipment		120,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	50,000
b) Salaries and Wages for...Months	
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	166,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA	kWh
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 ...% p.a.		2,500
Machinery, Equipment etc. 10 ...% p.a.		12,000
Transport Equipment etc. .....% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Domestic Hot Water Heaters		1500	230,000
b)				
c)				

Employment Total: 16 Total: 23,880

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	8	80	7680
" " : unt-semiskilled	2	50	4200
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled	1	1000	12,000

Number of shifts per Day 1 Number of working Days per Year 300

No 30

INDUSTRIAL PROJECT PROFILE

Name of Project: Aluminium Household Goods ... Production Capacity: 30 tons per month

Fixed Capital		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	6300 m^2		
b) Building (m^2)	1000 m^2	R100/m^2	100,000
c) Machinery and Equipment			400,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		150,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production		Name	Total:
a) Raw Materials (t,cbm)	1)	Aluminium 360T	
	2)		
	3)		
	4)		
b) Electricity	Inst. Capacity kVA	400,000 kWh	
c) Water			
d) Fuels, Oils, Lubricants etc.			
e) Packaging Materials etc.		78 tons	
f) Other Manufacturing Input, which ?			
g) Depreciation, Buildings etc.	5...% p.a.		5000
Machinery, Equipment etc.	10...% p.a.		40,000
Transport Equipment etc.	...% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Kitchen utensils			
b)				
c)				

Employment	Total: 81	Total: 108,720

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	31	80	29760
" " : unskilled	42	50	25,200
2) administrative + supervisory staff			
: low-skilled	4	120	5760
: Highly skilled	4	1000	48,000

Number of shifts per Day ....1.... Number of working Days per Year. 300 ...

INDUSTRIAL PROJECT PROFILE

No 31

Name of Project: Galvanised Corrugated Sheets Production Capacity: 800 tons per annum

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)		500,000
c) Machinery and Equipment		500,000
d) Transport- and Office Equipment		

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		500,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	4,000,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA / kWh	
c) Water		50,000
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.	Factory overheads	65,000
f) Other Manufacturing Input, which ?	Selling expenses	170,000
g) Depreciation, Buildings etc. 5 ...% p.a.		25,000
Machinery, Equipment etc. 10 ...% p.a.		50,000
Transport Equipment etc. .....% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Galvanised Corrugated Sheets	R625	8000T	5,000,000
b)				
c)				

Employment	Total: 109	Total: 126,000
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	50	80	48,000
" " : unt semiskilled	50	50	30,000
2) administrative + supervisory staff			
: low-skilled	5	120	
: Highly skilled	4	1000	48,000

Number of shifts per Day .....1.....Number of working Days per Year....300

No 32

INDUSTRIAL PROJECT PROFILE

Name of Project: .Knitted.Products..... Production Capacity: .....
Fabrics, socks, gloves, singlets, panties

Fixed Capital	Unit (m^2,t,cbm)		Value in Rands
a) Land (m^2)	.....		
b) Building (m^2)	.....1000 m^2.....	R100/m^2	100,000
c) Machinery and Equipment	.....		500,000
d) Transport- and Office Equipment	.....		

Working Capital		
a) Raw Material for....Months	.....	100,000
b) Salaries and Wages for...Months	.....	.....
Other Manufacturing Expenses for...Months	.....	.....

Annual Cost of Production	Name	Total:
a) Raw Materials(t,cbm)	1)	500,000
	2)	.....
	3)	.....
	4)	.....
b) Electricity	Inst. Capacity kVA ..... kWh	.....
c) Water	.....	.....
d) Fuels,Oils,Lubricants etc.	.....	.....
e) Packaging Materials etc.	.....	.....
f) Other Manufacturing Input, which ?	.....	.....
g) Depreciation, Buildings etc.	5...% p.a.	5000
	Machinery, Equipment etc. 10...% p.a.	50,000
	Transport Equipment etc.....% p.a.	.....

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	.....			700,000
b)	.....			.....
c)	.....			.....

Employment	Total: 100	Total: 102, 480

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	43	80	41280
" " : unskilled	50	50	30,000
2) administrative + supervisory staff			
: low-skilled	5	120	7,200
: Highly skilled	2	1000	24,000

Number of shifts per Day .....Number of working Days per Year...300

No 33

INDUSTRIAL PROJECT PROFILE

Name of Project: Shirt making ..... Production Capacity: .....

Fixed Capital	Unit (m^2,t,cbm)		Value in Rands
a) Land (m^2)			
b) Building (m^2)	1000 m^2	R100/m^2	100,000
c) Machinery and Equipment			160,000
d) Transport- and Office Equipment			

Working Capital	
a) Raw Material for....Months	130,000
b) Salaries and Wages for...Months	
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	610,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA kWh	
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		5,000
Machinery, Equipment etc. 10 % p.a.		16,000
Transport Equipment etc. ..... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Mens shirts	R14	50000	700,000
b)				
c)				

Employment	Total: 23	Total: 32,280

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	15	80	14400
" " : unskilled	5	50	3000
2) administrative + supervisory staff			
: low-skilled	2	120	2880
: Highly skilled	1	1000	12,000

Number of shifts per Day .....1.....Number of working Days per Year..300.

INDUSTRIAL PROJECT PROFILE No 34

Name of Project: Mens Shirt Sewing..... Production Capacity: 3600.... shirts per day

Fixed Capital	Unit (m², t, cbm)		Value in Rands
a) Land (m²)			
b) Building (m²)	9600 m²	R100/m²	960,000
c) Machinery and Equipment			800,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		1,000,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t, cbm) 1)	Cloth	8,200,000
2)	Subsidiary materials	400,000
3)		
4)		
b) Electricity	Inst. Capacity kVA / kWh	
c) Water		6,00,000
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		48,000
Machinery, Equipment etc. 10 % p.a.		40,000
Transport Equipment etc. ... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Mens shirts	R14.50	1,080,000	15,660,000
b)				
c)				

Employment Total: 280 Total: 294720

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	200	80	192,000
" " : un+semiskilled	40	50	24,000
2) administrative + supervisory staff			
: low-skilled	38	120	54720
: Highly skilled	2	1000	24,000

Number of shifts per Day ....3.....Number of working Days per Year..300...

Estimated usage - one suit per man per year

No 35

INDUSTRIAL PROJECT PROFILE

Name of Project: Working clothes sewing ..... Production Capacity: 250,000 suits per year

Fixed Capital		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	4000 m^2		
b) Building (m^2)	2000 m^2	R100/m^2	200,000
c) Machinery and Equipment			300,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		500,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production		Name	Total:
a) Raw Materials (t,cbm)	1)	Cloth 925,000 m	
	2)	Sewing Thread	
	3)	- 68 million m.	
	4)		
b) Electricity	Inst. Capacity kVA 20,000	kWh	
c) Water			
d) Fuels,Oils,Lubricants etc.	25,000 l		
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?			
g) Depreciation, Buildings etc. 5 % p.a.			10,000
Machinery, Equipment etc. 10 % p.a.			30,000
Transport Equipment etc. ..... % p.a.			

Annual Volume of Sales	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Working clothes			
b)				
c)				
			Total: 149	Total: 159,480

Employment	Number	Average Monthly income	Total income
Number of Employees and their Annual Income			
1) direct productive: skilled workers	122	80	117120
" " : unt-semiskilled	21	50	12600
2) administrative + supervisory staff			
: low-skilled	4	120	5760
: Highly skilled	2	1000	24000

Number of shifts per Day .....1.....Number of working Days per Year...300.

No 36

INDUSTRIAL PROJECT PROFILE

Name of Project: Plastic Containters..... Production Capacity: 340 tons per annum

Fixed Capital

		Unit (m^2, t, cbm)	Value in Rands
a) Land (m^2)	1200 m^2		
b) Building (m^2)	1000 m^2	R100	100,000
c) Machinery and Equipment			350,000
d) Transport- and Office Equipment			

Working Capital

a) Raw Material for...Months	
b) Salaries and Wages for...Months	140,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production

	Name	Total:
a) Raw Materials (t, cbm)	1)	600,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA kWh	
c) Water		
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5...% p.a.		5000
Machinery, Equipment etc. 10...% p.a.		35,000
Transport Equipment etc.....% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Plastic ware for			850,000
b)	Household and			
c)	Industrial use			

Employment

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
	Total: 100	Total:	112,320
1) direct productive: skilled workers	40	80	38400
" " : unskilled	40	50	24,000
2) administrative + supervisory staff			
: low-skilled	18	120	25920
: Highly skilled	2	1000	24,000

Number of shifts per day .....1..... Number of working Days per Year ...300...

INDUSTRIAL PROJECT PROFILE

Name of Project: Polyethelene Film and Bags Production Capacity: 30 tons per month

Fixed Capital	Unit (m^2,t,cbm)		Value in Rands
a) Land (m^2)	2800 m^2		
b) Building (m^2)	2000 m^2	R100/m^2	200,000
c) Machinery and Equipment			250,000
d) Transport- and Office Equipment			

Working Capital	
a) Raw Material for....Months	200,000
b) Salaries and Wages for...Months	
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	420,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA kWh	
c) Water		
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		10,000
Machinery, Equipment etc. 10 % p.a.		35,000
Transport Equipment etc. % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Polyethelene Film and Bags			550,000
b)				
c)				

Employment Total: 40 Total: 55640

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	18	80	16280
" " : untrained/unskilled	16	50	9600
2) administrative + supervisory staff			
: low-skilled	4	120	5760
: Highly skilled	2	100	24,000

Number of shifts per Day ....1.....Number of working Days per Year...300

No 38

INDUSTRIAL PROJECT PROFILE

Name of Project: Rigid PVC Pipe Making Plant. Production Capacity: 30 tons per month

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)	600 sq.m	60,000
c) Machinery and Equipment		2,200,000
d) Transport- and Office Equipment		

Working Capital

a) Raw Material for....Months .....

b) Salaries and Wages for...Months .....

Other Manufacturing Expenses for...Months .....

Annual Cost of Production	Name	Total:
a) Raw Materials(t,cbm)	1)	
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA 240,000 kWh	
c) Water	30 litre per minute	
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc.....% p.a.		
Machinery, Equipment etc.....% p.a.		
Transport Equipment etc.....% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	PVC pipes			
b)	1/4" to 24"			
c)				

Employment — Total: 11 Total: 21,000

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	6	80	5760
" " : untrained/unskilled	3	50	1800
2) administrative + supervisory staff			
: low-skilled	1	120	1440
: Highly skilled	1	1000	12000

Number of shifts per Day .....3.....Number of working Days per Year...300.

No 39

INDUSTRIAL PROJECT PROFILE

Name of Project: Detergent Powder Production Capacity: 50 tons per annum

Fixed Capital

		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	200 m^2		
b) Building (m^2)	100 m^2	R100/m^2	10,000
c) Machinery and Equipment			25,000
d) Transport- and Office Equipment			

Working Capital

a) Raw Material for....Months
b) Salaries and Wages for...Months } 20,000
Other Manufacturing Expenses for...Months

Annual Cost of Production

		Name	Total:
a) Raw Materials (t,cbm)	1)	Light soda ash	25tpa
	2)	C.M.C	1tpa
+ colour/perfumes 1 tpa	3)	Sodium tripolyphosphate	8tpa
	4)	Acid slurry	10 tpa.
	5)	Sodium silicate	0.6tpa

b) Electricity Inst. Capacity KVA 10kw kWh

c) Water 450 cu.m/annum

d) Fuels, Oils, Lubricants etc.

e) Packaging Materials etc.

f) Other Manufacturing Input, which ?

g) Depreciation, Buildings etc. 5 % p.a. 500

Machinery, Equipment etc. 10 % p.a. 2500

Transport Equipment etc. ... % p.a.

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Detergent Powder			
b)				
c)				

Employment

Total: 6 Total: 15,360

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	1	80	960
" " : un+semiskilled	4	50	2400
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled		1000	12000

Number of shifts per day 1 Number o[illegible] ... 300

No 40

INDUSTRIAL PROJECT PROFILE

Name of Project: Washing soap Production Capacity: 75 tons per annum

Fixed Capital		Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	500 m^2		
b) Building (m^2)	150 m^2	R100/m^2	15,000
c) Machinery and Equipment			35,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for...Months		
b) Salaries and Wages for...Months		20,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production		Name	Total:
a) Raw Materials (t,cbm)	1)	Mutton tallow	
	2)	Vegetable oils	
	3)	Rosin	
	4)	Caustic soda	
	5)	Sodium silicate	
b) Electricity	Inst. Capacity	10kw kW/h	
c) Water	600 cu.m/annum		
d) Fuels,Oils,Lubricants etc.			
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?			
g) Depreciation, Buildings etc.	5 % p.a.		1250
Machinery, Equipment etc.	10 % p.a.		3500
Transport Equipment etc.	% p.a.		

Annual Volume of Sales

Type of Product	Unit Value	Number of Units	Total Turnover
a)			
b)			
c)			

Employment Total: 4 Total: 14520

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	2	80	1920
" " : unskilled	1	50	600
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled	1	1000	12000

Number of shifts per day ..... Number of working Days per Year 300

No 41

INDUSTRIAL PROJECT PROFILE

Name of Project: Toothbrush Manufacture ..... Production Capacity: 400,000 dozen per annum

Fixed Capital (Assembly only)	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)		
b) Building (m^2)	150 m^2 R100/m^2	15,000
c) Machinery and Equipment		70,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	20,000
b) Salaries and Wages for...Months	
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1)	124,000
	2)	
	3)	
	4)	
b) Electricity	Inst. Capacity kVA kWh	
c) Water		
d) Fuels,Oils,Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		750
Machinery, Equipment etc. 10 % p.a.		7,000
Transport Equipment etc. % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Toothbrushes	R0.70/doz.	230,000 dozen	161,000
b)				
c)				

Employment

Number of Employees and their Annual Income	Number	Average Monthly income	Total: Total income
1) direct productive: skilled workers	7	80	6720
" " : unskilled			
2) administrative + supervisory staff			
: low-skilled			
: Highly skilled	1	1000	12000

Number of shifts per Day .....1..... Number of working Days per Year...300...

No 42

INDUSTRIAL PROJECT PROFILE

Name of Project: Wool Scouring ..... Production Capacity: 2Mkg greasy wool per annum

Fixed Capital		Unit (m², t, cbm)	Value in Rands
a) Land (m²)			
b) Building (m²)	1000 m²	R100/m²	100,000
c) Machinery and Equipment			400,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for....Months		100,000
b) Salaries and Wages for...Months		
Other Manufacturing Expenses for...Months		

Annual Cost of Production	Name	Total:
a) Raw Materials (t, cbm) 1)	Soap 40,000 kg	40,000
2)	Alkali 20,000 kg	
3)		
4)		
b) Electricity Inst. Capacity ~~kW~~ 20 kVA		
c) Water 10M gallons @ 50c/1000 gallons		5,000
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		11,000
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		5,000
Machinery, Equipment etc. 10 % p.a.		40,000
Transport Equipment etc. ..... % p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Scouring operation	11.2c/kg	2 M kg	224,000
b)				
c)				

Employment — Total: 28, Total: 17 240

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	1	80	960
" " : unskilled + semiskilled	24	50	14400
2) administrative + supervisory staff			
: low-skilled	2	120	2880
: Highly skilled	1	1000	12000

Number of shifts per Day 2 ..... Number of working Days per Year 300

No 43

INDUSTRIAL PROJECT PROFILE

Name of Project: Paper Making (writing and printing papers) Production Capacity: 5 tons per day

Fixed Capital		Unit (m², t, cbm)	Value in Rands
a) Land (m²)	6000 m²		
b) Building (m²)	3000 m²	R100	300,000
c) Machinery and Equipment			1,000,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for....Months		
b) Salaries and Wages for...Months		100,000
Other Manufacturing Expenses for...Months		

Annual Cost of Production		Name	Total:
a) Raw Materials (t, cbm) + chemical, dyes	1)	Waste paper 2000 tpa	
	2)	Caustic soda 40 tpa	
	3)	Rosin 15 tpa	
	4)	Alum 75 tpa	
b) Electricity	Inst. Capacity kVA	1.05 Mkwh/annum	
c) Water		225 M.cu.m./annum	
d) Fuels, Oils, Lubricants etc.	coal	750 t.p.a	
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?			
g) Depreciation, Buildings etc. 5 % p.a.			15,000
Machinery, Equipment etc. 10 % p.a.			100,000
Transport Equipment etc. ... % p.a.			

Annual Volume of Sales	Type of Product	Unit Value	Number of Units	Total Turnover
a)				
b)				
c)				

Employment	Total: 102	Total: 119400
Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	40	80	38400
" " : unt-semiskilled	35	50	21000
2) administrative + supervisory staff			
: low-skilled	25	120	36,000
: Highly skilled	2	1000	24,000

Number of shifts per Day 1 Number of working Days per Year 300

No 44

INDUSTRIAL PROJECT PROFILE

Name of Project: Cardboard Cartons ..... Production Capacity: 75,000 per annum - all sizes

Fixed Capital	Unit (m^2,t,cbm)	Value in Rands
a) Land (m^2)	450 sq.m.	
b) Building (m^2)	150 sq.m.	15,000
c) Machinery and Equipment		48,000
d) Transport- and Office Equipment		

Working Capital	
a) Raw Material for....Months	
b) Salaries and Wages for...Months	50,000
Other Manufacturing Expenses for...Months	

Annual Cost of Production	Name	Total:
a) Raw Materials (t,cbm)	1) Cardboard 20 t.p.a	
	2) Adhesive	
	3) Stitching wire	
	4)	
b) Electricity	Inst. Capacity 2kW 10,000 kWh	
c) Water	750 cu.m/annum	
d) Fuels, Oils, Lubricants etc.		
e) Packaging Materials etc.		
f) Other Manufacturing Input, which ?		
g) Depreciation, Buildings etc. 5 % p.a.		750
Machinery, Equipment etc. 10 % p.a.		4800
Transport Equipment etc. ..... % p.a.		

Annual Volume of Sales

Type of Product	Unit Value	Number of Units	Total Turnover
a)			
b)			
c)			

Employment — Total: 10 — Total: 18600

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	1	80	960
" " : unskilled	2	50	4200
2) administrative + supervisory staff			
: low-skilled	1	120	1440
: Highly skilled	1	1000	12000

INDUSTRIAL PROJECT PROFILE No 45

Name of Project: Paper Making Plant ..... Production Capacity: 20 tons per day

Fixed Capital		Unit (m^2, t, cbm)	Value in Rands
a) Land (m^2)	6000 m^2		
b) Building (m^2)	4000 m^2	R100/m^2	400,000
c) Machinery and Equipment			3,100,000
d) Transport- and Office Equipment			

Working Capital		
a) Raw Material for 1.5 Months		
b) Salaries and Wages for 2 Months		900,000
Other Manufacturing Expenses for ... Months		

Annual Cost of Production		Name	Total:
a) Raw Materials (t, cbm)	1)	Chemical pulp for high grade paper	
	2)	Chemical pulp for packing paper	3,800,000
	3)	Chemical pulp for woody paper	
	4)	Subsidiary materials	
b) Electricity	Inst. Capacity kVA	kWh	
c) Water			500,000
d) Fuels, Oils, Lubricants etc.			
e) Packaging Materials etc.			
f) Other Manufacturing Input, which ?			
g) Depreciation, Buildings etc.	5 % p.a.		20,000
Machinery, Equipment etc.	10 % p.a.		310,000
Transport Equipment etc.	% p.a.		

Annual Volume of Sales

	Type of Product	Unit Value	Number of Units	Total Turnover
a)	Printing Paper	950/ton	6000 tons	5,700,000
b)	Writing paper			
c)	Packing paper			

Employment Total: 41 Total: 54 960

Number of Employees and their Annual Income	Number	Average Monthly income	Total income
1) direct productive: skilled workers	18	80	17280
" " : unskilled	18	50	10800
2) administrative + supervisory staff			
: low-skilled	2	120	2880
: Highly skilled	2	1000	24000

Number of shifts per Day 3 Number of working Days per Year 300

APPENDIX B - 1

LESOTHO INDUSTRIES (December 1978)

		Licence No.	Year of Issue	Number of employees June 78x/
1.	MINERAL BASED INDUSTRIES			
1.1	National Diamond Corporation			
1.2	De Beers (Lesotho)			773
2.	BUILDING MATERIALS			
2.1	Selkol Joinery	38	76	84
2.2	Lesotho Quality Stone Supplies	39	76	31
2.3	Lesotho Steel Products			33
2.4	Lesotho Brick and Concrete Products	58	78	33
2.5	Lesotho Quality Aggregate Indu.	53	77	
2.6	Mohokare Heavy Clay Products			31
2.7	Flash Construction	41	77	
3.	METAL-BASED INDUSTRIES			
3.1	Lesotho Tractor and Construction Company	24	71	14
3.2	Lesotho Umbrella Manufacturing	32	72	112
3.3	Maseru Roller Mills	36	68	
3.4	Lesotho Stell Products	37	76	
3.5	Tranalquip (Lesotho) Ltd.	49	77	30
3.6	Lesotho Electronics	51	77	
4.	TEXTILE INDUSTRY			
4.1	Royal Lesotho Tapestry Weavers	5	69	105
4.2	Torkilds Handweaving Ltd.	22	72	47
4.3	Afro Ltd.	31	73	
4.4	International Textiles	44	76	71
4.5	Gallant Clothing Manufactures	54	77	82
4.6	Berea Knitwear	56	78	

x/ Source: LNDC Employment Survey - June 1978.

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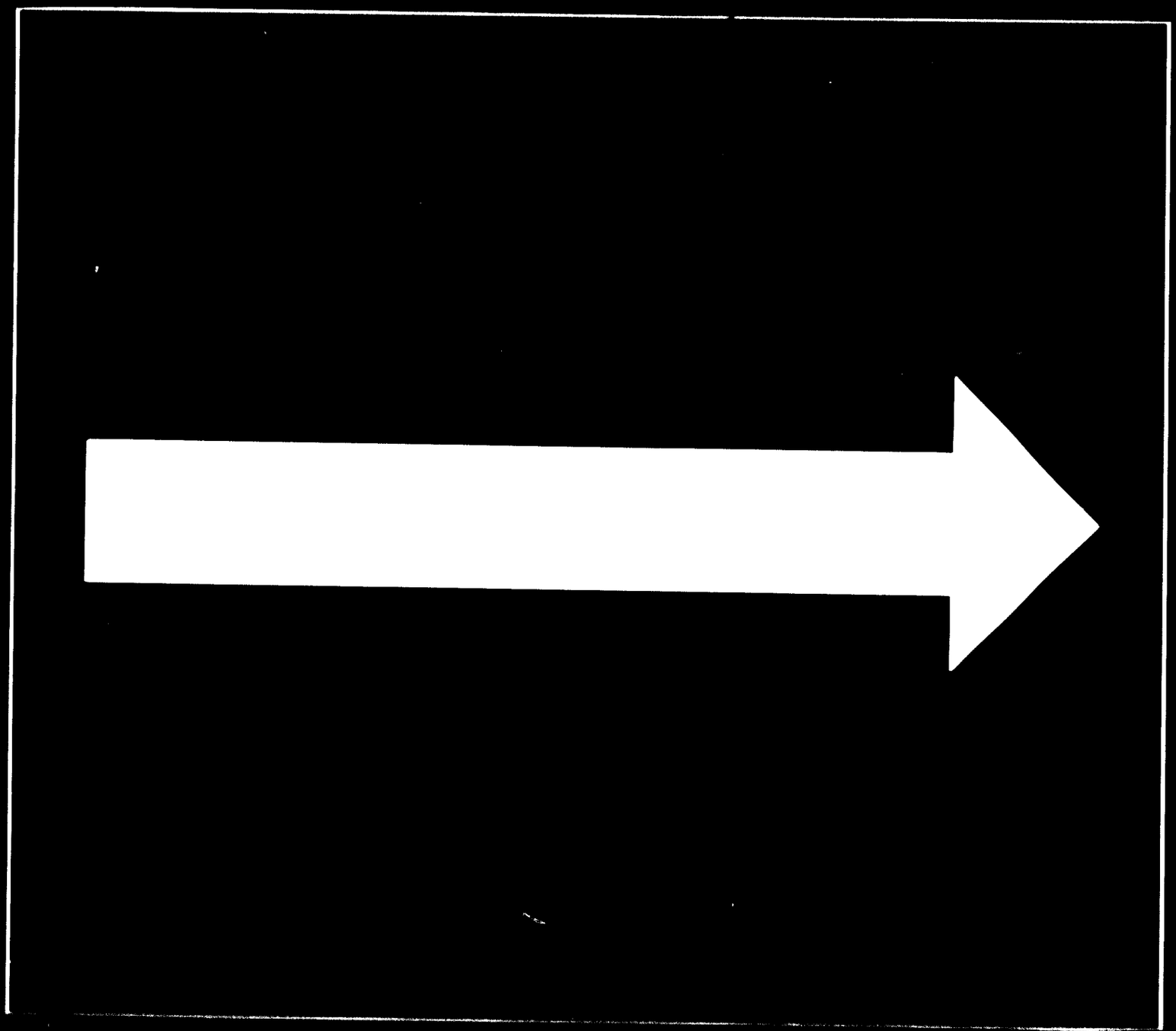

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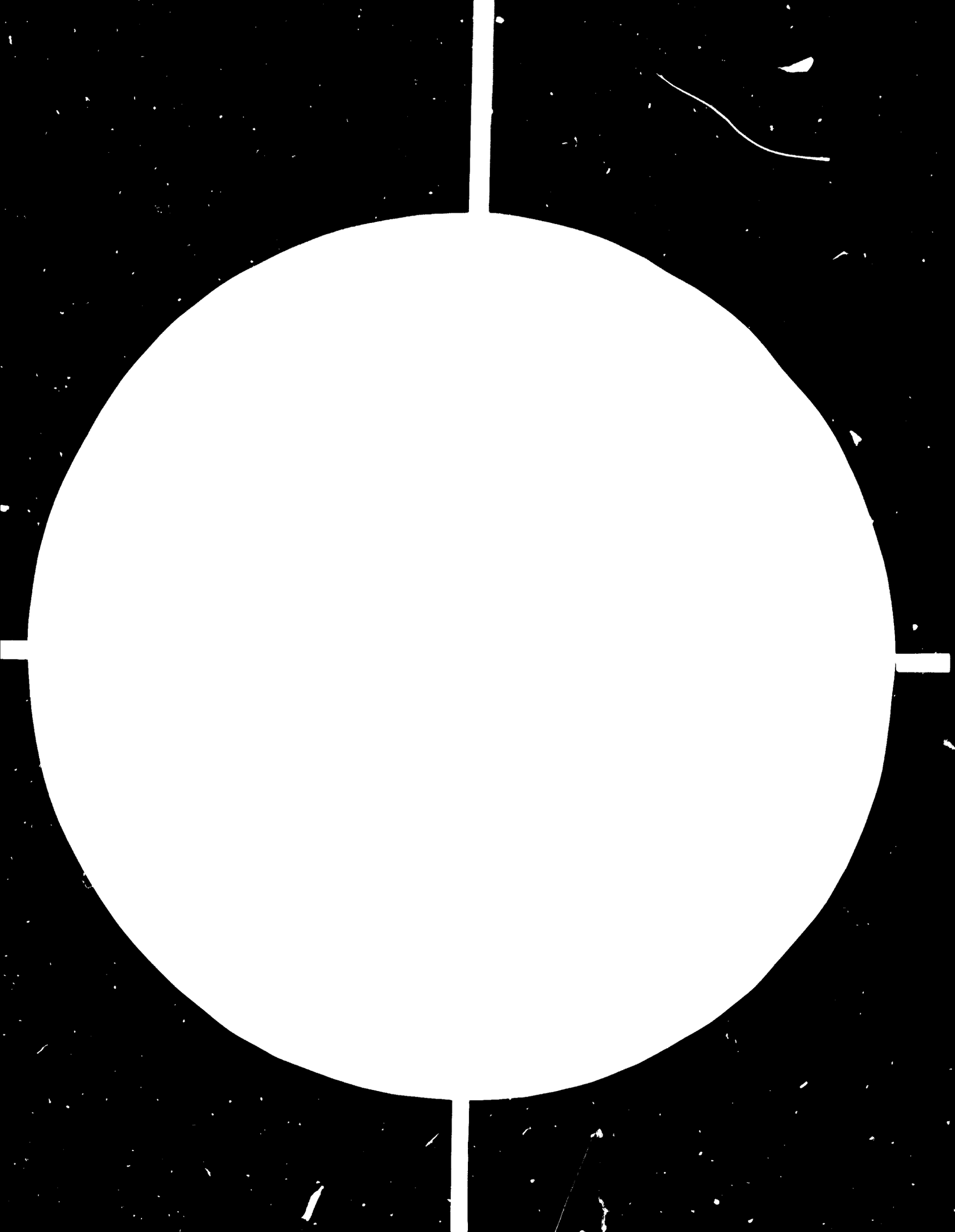

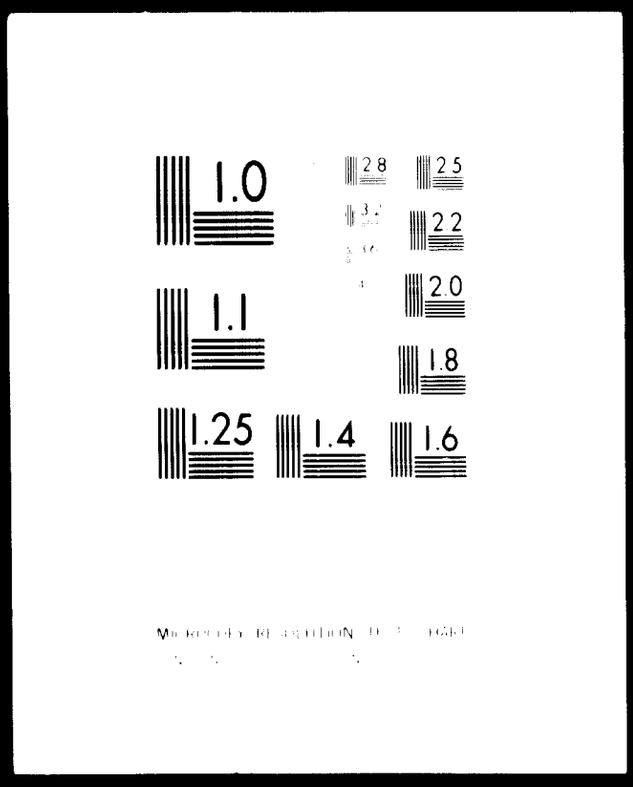

	Licence No.	Year of Issue	Number of employees June 78x/
5. AGRO-BASED INDUSTRIES			
5.1 Optichem Ltd.	1	69	17
5.2 Lesotho Milling Company	2	69	173
5.3 Ta Hsing and Tebenno Enterprises Mfg	35	73	35
5.4 Lesotho Cannery	45	70	
6. CHEMICAL INDUSTRY			
6.1 Kolonyama Candles	6	69	64
6.2 Matsieng Development Trust	50	74	
6.3 National Biopharma			41
6.4 Trans Africa Biologicals			32
6.5 Lesotho Oil and Soap Works	55	78	
7. LEATHER-BASED INDUSTRIES			
7.1 Maluti Skin Products	27	78	132
7.2 Lesotho Shoes Ltd.	33	78	(not yet in operation)
8. WOOD-BASED INDUSTRIES			
8.1 Essa Ltd. (School furniture)	3	78	
8.2 Frasers Manufacturing (Lesotho)Ltd	4	69	73
8.3 Maluti Furniture	28	72	184
9. SERVICE INDUSTRIES			
9.1 Maseru Tyres Company	7	69	44
9.2 Pioneer Motors			41
9.3 National Motor Company			47
9.4 Government Printer			

APPENDIX B - 2

A Study of four cases of project development

The development of industrial projects is taking an inordinately long period of time and although there may be many reasons contributing to this, it is in itself a brake on indutrial progress.

A study of the records of four important projects, - wool and mohair, Maseru abattoir, brick manufacturing, and an indutrial tannery, revealed that in each case, although investigations had continued over a ten year period, no real feasibility study had been prepared. This is a matter of project management and monitoring of progress, and assignment of specific responsibility for each project.

Wool and Mohair

Production of mohair in Lesotho has fluctuated from 536,000 kg per annum in 1960, around 1 000 000 kg from 1963 to 1970, 610 000 kg in 1975, 400 000 kg in 1976 to 397 000 kg in 1977. Sales value in 1975: R2,55 million, 1976: R2,10 million and 1977: R2,21 million.

The statistical figures after 1975 are, according to the Oxtoby-Iredale report, too low. Production is closely related to the number of goats. From 1965 to 1970 the number of goats was fairly constant at 900,000 to 950,000. Given a yield per goat of around 1 kg these figures for goat population correlate fairly well with the production figures from that period. In 1974 and 1975 there were 890,000 and 825,000 goats respectively, but the production was reported as 670,000 kg and 610,000 kg. The very low figures for production are explained by increased smuggling following the two payment system introduced in 1972. A conservative figure of 750,000 kg for the year 1975 is assumed.

The yield of mohair of 1 kg per goat is very low compared to 4.0 kg in RSA and 3.1 in USA but in line with 1.2 in Turkey. The low yield in Lesotho is explained by the fact that the flocks are very small on average, the goats are kept only partly for economic reasons, flock management is of a low standard and there is considerable overstocking.

The types of mohair grown in Lesotho cover almost the entire range of qualities and lengths. For the past two decades, however, there has been a marked decline in the quality of mohair. The long, fine "blue" mohair has during the past few years been available in very small quantities only.

Processing of mohair has been an area of investigation over a long period of time. The first Industrial Survey in 1969 suggested that a feasibility study on raw wool and mohair processing should be undertaken.

Before 1970 the farmers sold the mohair to traders who classed the products, offered immediate payment and despatched the mohair after inspection by the Ministry of Agriculture, to brokers in South Africa to be sold at auction under the responsibility of the South African Mohair Board (SAMB).

In 1972 a two-payment system was introduced by SAMB. A conservative average advance payment for the clip as a whole was fixed, and 9-12 month later, when the total sale value of the clip had been calculated, any surplus of sale value over total advances paid to producers was once again distributed to the producers. This two-payment system is a main source of dissatisfaction among Basotho farmers.

In May, 1975 the Government was approached by BOEA Finanz AG with a project concerning wool and mohair. In October, 1975 an agreement was signed between LNDC, Livestock Marketing Corporation (LMC) and BOEA Finanz AG of Switzerland, a consortium of companies from various European countries but including South African interests. This agreement was concerned with the marketing and further processing of wool and mohair (scouring, carding and combing of wool and mohair was an ingredient part of the project). The company was registered in Maseru in December, 1975 under the name of Lesotho Mohair Industries Ltd. (LMI), and commenced trading on 1 February, 1976. The only part of the original project which came into being was the direct marketing of mohair. The idea behind the project was that LMI would buy the mohair from the farmers via LMC and sell it direct to manufacturers abroad. The price paid to the farmers would generally reflect international prices and a single payment would be made quickly to the farmers.

The activities of LMI during its first year of operation were carefully appraised in a market study undertaken by G.H. Oxtoby and I.A. Iredale, sponsored by the Commonwealth Fund for Technical Co-operation. The Draft Report was delivered in November, 1976: "The Marketing and Further Processing of Wool and Mohair in the Kingdom of Lesotho".

After a detailed appraisal of various aspects of LMI activities Oxtoby-Iredale formulated the following conclusion: "The establishment of a joint venture such as LMI was bound to be difficult especially in a situation where lack of knowledge and experience on the domestic side made it inevitable that the crucial decisions were made by the foreign partner. In this case the difficulties were made worse by a number of factors. There was a failure to clarify objectives and to take the necessary policy decisions to achieve these objectives. This omission in turn led to suspicion and mistrust which were further exacerbated by clashes of personality." The recommendation was that from the 1977 season "Lesotho mohair should be marketed through the SAMB and that the agreement with LMI should be determinated and the company wound up".

With regard to further processing the conclusion was that "it will not be economic to scour the mohair". After appraisal of the Market Study Report the Government, following the recommendations, decided that the 1977 clip of mohair should be marketed through SAMB and that the agreement with LMI should be terminated. LMI has later ceased operations.

In the Farah-Mission Report dated 30 March, 1977, Wool and Mohair Development is included as project A-6 in the accelerated development program. This project provides for seven stores for LMC together with marketing capital. The most immediate need is for three or four stores in the South and East for the 1978/79 season. Inputs are also needed for to complete the vital campaign for sheepscab eradication and to reinforce the supply of vaccines. (2.7)

A Project Document has been prepared titled "Technical Assistance in Wool and Mohair Marketing", (6.5.17). Financial assistance for this project has been received from the British Government (R550,000) and from the Irish Government (R50, 000). The Australian Government has been approached with a request for technical assistance in the form of two experts : one Wool and Mohair Marketing Expert and one Financial Controller, both for two years, at an estimated cost of 280,000 Australian dollars. By the end of January, 1979 there was no answer to this request. Lesotho contribution to the project is estimated at R480, 000.

Facing the fact that further processing is not feasible and that expansion of the goat herd is not possible the only way to increase the value of production seems to be higher yields per goat, better quality, and more efficient collection and marketing.

The key to better livestock production has been recognized as better range management. Grazing control programme based on grazing permits and rotational system is being implemented. Long-term projects like the Thaba-Tseka Mountain Development Project and the Mphaki Mountain Development Project are designed to improve livestock production through application of group ranching and breeding system.

Breeding improvement has centered on Government-organized sale of imported quality cattle, merino and angora sires. The program is being augmented by supply of merino rams from two Government sheep studs.

Although subject to winter chill and periodic drought, the radiant dry, temperate, high altitude climate is healthy and there are few serious enzotic diseases. The only diseases of regular concern are parasitic outbreak of sheep scab. A basic national network of livestock infrastructure is near completion. This comprises a total of 50 Livestock Improvement Centres, 200 diptanks, 100 woolsheds and 100 crushpens.

The technical assistance in wool and mohair marketing is aiming at higher efficiency in the process of collecting, classing, grading and marketing of wool and mohair. It is also the intention of the Government to initiate local auctions in 1979/80 and to establish viable links with international buyers and processors.

Maseru Abattoir

An abattoir was recognized as a project for further study already in 1970. In 1972 the Danish Government offered capital aid (20 million Dkr) for the establishment of an abattoir in Lesotho.

An opportunity study was undertaken in 1973 and a Pre-investment Study in 1974. FAO-experts appraising the Pre-investment Study found it incomplete and not acceptable. An FAO/DANIDA Mission made a four weeks study in Lesotho and presented a Mission Report in January, 1975.

In February, 1977 a contract was signed with Wernberg Consulting for the design of the abattoir; to prepare working drawings and tender documents, send out tenders, undertake the general supervision of the work, supervise the procedure of taking over the completed work and prepare a training program. The Consultant delivered a Report covering Phase I; Preliminary Design, in June, 1977.

Two Market Studies have been undertaken: "Marketing of slaughterhouse by-products", by E. Stephens (Final Report presented 1978.06), and "Meat Marketing" by David Manly (Final Report not yet delivered). The Livestock Marketing Corporation(LMC) was established in 1974 to be responsible for the establishment of the abattoir. LMC was located under the Ministry of Agriculture.

In November, 1978 however, the Government decided to establish the project as a joint venture with an international firm as technical partner. The venture will be wholly commercial.

Brick Manufacturing

Brick manufacturing was proposed as a potential undertaking in the Industrial Survey of 1969. A UNIDO-expert, W. Buchanan, was appointed in 1972 and in 1973 he presented a Report together with B. Westman, UNDTC: Appraisal of a Pilot Brickmaking Plant in Lesotho. Mr Buchanan was again appointed in 1975 for a clay survey. In October, 1977 he presented a "Draft Proposal for the Establishment of the Brick Factory at Thetsane: Requirements and Design Data". This proposal was based on an offer from the German Economic Mission of DM 2,4 million for the establishment of a brick plant in Lesotho. In May, 1978 the loan agreement between KFW abd the Lesotho Government was signed in Frankfurt.

In July, 1978 P.E. International was appointed as consultants for the design of the brick plant, and a UNIDO expert is giving technical support to LNDC for this project.

Tannery

A Hides and Skins Improvement and Processing Expert was requested by the Government in 1969 (1.11). The studies traced dealing with tanneries were the following:

"Draft Program for the Development of Rural Tanneries, G.F. Leger, UNIDO, 1975.

"Report on an Exploratory Study on Footwear Manufacturing in Lesotho, J.W. Parkinson, UNIDO, 1975.

"Report on Hides and Skins Improvement, FRIDA Mission, 1977.

"Tanning and Leather Goods Industry, ICP/FAO,1977

In a CPDO Meeting in March, 1978 it was decided that a proposal for consultancy assistance in the "upstream" improvement and development of hides and skins production and marketing should be prepared. Mr Stobie delivered the proposal in April, 1978. No further studies on the leather manufacturing side should be undertaken.

PART C

THE ECONOMIC BACKGROUND

I. Historical Background

II. Economy, Money, and Banking

III. Employment

Appendix C 1 - Lesotho: Selected Economic aggregates 1973/74 - 1977/78

Appendix C 2 - Lesotho: Gross Domestic Product at factor cost by Industrial Origin 1973/74 - 1977/78

Appendix C 3 - Percentage Distribution of private sector employees by salary range June, 1975.

Appendix C 4 - Bibliography

PART C - SUMMARY

CHAPTER I : Deals with the historical background to the economy, instancing the occupation of lands previously owned by the Basotho, lack of development during the colonial era, and an educational system directed towards basic skill training. An early land tax is considered to be one of the starting points of Basotho migration to find employment in South Africa.

From the point of view of industrial development Lesotho is, in relation to South Africa, a highly peripheral area.

CHAPTER II : Looks at the economy in general, together with money and banking, in what may be described as a " Thumbnail" sketch of the economy, which is itself a summary. Between 1974/75 and 1978/79 recurrent expenditures at current prices have tripled and capital expenditures have increased tenfold, most of the development costs having been met by foreign donors. GNP per capita was R 208 in 1977/78, having grown at the rate of 12.8% per annum in real terms, due to increased receipts from migrant workers. Inflation over the last 5 years has been 15 to 20% per annum. Exports in 1976 were R 10 million while imports totalled R 180 million.

Lesotho is a net exporter of capital. Savings have doubled in three years while there has been a low level of investment in the private sector.

CHAPTER III : Records the sectoral distribution of employment in 1975 and 1980, quotes a study on the breakdown of the migrant workers by age groups and educational background, and an analysis of Africans employed through the African Chamber of Mines.

Job opportunities and higher wages are reported as being the main reasons for migration of workers to South Africa. Between 1975 and 1978 domestic employment creation averaged 1000 per annum as compared with an estimated annual increment in the labour force of 10,000-12,000. Three appendices list recent economic statistics.

I - HISTORICAL BACKGROUND

The borders of Lesotho were finally established during the Boer -war, when the Boers took over the better part of the grazing lands and left the Basotho with the mountains and a narrow belt of lowlands. About 400,000 hectares or 13% of the land is considered suitable for crop production. Rugged foothills and mountains consitute nearly two-thirds of the land area, and these have been utilized for the raising of cattle, sheep and mohair goats.

Lesotho was economically, neglected during the period of British rule, 1843-1966. British taxation of the rural population (a property tax on land) was one of the starting points in the process of migration to the Republic of South Africa (RSA). Hard work in South African mines was the easiest way of earning money for the tax without starvation. The process of migration which started at that time has continued up to today. Lesotho has ever since been considered as reservat of cheap labour.

All education during the British rule was performed by missionaries and, especially after 1913, by the Catholic Church. The education was characterized by a very specific set of values. "Missionary-sponsored education emphasized the basic skill training and included only limited science training and skill development in the crafts, trade and agriculture. The Government, and the donors as well are of the opinion that the non-availability of skilled and semi-skilled Basotho manpower is an outgrowth of the educational system" (2.4). The conservative Basotho value structure is reinforced by the considerable influence of the Catholic Church.

The money-economy was at an early stage introduced from outside in order to create a market for South African consumer goods. The trade was from the beginning dominated by foreign, mostly South African tradesmen and this has continued to the present day.

The economic situation in Lesotho, from the outset, has been characterized by the fact that there is - and always has been - an acutely dualistic economy in Southern Africa. The regional centres of industrial growth have always been concentrated to a few regions in the RSA; Southern Transvaal, Cape Town, Durban and Port Elizabeth. In terms of industrial development Lesotho is really a highly peripheral area.

When independence came to Lesotho in 1966 the country was in a rather weak position with regard to politics, foreign relations, economy, employment , education and so forth. A two-party system existed until the 1970 elections, when the constitution was suspended. The National Assembly was appointed in 1973, including some members of the opposition.

II - ECONOMY, MONEY AND BANKING

The economy is extremely open and dependent. Membership in the Southern Africa Customs Union provides for almost free trade in the area. Membership in the Rand Monetary Area means that the Government cannot have an independent policy for exchange rates. In 1975 Lesotho became associated with the EEC under the Lomé Convention, which gives Lesotho duty-free access to EEC-markets for all exports except those covered by the EEC's Common Agricultural Policy.

Recurrent expenditures have increased at an annual rate of 35% in real terms during the period 1974/75 - 1977/78. The largest recipient in 1978/79 is Education. Capital expenditure is estimated to have increased fourfold during the same period.

Current Expenditure and Capital Expenditure 1974/75-1978/79

Current prices. Million of Rands

	1974/75 Actual	1975/76 Estimate	1976/77 Actual	1977/78 Estimate	1978/79 Estimate
Current Expenditure	18,2	26,2	33,0	46,0	55,7
Capital Expenditure	6,6	12,1	15,1	25,7	66,4

Current expenditures - Selected Ministries: 1978/79. Estimates

	Million Rands	%
Agriculture	5,47	9,9
Health	3,45	6,2
Education	11,38	20,6
Rural Development	0,77	1,4
Transport and Communication	1,58	2,9
Police/Mobile Unit	6,41	11,6
Other	26,21	47,4
TOTAL	55,7	100,0

Source: Revenue and Expenditure of the Kingdom of Lesotho, 1978/79

The development of the Gross National Product (GNP) over the period 1973/74 - 1977/78 is demonstrated in Appendix C-1, GNP has grown from R99,6 million to R150,8 million in 1972 prices (the bottom line). GNP per capita was R208 (239 US dollar) in 1977/78 in current prices. GNP is considerably higher than GDP and this is due to remittances by Lesotho miners, working in South Africa. GNP has grown by 12,8% per annum in real terms, due to the miners increased wages and increased emmigration. Inflation has been 15-20% per annum during the last three years.

The agricultural sector is dominating the domestic economy, as demonstrated in Appendix C-2, Agriculture, has however declined in recent years, relatively because of the growth of other sectors (primarily construction and tourism) but also in absolute terms.

> "The growth of the economy during the first three years of the Second Plan is estimated at 5 percent in real terms, the expansion being mainly in the public sector, the construction industry, and the earnings of migrant workers. Agricultural output has declined in the past two years, influenced by adverse weather as well as the persistent problems of poor cultivation practices, overstocking, and erosion. Industrial growth is disappointing." (1.3)

Exports from Lesotho in 1976 amounted to R10 million, whilst imports totalled R180 million. Wages earned by the miners in the RSA accounted for R77 million and earnings from the Customs Agreement about R56 million.

Money and banking. Lesotho has no central bank or monetary authority, and uses the Rand as its currency and legal tender. In May 1978, the Government announced its decision to establish a monetary authority and create a separate currency, the maloti, which would be set at par with and be fully backed by the Rand. Both currencies would circulate in Lesotho as legal tender.

Surplus liquidity has been a significant feature of the banking system since 1970. The excess liquidity over the minimum required by law amounted to 77 percent in 1974. The annual average for 1975 was 146%, for 1976 it was 167% with a high of 182, and in 1977 it was 141% with a high of 174%.

This means a doubling of savings and time deposits in three years and a low level of investment in the private sector. As surplus deposits continue to be reinvested abroad Lesotho is in fact an exporter of capital.

The Lesotho Bank was founded 1972. Lesotho Bank, is one of three commercial banks in the country. The assets of the bank amounted to R40 million in 1977. Despite the fact that the basic philosophy of the Lesotho Bank should be development-oriented the Bank operates as a commercial bank. The Bank lends primarily to its own customers and to local corporations.

Other financial institutions are: Lesotho Building Finance Corporation, which commenced operations in 1977, the Lesotho Agricultural Development Bank, in operation from 1978, and the National Insurance Corporation, in operation since July, 1977.

National development is not a primary objective of commercial banks as may be seen from the sectoral distribution of their lending in 1977:

Household (for consumption)	34,6%
Wholesale, Retail, Hotels, Restuarants	24,1%
Agriculture (including advances to households for agricultural purposes)	13,0%
Manufacturing	7,8%
Community, Social and Personal Services	6,2%
Construction	5,5%
Electricity, Gas, Water	4,0%
Non-bank Financial Institutions, Real Estates, Business Services	2,1%

Transport, Storage, Communication	1,9%
Mining and Quarrying	0,8%
TOTAL	100,0%

Capital and technical assistance from foreign sources have played a substantial role in the process of development. The aggregate costs of planned projects in the Second Five Year Plan was R224 million in 1975 prices. Including new projects urgently needed the revised Plan of 1977 came to R407 million in current prices. Out of this R387 million are to be financed by a great number of donors. The rest, R20 million, is the Lesotho Government input.

The coordination of donor's assistance is a key function of the Central Planning and Development Office. The first Donor Conference, arranged by the Government in 1975, was attended by 36 delegates constituting 21 delegations. A Mid-Plan Donor Conference was held in September 1977 with 76 delegates from 39 donors.

III - EMPLOYMENT

The population of Lesotho was estimated at 1,217,000 in the Population Census in 1976, of which 630,000 were females and 587,000 were males. The annual growth rate has increased from 1.8% for the period 1946-1956 to 2.3% for the period 1966-1967. The population in 1978 has been estimated at ., 273, 000 with the sectoral distribution (5.44), given in Table C-1.

Table C-1

Sectoral employment 1975 and 1980

	1975		1980	
Modern Sector		27 500		46 000
Mining			1 000	
Manufacturing	2 000		6 500	
Construction and civil engineering	2 500		5 000	
Government	9 200		12 300	
Tourism	500		1 000	
Other services	13 300		16 100	
Labour intensive works	-		4 000	
Non-modern sector		362 500		374 000
Handicrafts and informal activities	22 500		26 000	
Agriculture	340 000		348 000	
Total employment in Lesotho		390 000		420 000
Migrant labour		150 000		180 000
Total labour force		540 000		600 000

The total labour force for the year 1990 has been projected at 1,148,000 out of an estimated population of 1,693,000. 65.5% of the projected labour force will be females or 753,000 leaving a total of 395,000 males (5.44).

In the Second Five Year Plan the number of migrant workers was estimated at 150,000 or nearly 28% of the total labour force for the year 1975 In a report prepared by Deutsches Institute für Entwicklungspolitik the number of Basotho working in South Africa is estimated to be 206,000 or

nearly 40% of the total labour force for the year 1975/76. The occupational distribution was approximately as follows: (5.46)

The mining sector	150 000
Between contracts with mines	30 000
Manufacturing sector	13 500
Government service	9 500
Agricultural sector	3 500
TOTAL	206 500

About 50% of the migrant workers were in 1974, aged between 20 and 29 years (5.44, 5.45).

Age Groups of Basotho Migrant Workers in South African Mines

Age Group	%
18-19	6.9
20-24	28.5
25-29	21.7
30-34	19.2
35-39	11.2
40-44	5.5
45-49	3.9
50-54	2.4
55-59	0.7
	100.0

A sample survey carried out by the National University of Lesotho in June/August 1977 indicated that 66% of the migrants at that time back in Lesotho were below the age of 44 years. (The age recorded was the age at the time of the interview and not at the time of signing a contract). (5.44) The NUL Survey covered 200 migrants who had returned from South Africa. Out of these 200 40% had received no formal education, 109 had primary education and 9 held Junior Certificates. Very few migrants had held paid employment before signing contracts: 4 were skilled workers and 11 unskilled workers from the modern sector while no less than 185 came from the subsistence sector. (5.44)

The employment of Africans by the South African Chamber of Mines was in April 1977 about 203 000 from areas outside the RSA and another 217 000 from inside the RSA; with the following distribution: (5.44, 5.47)

	Number	%
Mozambique	38 244	9.1
Malawi	207	-
Zimbabwe	24 727	5.9
Botswana	24 810	5.9
Lesotho	99 964	23.8
Swaziland	11 756	2.8
Namibia	2 491	0.6
Angola	1 247	0.3
	203 446	48.4
South Africa: White area	54 913	
Homelands	162 177	51.6
	420 536	100.0

In a study dated December, 1977, Norman Bromberger suggest that mechanization will not play an important role in replacing labour in the mining sector of the South African economy until the end of this century. (5.44, 5.48)

The main reason for the emmigration from Lesotho to RSA is the shortage of employment possibilities in Lesotho and the very low income of subsistence agriculture. Several investigations have established the fact that for the average household in the Subsistence Agricultural Sector, 60% of the income is coming from migrants wages 20% from other than farm activities and 20% only from crop and livestock.

In addition to job opportunities, wages appear to attract Basotho to work in RSA. In 1977 the minimum annual wage in Lesotho was set at R480 for unskilled workers; as compared to R820 plus a free board; accomodation and medical services for mine workers in the RSA. Migrant workers represent about 80% of estimated male population in the prime working ages of 20-44.

The collection of detailed wage data was attempted in the annual employment survey in 1975. Appendix C-3 is taken from this survey The Appendix shows the percentage distribution of private sector employees by salary range in 1975 and the average salary level by sector. There seems to be some discrepancies between the two groups of figures.

The current annual increment to the labour force is estimated at 10 000 - 12 000, while domestic employment creation averaged 1 000 per annum during the period 1975-78.

Employment opportunities in the industrial sector are apparently rather limited. There must be an intersectoral approach.

"What is required is a comprehensive investment programme that aims at integrating the modern sector with the traditional sector of subsistence agriculture with more emphasis being put on the creation of job opportunities by greater utilization of domestic resources to supply the domestic market."

"The manufacturing sector today is in its present form capital-intensive and is largely dominated by foreign firms which tend to use capital intensive techniques of production. Thus reliance on multinational corporations to make a significant contribution to the solution of the problem of employment in Lesotho, and indeed anywhere, is a mystification of reality." (5.44)

A special employment problem for Lesotho is the great number of expatriates. "The acute shortage of skills and expertise in Lesotho and the increased sophistication of development activities necessitates a high participation of expatriate personnel especially in the public sector. The aims of the technical assistance programme are to fill key personnel shortages and to promote the long-term goal of an adequate supply of local expertise through training of counterpart staff locally on-the-job and through enabling the release of personnel for training abroad. Operational posts in the public service in 1975/76 held by expatriates were 169." (1.10)

"In the private sector there were some 500 non-citizens participating in employment in 1971. This figure was estimated in the course of a manpower survey conducted in that year. It is generally believed that the manpower survey understates the number of expatriates employed in the country." (1.10)

"Because of the shortage of high-level manpower, Lesotho will have to depend for some time yet on a substantial programme of expatriate technical assistance for implementation of its development plans. At the end of 1977, nearly 600 professional and technical expatriates were in the country; their salaries and related costs represent an amount equivalent to approximately 25 percent of capital expenditure

over the Second Plan period. However, there is a widespread view that this assistance is not as effective as it should be. Clearly, effectiveness could be increased if such assistance were: (1) better coordinated and evaluated, (2) supported by a strengthened local management and (3) monitored particularly for its impact on counterpart training and institution-building." (3.5)

APPENDIX C - 1

Lesotho: Selected Economic Aggregates, 1973/74 - 1977/78

	1973/74	1974/75	1975/76	1976/77	1977/78
	(In millions of rand; at current prices)				
Gross national product (market prices)	106.2	129.3	171.2	219.6	264.0
Gross domestic product (market prices)	76.3	85.5	102.5	130.9	162.9
Gross domestic product (factor cost)	(68.9)	(75.7)	(87.3)	(106.3)	(126.5)
Indirect taxes less subsidies	(7.4)	(9.8)	(15.2)	(24.6)	(36.4)
Gross national disposable funds funds 1/	126.5	145.5	187.6	242.8	304.2
Savings from gross national disposable funds 2/	21.1	6.4	11.8	2.6	2.9
	(Ratios to aggregate demand: in per cent)				
Total consumption	75.3	81.1	77.0	78.1	79.9
Gross domestic investment	11.5	6.9	12.4	11.3	11.0
Government capital formation	3.5	3.1	4.6	5.7	6.8
Private sector capital formation	3.9	2.1	7.0	6.3	3.0
Total exports (goods and services)	18.2	1.4	10.6	10.6	9.1
Memorandum Item:					
Gross national product (in millions of rand; at 1972 prices) 3/	99.6	106.4	129.3	148.2	150.8

1/ Gross national product at current market prices plus net total transfers from rest of the World.

2/ Gross national disposable funds less total consumption.

3/ Deflated by the average index of consumer prices.

Sources: Data provided by the Lesotho authorities; and IMF estimates.

Lesotho: Gross Domestic Product at Factor Cost
by Industrial Origin 1973/74-1977/78

(In millions of rand, at current prices; and in per cent)

	1973/74	1974/75	1975/76	1976/77	1977/78	1967/68 Share in total GDP 1/	1977/78 Share in total GDP 1/
Agriculture	35.5	35.2	37.7	43.6	38.1	41.9	30.1
Crops	(19.3)	(17.1)	(18.9)	(24.5)	(18.0)	(25.1)	(14.2)
Livestock	(16.2)	(18.1)	(18.8)	(19.3)	(20.1)	(16.9)	(15.9)
Mining and quarrying	0.2	1.1	1.7	3.7	3.6	2.5	2.4
Manufacturing	1.8	3.2	3.6	3.8	2.6	2.1	2.1
Building and construction	1.7	1.0	2.6	5.3	13.1	2.2	10.4
Wholesale and retail	6.5	10.8	12.0	14.9	17.0	12.8	18.4
Catering	2.0	2.4	4.3	6.1	8.7	0.8	6.9
Transport and communication	1.7	2.1	2.1	2.9	3.6	1.4	2.8
Ownership of dwellings	7.6	8.6	8.8	10.9	15.0	15.3	11.8
Central government	6.6	6.3	9.3	11.5	18.7	10.8	14.8
Other 2/	5.3	5.0	5.3	4.6	6.7	5.2	5.8
Total	58.9	76.7	87.3	106.3	126.5	100.0	100.0
Total in 1972 prices	64.6	62.3	66.0	69.3	72.3		

Sources. Kingdom of Lesotho, Bureau of Statistics, National Accounts 1974/75; data provided by the Lesotho authorities, and [redacted] estimates.

1/ In per cent.
2/ Includes electricity and water, finance, insurance and business, and other services.

Table 3. PERCENTAGE DISTRIBUTION OF PRIVATE SECTOR EMPLOYEES BY SALARY RANGE - JUNE 1975

(Preliminary data)

Sector	Salary Range in Rand per Month								Average wage per employee (Rand per month)
	Below 25	25-49	50-99	100-199	200-299	300 +	Not stated	Total	
Manufacturing	13	68	11	5	1	2	-	100	118
Construction	12	57	21	5	1	1	3	100	68
Hotels & Restaurants	11	53	19	5	5	7	-	100	122
Commerce	26	53	14	5	1	1	-	100	59
Financial & Bus. Services	2	19	23	38	10	6	2	100	183
Other Services	39	26	20	6	2	1	6	100	107
ALL SECTORS	20	50	17	8	2	2	1	100	97

Source: Preliminary data from Annual Survey of Employment and Earnings, 1975

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INDUSTRIAL DEVELOPMENT IN LESOTHO

PART D

RECOMMENDATIONS FOR FURTHER TECHNICAL ASSISTANCE

Outline of the problems

1. Industrial Development Centre
2. Industrial Management Institute
3. Technical assistance in the development of small industrial estates
4. Financial and business advisor to Lesotho National Development Corporation
5. Block financial allocation for training
6. Block financial allocation for consultancy
7. Leather Products Technical Development Centre

Appendices D - 1 to D - 5 provide project data sheets for items 1, 2, 3, 4 and 7 above.

PART D - SUMMARY

Part D sets out in detail the recommendations for further technical assistance to the industrial sector.

The most important proposal is the setting up a technical unit in the Ministry of Commerce and Industry to be called the 'Industrial Development Centre! This is designed to strengthen the Ministry and enable it to effectively perform the functions of planning, project identification, and project evaluation, and to substantially contribute to industrial policies and strategies. Additionally, in the initial years, it would assist in upgrading operating industries by providing consultancy services and training, although these two functions may be taken over by an ' Industrial Management Institute' at a later date.

It is also proposed that a top-level industrial advisor be provided to assist LNDC in business decisions, to strengthen project appraisal, and to make a substantial contribution to operating companies.

Consultancies are proposed for specific projects, - industrial estates, blankets, and textile/garments.

A leather products centre is put forward as a possible area of support, the timing to be related to the abattoir and industrial tannery development.

The possible provision of block financial support for training and consultancy needs is under consideration but this would need to be co-ordinated with the functions of the proposed 'Industrial Development Centre'

RECOMMENDATIONS FOR FURTHER TECHNICAL ASSISTANCE

Outline of the Problems

Most enterprises in the manufacturing sector face all the problems of an industrial sector in the early stages of development. The following is a list of problems arising in many enterprises and in the industrial infrastructure.

Problems in manufacturing enterprises

- Low production efficiency
- low utilization of production capacity,
- discontinuous supply of raw materials,
- disturbances in the supply of electric power,
- insufficient capacity for maintenance and repair of productive equipment,
- inadequate procedures for production planning and control, materials control, quality control, and cost control,
- ineffective long-term programming of markets and marketing,
- insufficient managerial and supervisory capacity and capability,
- insufficient capital for the level of activity and cash flow problems,
- production is mostly against orders which may give short production runs,
- all enterprises work isolated from each other, very little co-operation, no sub-contracting or other linkages.

Problems in the industrial infrastructure

- no service industries for large repair work and overhauls,
- no depots for spare parts,
- insufficient consultancy services,
- insufficient support from Development Institutions,
- inadequate procedures used in project preparation,

- inadequate appraisal of project studies,
- inadequate training of managers, supervisors and operators,
- inadequate channelling of capital.

It is quite clear that many firms are facing problems which they cannot solve by themselves. They need support from outside. Furthermore, the failures are too many. During the period 1973/74 - 1976/77 the number of firms in the manufacturing sector decreased from 39 to 28 and the number of employees from 2,106 to 1,721. This could be the result of poor project preparation and too optimistic economic estimates. Some companies have been started with too small a capital base and have afterwards been overburdened with debt servicing problems.

Accordingly, the recommendations for further technical assistance are aimed mainly at strengthening of the supporting agencies and the industrial infrastructure.

1 - Industrial Development Centre

Establishment of an Industrial Development Centre to be located in the Ministry of Commerce and Industry with a view to increasing the capacity and capability of the Industrial Section and to make it possible for the Ministry to effectively direct industrial development and coordinate industrial development activities in the country.

The long term functions of the centre would be:-

Industrial planning, project identification, project evaluation, scrutiny of proposed and existing agreements with foreign partners, and the preparation of policy papers. Training of Basotho staff for the Ministry and for other Government agencies would be continuous.

Short term consultants would be attached to the centre to study and report on blankets manufacture, and textiles/garments manufacture.

There is an immediate need for market research in the following areas:-

(a) Area bread demand as a basis for establishing bakeries

(b) Market demand for fruit juices and tomato juice

(c) Production possibilities for leather in rural tanneries linking with the market potential for artisan leather goods

(d) The demand for footwear of all types

(e) Windmill generators and pumps

(f) The demand for paper goods and scrap paper availability

(g) The demand for concrete products

(h) Industrial packaging requirements

The Centre would participate in these studies and work with LNDC, BEDCO and the National University of Lesotho to develop local capability in practical market research. The project would require a variable number of experts co-ordinated by a project manager.

The Centre would co-operate with the Central Planning Office, and the Bureau of Statistics in establishing a sound basis for the collection of industrial statistics and would call for assistance in this field if required. A project data sheet is presented in Appendix D-1.

2 - Industrial Management Institute

The establishment of a small Industrial Management Institute will become essential to provide consulting assistance to industry and industrial management training and development.

On the consulting side the Institute would assist individual enterprises in the fields of finance and accounting, production problems, marketing, and organisation. Management training and development would take the form of in-factory training and the presentation of seminars and courses.

The extreme shortage of Basotho staff and the small base of the industrial sector may delay this proposal, but the functions of consultancy and industrial management training must be established urgently.

The proposed Industrial Development Centre could start these functions, training Basotho in readiness for the time when the Institute could become a separate entity.

The immediate objective would be to assist in the process of problem solving in manufacturing undertakings with a view to increasing the production efficiency and the profitability of these undertakings.

A project data sheet is presented in Appendix D-2.

3 - Technical Assistance in the development of small industrial estates

The immediate objective is to investigate the suitability of establishing one or several small estates as an instrument for promoting the establishment of new enterprises. An Industrial Engineer with experience in programming the development of small and medium-sized industries in developing countries and in planning of industrial estates would be appointed for a period of four months.

He would also consider the need for extension services and common workshop facilities.

A project data sheet is presented in Appendix D-3.

4 - Lesotho National Development Corporation (LNDC)

- Financial and Business Advisor

The objective is to support the Managing Director of LNDC in business and financial decisions, to provide council at all levels, to monitor progress particularly in project preparation and appraisal, and to make a substantial contribution to the efficiency of the operating companies.

A project data sheet is presented in Appendix D-4.

5 - Block Financial Allocation for Training

The UNIDO Senior Industrial Field Advisor has discussed with the Ministries and Government agencies concerned, the possible provision of a block sum of money which could be drawn on to meet training expenses.

LNDC have indicated that they would like to have access to such a fund for operative training, and while this is a desirable feature in Lesotho, the control of such expenditures would require careful supervision.

The provision of a block training fund would also have to be considered in relation to any decisions which may be taken under items (1) and (2) to establish industrial training in Lesotho.

6 - Block Financial Allocation for Consultancy

The UNIDO Senior Industrial Field Advisor has discussed with the Ministries and Government Agencies concerned, the possible provision of a block sum of money to meet the need to employ consultants.

In considering this possibility, and the contractual relationship between UNIDO and any consultants or consulting organisation to be employed, consideration will no doubt be given to administering such contracts through the Industrial Development Centre proposed under item (1).

7 - Leather Products Technical Development Centre

UNIDO have had under consideration for some time the establishment of a footwear and leather products technical development cum - production centre, to include footwear, saddlery and other leather products.

LNDC is negotiating with foreign entrepreneurs to establish a shoe factory to produce 1000 pairs of shoes per day, but the products to be manufactured, the operations to be undertaken in Lesotho, and the details of capital equipment to be installed are not available.

The proposed Maseru industrial tannery which is in turn based on the proposed abattoir, is still perhaps two years away, and the timing and content of the project would relate to the development of the abattoir and tannery and the final outcome of the LNDC negotiations to establish a shoe factory.

There is no doubt that technical assistance in the leather industry is a most necessary support.

Although this project is still only formulative a project data sheet based on an earlier document prepared by UNIDO, has been included in Appendix D-5.

Appendix D - 1

DRAFT

PROJECT DATA SHEET

PART A

COUNTRY LESOTHO

PROJECT TITLE Establishment of an Industrial Development Centre to be located in the Ministry of Commerce and Industry.

PART B

Narrative

1. Background and Justification

A comprehensive study of Lesotho's industry and industrial development institutions and a survey of existing and planned industrial development activities has recently been undertaken with a view to identify new investment opportunities.

Lesotho's industry is still at an early stage of development and has not yet reached the level of stability and growth.
The Government has the intention to increase its support to industrial enterprises by increasing the capacity and capability of the Development Institutions: The Ministry of Commerce and Industry, LNDC and BEDCO. It is also the intention of the Government to review the procedures of project preparation and project implementation in order to increase the implementation capacity.

2. Special Considerations

Limited by a meagre base, a rapidly growing population, and the constraints imposed by its proximity to the highly developed industry of South Africa, the Government of Lesotho is seeking in its Development Plan to improve the industrial potentials aiming at self-sufficiency and economic independence.

3. Objectives

(a) Development Objectives

The long-term development objective is to enhance the industrialization programme in Lesotho in compliance with the Second Five Year Development Plan.

(b) Immediate objectives

To establish an Industrial Development Centre within the Ministry of Commerce and Industry with a view to increasing the capacity and capability of the Industrial Section in the Ministry and make it possible for the Ministry to effectively direct the industrial development and coordinate all industrial development activities in the country.

4. Project Outputs

The project will fill a gap in the existing institutional set up and make it possible for the industrial enterprises to get the guidance and support so urgently needed.

5. Project Activities

The Industrial Development Centre will work directly under the Permanent Secretary with the following scope of activity:-

(1) to establish a line of action for the industrial development in Lesotho;
(2) to prepare an outline of a 10 year industrial development plan;
(3) to formulate (short-term) objectives, policies and strategies for the short-term development of Lesotho's industry;
(4) to carry out project appraisal and project evaluation studies;
(5) to coordinate industrial development activities in Development Institutions and industrial enterprises;
(6) to initiate actions aiming at strengthening the capacity of existing enterprises and improvement of their productive efficiency;

(7) to be responsible for the contacts with donors for all technical and economic matters:

(8) to investigate the needs for the establishment of a Bureau of standards and quality control;

(9) to train Basotho staff for the Ministry and other Government Agencies;

(10) to investigate the need for the establishment of an Industrial Management Centre, and to initiate consultancy and training courses.

6. Project Inputs

The specified tasks will be carried out by a team of experts consisting of an Industrial Engineer, a Production Engineer and an Industrial Economist - specialist in marketing and market research. Duration of their stay will be 3 years. The group of experts will work under a Project Manager, who will be responsible to the Permanent Secretary for industry.

7. Project Budget

UNIDO Inputs

		US $
Project Manager	36 m/m	180,000
Commercial and Economic Project Evaluation Expert	24 m/m	100,800
Industrial Economist (Market Researcher)	24 m/m	100,800
Industrial Engineer/Management Consultant	24 m/m	100,800
Expert in blanket manufacture	4 m/m	16,800
Expert in textile/garments marketing and manufacture	4 m/m	16,800
Travel costs within the country		5,000
		521,000

Government Inputs

Counterpart Staff

Offices, Transport etc.

Appendix D 2

DRAFT

PROJECT DATA SHEET

PART A

COUNTRY LESOTHO

PROJECT TITLE Establishment of an Industrial Management Institute

PART B

Narrative

1. Background and Justification

Same

2. Special Considerations

Same

3. Objectives

(a) Development Objectives

Same

(b) Immediate Objectives

To establish an Industrial Management Institute, to provide consulting assistance to industry and to provide industrial management training and development.

4. Project Outputs

There is an essential need to upgrade the operating efficiency of many industrial companies, and this can only be achieved by in-factory consulting support. Further, there is little practical industrial management training, and the project will supply this basic need.

5. Project Activities

(a) To survey and appraise the performance of existing industrial enterprises within the manufacturing sector.

(b) To investigate and improve the organizational structure, production methods, raw material sources and purchasing procedures, environmental conditions, equipment procurement, repair and maintenance facilities and procedures, materials a and cost control systems financing, capacity utilization, production planning and control, marketing and distribution.

(c) To act as consultants on request from individual firms.

(d) To establish training courses and seminars designed for middle management including accounting, production management, organization, and marketing.

(e) To provide in-factory training as a part of the consulting services.

6. Project Inputs

The specified tasks will be carried out by a three man team consisting of experienced management consultants having individual specializations in industrial management, finance and costing, industrial engineering, and marketing and market research.

7. Project Budget

UNIDO Inputs

		US $
Management Consultant - Management, Finance, Costs	24 m/m	100,800
Management Consultant - Industrial Engineering	24 m/m	100,800
Management Consultant - Marketing/Market Research	24 m/m	100,800
Travel costs within the country		5,000
TOTAL		307,400

Government Inputs

Counterpart Staff
Offices, Transport etc.

PROJECT DATA SHEET

PART A

COUNTRY LESOTHO

PROJECT TITLE Technical Assistance to Lesotho aiming at the establishment of Small Industrial Estates.

PART B

Narrative

1. Background and Justification

Same

2. Special Considerations

Same

3. Objectives

(a) Development Objectives

Same

(b) Immediate Objectives

To investigate the suitability of establishing one or several small industrial estates as an instrument for promoting the development of new enterprises.

4. Project Outputs

The project will provide the basis for the selection of locations, size, design and centralized facilities to be provided for and for time schedules, manpower planning and cost estimates.

5. Project Activities

The expert will investigate the possibilities for the creation of infrastructural facilities for industrial development through the establishment of small industrial estates.

The activities will consist of:-

(a) To survey and appraise existing Industrial Areas in Maseru and Maputsoe, the Sebaboleng Trade and Industrial Centre, and Artisan Industrial Centres in the Country.

(b) To establish the future needs and demands for physical facilities for industrial production in Lesotho.

(c) To develop a model of typical small industrial estates with inbuilt infrastructural services.

(d) To evaluate suitable locations in various parts of the country.

(e) To prepare working drawings, estimate construction costs, produce time schedules and layouts of the estate.

(f) To prepare a masterplan for the further development of Industrial Areas and Industrial Estates in Lesotho.

(g) To make recommendations for the short-term actions to be taken with regard to small industrial estates in Lesotho.

6. Project Inputs

The specified task will be carried out by an Industrial Engineer with experience in programming the development of small and medium sized industries in developing countries and in planning of industrial estates. Duration of the assignment will be 4 months.

7. Project Budget

UNIDO Inputs

Industrial Engineer	4 m/m	16,800
Travel costs within the country		1,000
TOTAL		17,800

Government Inputs

Counterpart Staff

Office, Transport etc.

Appendix D - 4

PROJECT DATA SHEET

PART A

COUNTRY Lesotho

PROJECT TITLE Financial and Business Advisor to Lesotho National Development Corporation (LNDC)

PART B

Narrative

1. Background and Justification

Same

2. Special Considerations

Same

3. Objectives

(a) Development Objectives

Same

(b) Immediate Objectives

The objective is to support the Managing Director of LNDC in business and financial decisions, and to provide council at all levels, to monitor progress particularly in project preparation and appraisal, and to make a substantial contribution to the efficiency of the operating companies controlled by LNDC.

4. Project Output

LNDC has experienced a number of staff changes in recent years, and it is expected that this appointment would lead to an improved structure, provide a critical analysis of the project preparation and appraisal, and give considerable help to increasing the profitability of operating companies.

5. Project Activities

The expert would be concerned with the day to day activities and contribute to decision making in LNDC.

6. Project Inputs

UNIDO Inputs		US $
Financial and Business Advisor	24 m/m	100,800

Government Inputs

Office, Transport etc.

Appendix D - 5

DRAFT

PROJECT DATA SHEET

PART A

COUNTRY LESOTHO

PROJECT TITLE Establishment of a footwear and leather product technical development cum - production centre.

PART B

1. Background and Justification

Same

2. Special Considerations

Same

3. Objectives

(a) Development Objectives

Same

(b) Immediate Objectives

(i) To establish a Footwear and Leather Products Technical Development-cum-Production Centre and train management, supervisors and workers in the techniques of modern footwear and leather products manufacture both in theory and practice;

(ii) After nine months from the commencement of training, the leather products are expected to reach marketable quality standards for the local market:

(iii) The Centre will obtain leather from the local tannery and will become the main outlet for its leather production.

4. Project Outputs

After training the management, supervisors and about forty workers, the following targets should be reached in the footwear production:

Months	Pairs per day	Pairs per week
9	100	500
12	150	750
18	200	1,000
24	300	1,500
30	400	2,000

In addition to this, saddles and saddlery items will be produced.

The production of the footwear will be made as cement-lasted construction and the pilot plant will serve as demonstration centre on the level of mechanized small-scale industry.

5. Project Activities

The project's aim is to establish a Footwear and Leather Products Technical Development-cum-Production Centre, to provide equipment, and to train personnel at all levels. The following main activities are included:

- Budgetary action and financial appropriation to provide counterpart and training funds required;
- Obtain a building or construct a new building;
- Appoint project personnel;
- Prepare specifications for expendable and non-expendable equipment and supplies, as well as building and machinery plant layout;
- Select local key personnel and staff for fellowship training;
- Machinery installation;
- Mid-project review;
- Commence practical training and pilot production;
- End-project review.

6. Project Inputs

(a) UNIDO Inputs

		m/m	US $
(i)	Assignment of international staff		
	Project Manager	30	180,000
	Footwear manufacturing expert	12	50,400
	Leather products expert	12	50,400
(ii)	Mid-term and end review missions for evaluation of project		6,000
(iii)	Training:		
	One fellowship of ten months		
	Three fellowships of six months	28	?
(iv)	Equipment:		US $
	Expendable equipment and supplies		40,000
	Non-expendable equipment		120 000
	Project vehicles		7,500
(v)	Miscellaneous:		
	Maintenance, reporting cost, sundries		14,000
		TOTAL	468,300

(b) Government Inputs:

- Counterpart staff
- Workers, trainees
- Building, power, etc.
- Materials and supplies

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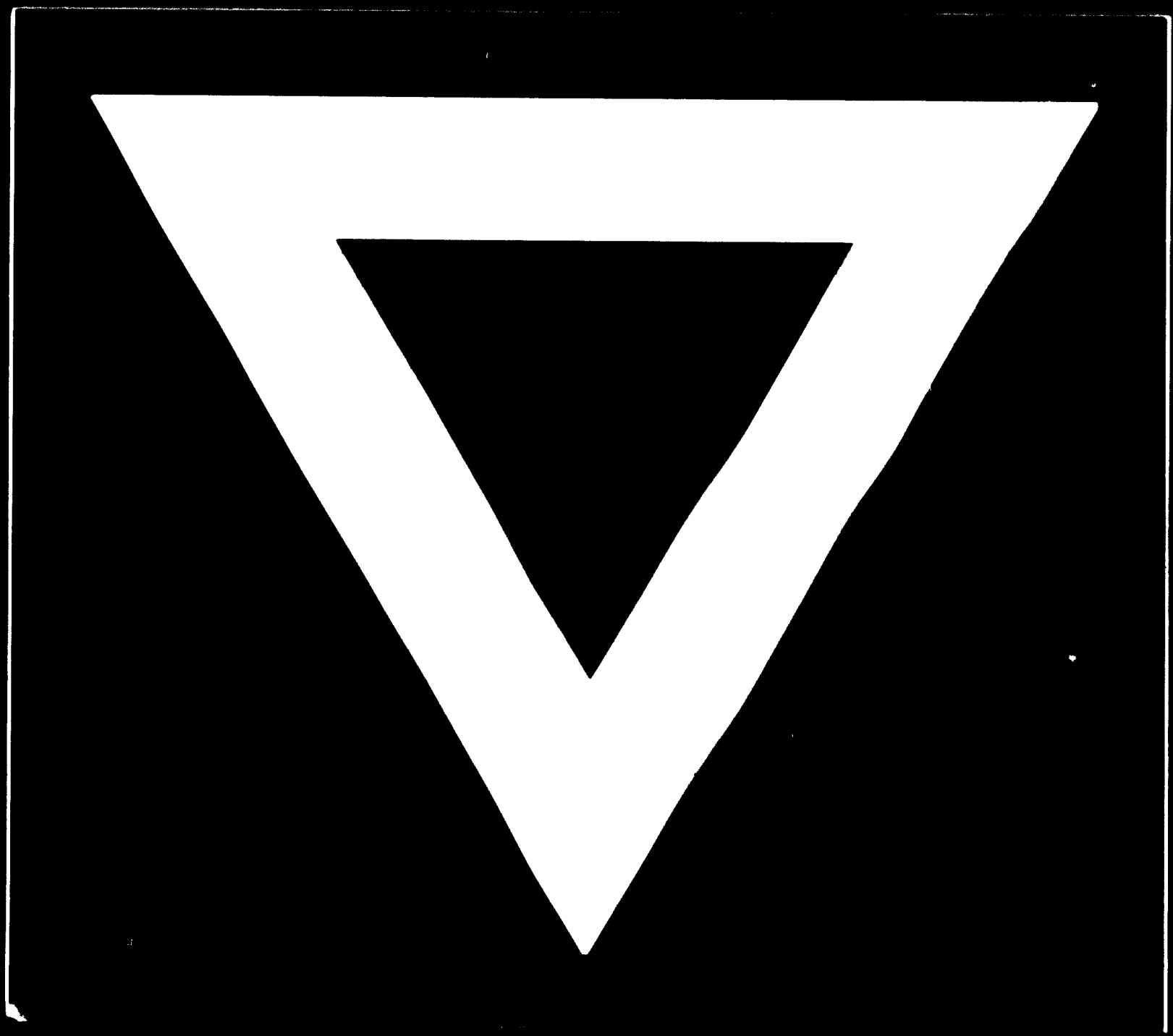

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