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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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Report of the [illegible]
15 June to [illegible]

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HIGHLIGHTS

- Rapid economic growth has been achieved in Iran in the 1960's and is expected to continue in the 1970's;
- The existing industrial structure has made Iran practically self-sufficient in the production of most consumer goods, but production of intermediate and capital goods has developed more slowly;
- In some industries productivity is low and costs of production are high; structural changes and improved production techniques are needed;
- Some industries make only a small contribution to foreign exchange savings;
- Manufactured goods are exported on only a small scale so far;
- In the future, priority should be given to establishing new industries in which Iran enjoys a comparative advantage including resource-based industries, food-processing industries and power-intensive industries; these industries should be given priority irrespective of whether the product is sold in the domestic market or predominantly exported.
- To meet the proposed targets for further industrialization, intensified efforts to develop a wide range of clearly identified investment opportunities will be required;
- To attract capital for new industrial growth will require policies which create an investment climate that encourages modernization and expansion of existing companies as well as attracting outside new investment;
- Policy measures are recommended for attracting foreign capital, promoting the geographical dispersal of new industries, encouraging investment in agro-industries and industries producing intermediate goods, promoting exports of manufactured goods, strengthening research and development efforts, expanding the role of small-scale industry, and improving the productivity of existing industries.

- Industrial development appears likely to be adversely affected unless more attention is paid to the development of adequate transportation, communication and power supply systems;

- Managerial, technical and labour skills are in short supply; intensified efforts are required particularly to develop skills at the intermediate level;

- The pharmaceutical industry supplies about one third of Iran's requirements for finished drugs at present. There is scope for broadening the range of products formulated from imported ingredients. Local production of some chemical intermediates can be developed gradually. The lack of detailed market information, the inadequate legal framework and some of the existing policies are all acting as obstacles to such developments at the present time;

- The textile industry can achieve a reasonable standard of efficiency with better management of existing mills, a moderate amount of well-directed new investment, and other improvements recommended in this report. Further study is needed before a restructuring of the industry and more extensive modernization can be recommended. Iran should use more locally grown cotton and synthetic fibres and less rayon. A large-scale export-oriented synthetic fibre manufacturing industry based eventually entirely on local raw materials can be developed;

- Rapid industrialization has placed a heavy burden on the administrative capacity of the Ministry of Economy and other government bodies; there is a need for a review of the operations and administrative procedures followed by all agencies involved in industrial development to ensure proper co-ordination;

- The Ministry of Economy needs to develop an improved information system as a basis for policy decisions. Ways of ensuring that all major industrial projects receive an adequate technical appraisal are suggested. The Ministry should also make more use of the advice of experienced businessmen

INTRODUCTION

1. At the request of the Government of Iran, the United Nations Industrial Development Organization arranged for an Advisory Group on Industrial Policies to visit Iran between June 15 and July 19, 1970.

2. The Mission was asked to review with the appropriate government officials and other interested parties existing industrial policy objectives and measures with special reference to:

(i) the existing industrial structure;
(ii) its future development;
(iii) the required policy measures;
(iv) the adequacy of implementation machinery;

The Mission was also asked to make a special study of the pharmaceutical and textile industries and in particular to:

(i) examine the problems and nature of growth of each industry to date, as well as its future direction;
(ii) recommend measures to solve the problems identified;

These terms of reference were based on discussions which UNIDO staff member, Mr. E. Lisa, held with officials of the Ministry of Economy during the Exploratory Mission in July 1969. At that time, H.E. Mr. Enjavi and other senior officials of the Ministry identified the problem areas which they wished to be considered and the approach to be adopted.(1)

3. The Advisory Group was asked to pay particular attention to the Statement of Iran's General Policy of Industrialization made by H.E. Mr. Hushang Ansary, the Minister of Economy, at the inaugural session of the Iran Development Conference in May 1970.

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(1) See UNIDO's Report: Industrial Policies for selected branches of Industry, Problem areas and the approach to be adopted. July 1969.

4. The members of the Advisory Group were:

R. [illegible] Grose (Team Leader)	-	Business Consultant, and formerly Deputy Minister Industry and Commerce, Government of Manitoba, Canada and Chairman and General Manager of the Manitoba Development Fund.
[illegible]. Shah (Pharmaceutical)	-	Industrial Adviser (Pharmaceuticals and Chemicals), Ministry of Industrial Development, Government of India.
[illegible]. Buxton (Textile)	-	International Textile Consultant, London, U.K., formerly Managing Director of the Brazilian Spinning Company.

The Advisory Group were assisted by UNIDO staff member Mr. R. Lamo who accompanied them during part of their visit to Iran. His guidance and assistance and the background information contained in the preparatory report made it possible for the Advisory Group to complete its task in the limited time available.

5. The Advisory Group's report is in four sections. Section 1 identifies some of the highlights of industrial growth in the past and considers some of the more important challenges th at must be met if development is to continue to progress satisfactorily in Iran in the 1970's. Section 2 outlines a number of policy measures recommended by the Advisory Group for consideration by the government and includes some recommendations regarding the existing implementation machinery and procedures. Sections 3 and 4 review the problems and nature of growth of the pharmaceutical and textile industries respectively as well as their future direction and recommends some possible measures to solve the problems identified.

6. Discussions on many aspects of the textile industry were held with officials of the Ministry of Economy (particularly Mr. [illegible]) and with textile men from chairmen to foremen and workers. Seventeen textile plants and over 70 per cent of the spindles and looms in the cotton and

rayon industry were visited. Three important woollen and worsted mills, one hand screen printing plant and the texturizing plant for synthetic fibres were also inspected. There was insufficient time to investigate the hand loom sector, the garment industry, the increasingly important knitting sector, the nylon fibre plant, and one of the old spinning and weaving mills which is reputed to be amongst the best managed mills in the country.

7. Discussions with the officials of the Ministry of Economy and Ministry of Health helped the Advisory Group to get an accurate appreciation of the Pharmaceutical Industry's development. Seven pharmaceutical factories and the central Control Laboratory for testing drugs run by the Government were visited. Discussions were held with the members of the Pharmaceutical Manufacturers Association and its legal adviser Dr. Mahasi.

8. The Advisory Group are very conscious that the time spent in Iran... 3 weeks....was limited and that its findings undoubtedly reflect this fact. It would be absurd and presumptuous to pretend that all problems have been identified or that the Group is in a position to recommend detailed measures to solve them. Most of the problems are well known to government officials as well as many of the possible solutions. Nevertheless, this report records the main conclusions which the Advisory Group believe can be drawn from its discussions with government officials, bankers, businessmen and other groups interested in the further development of Iran.

9. The Advisory Group wishes to express its sincere appreciation for the discussions held with the Senior Deputy Minister, H.E. Dr. Khambatti, Deputy Ministers H.E. Dr. Ashrafi and H.E. Dr. Vafa, other officials in the Ministry of Economy and to the local and international staff of the Research Institute. Certain officials of the Ministry of Health, the Plan Organization and other government agencies also gave generously of their time. In addition, the Advisory Group was most grateful to the large number of Iranian businessmen who met with them and gave the Group the benefit of their practical experience in doing business in Iran.

10. Special mention should also be made of our assistants. Mr. E. Enamly rendered valuable service in arranging appointments for the Advisory Group and in accompanying them during their visits; Mrs. Alavi and Mr. Emamgarni helped us collect information concerning the Pharmaceutical Industry; Mr. Moarefi helped collect information on the Textile Industry and accompanied team members on visits to the textile mills.

SECTION 1. PAST GROWTH AND CHALLENGES FOR FUTURE DEVELOPMENT

11. During the sixties Iran has sustained a high rate of growth over a very broad front. Continued progress is expected during the 1970s, reflecting the momentum of past growth and the improved utilization of human and national resources. A major factor in the rapid progress that has been achieved was, of course, the expansion in oil production and revenues, with the latter being used to finance development projects aimed at diversifying the economy and lessening its dependence on petroleum.

12. The following statistics describe the significant highlights:

- Since 1961 the Iranian economy has achieved an average expansion of 7 per cent per annum; the rate of growth has been 8 per cent per annum over the past five years;
- Gross national product now totals approximately $9.2 billion or $270 per capita compared with $143 per capita at the start of the 1960s;
- Since 1961 industrial production has increased at an annual average rate of 12 per cent and agricultural production at 4.6 per cent;
- The volume of investment has increased by 19 per cent per annum since 1961, and savings by 12 per cent per annum. The proportion of gross national product devoted to investment has risen steadily from 17 per cent five years ago to 20 per cent last year;
- Total exports have grown 11 per cent annually since 1960. Non-oil exports have increased 6 per cent annually in the same period;
- Total imports have grown rapidly and exceeded $1,900 million last year.

13. Although Iran is now virtually self sufficient in the production of most consumer goods, production of intermediate and capital goods has developed more slowly. Some industries at present make only a small contribution to national output and balance of payment savings because they are still a final assembly or processing operation. In many industries, productivity is low and costs of production are high in relation to the costs of importing the same product.

• [redacted] Research Centre for Industrial and Trade Development, Ministry of Economy, Tehran.

Manufactured goods have made only a small contribution to export earnings so far. Despite rapid industrialisation, the volume of imports grew more rapidly than the economy as a whole in the 1960's.

14. For these reasons, it appears desirable that a re-appraisal of the scope and direction of industrialisation be undertaken at this time. In the past, industrialisation has been successfully promoted mainly by encouraging the production of manufactured goods under substantial tariff protection as a substitute for imports. The price of goods available on the domestic market has therefore often been high, industries have been developed which rely heavily on imported materials and components, and there has been little incentive to develop export-oriented production. It is therefore essential that policies be reviewed with a view to ensuring (a) that the share of domestic value added in industry will be raised and (b) that new activities represent a more balanced programme which includes the development of competitive exports based on Iran's comparative advantages.

15. Iran is endowed with many of the natural resources required to sustain large scale economic development and increasing attention is being given to the promotion of resource-based industries. Opportunities for profitable growth lie partly in expanding output of present products, partly in shifting to new ones, and most importantly, in improving productivity and efficiency.

16. The aim of Iran to process within the country as much indigenous raw material as is economically feasible, thus securing for the nation the value added in processing is a correct one. Certainly the promotion of industries which are based on the utilisation of domestic resources, and are low cost, irrespective of whether the final product is sold in the domestic market or predominantly exported, should receive top priority. The further development of such industries, and at what speed, and with what efficiency, will depend on the priority they are accorded in government policy, and on their profitability, as determined by the prices they command, and by the costs of development as influenced by the efficiency of production.

17. It is vital in these and other industries to keep in mind that Iran is operating within a highly competitive and dynamic international environment. Iran's competitive strengths and weaknesses must be evaluated in relation to those of producers elsewhere in the world. Policies which unduly protect the inefficient branches of industry will be costly and short-sighted to the industry and the country as a whole. On the other hand, action to assist resource-based industries to become more efficient, competitive, and attuned to changing export markets can bring long-range benefits for the industry and the economy.

18. The agricultural sector underpins the Iranian economy and presently accounts for about one-quarter of the gross national product and provides employment for approximately one-half of the country's labour force. Agriculture, however, lags behind the economy as a whole and special efforts will be needed to close the gap between progress in agriculture and that in the other sectors of the economy. Properly organized and encouraged agribusiness could be the single most important aspect of Iran's industrial growth for the next decade and the cornerstone of sound regional development. The total agricultural system, considering supply industries, the primary production sector, and the output processing and distribution industries has increased significantly in developed countries in recent years. This trend is likely to continue. A full recognition of the ramifications of agriculture and its growth potential and a stimulation of the key ingredients deserves high priority and could permit greatly accelerated growth. Iran could emerge as a unique and outstanding food processing area appropriate to its resources and to changing world markets. Policies that vigorously encourage the overall agribusiness will consist in the growth of small and intermediate regional centres, offer a considerable measure of employment for unskilled labour, help to raise levels of living for a large proportion of the population, and provide markets for growing industries.

19. Both domestic and foreign private capital have participated in the industrial growth that has occurred in Iran. While most of the industrial growth has taken place in the private sector of the economy, the public sector has, particularly in

the immediate past, directed substantial investments into capital goods and intermediate industries which are primarily import substitutions or have export potential. Recently announced government policy indicates greater emphasis in encouraging private enterprise to participate in industrial development with the government concentrating more on the development of infrastructure and other sectors of the economy. Except in the national interest, the government will not initiate new industrial projects wholly-owned by the state and the expansion of existing state-owned industries will only be permitted in their immediate fields.

20. No modern economy is isolated from international influences, and in the future Iran can expect to face keener competition for its products in overseas markets and also from alternative opportunities for the investment of capital. To achieve satisfactory growth in a more competitive world, more attention must be paid to the need to minimise costs at all stages of production and distribution. To encourage private enterprise, policies will be needed to provide an investment climate that encourages the profitable modernisation and expansion of existing companies as well as attracting viable new investment. The provision of an adequate industrial infrastructure is a first prerequisite and will also act as a stimulant to private investment. On the other hand, if Iran is to derive the maximum advantage from private investment, care must be exercised that industrial and fiscal policies are pursued which (a) maximise the contribution of such investment to manpower training, local industry and national growth and (b) avoid excessive protection and tax concessions.

21. As in many developing countries, skilled labour and managerial talent are scarce in Iran relative to the growing demand. There must be a substantial increase in the training of senior and junior management to make good certain weaknesses in modern production techniques. Higher productivity must be achieved in many industries if the country is to exploit fully its industrial opportunities. This will require the adoption of more advanced management and production techniques. Substantial productivity improvements can be realised at relatively low capital cost through the application of industrial engineering techniques including work study, plant layout, production planning and control; cost accounting and organisation planning. In some industries structural changes may be needed involving rationalisation and consolidation of small factory units into larger and more productive operations where economies of scale can be realised.

22. Increased productivity cannot be accomplished rapidly, but the degree to which it is increased will determine to a large extent how successful Iran will be in developing or maintaining the price levels needed to compete in international markets. There are a number of areas in which constructive work can be done in moving towards higher productivity in Iranian industry which will involve a strong commitment on the part of management, labour, government and universities. Each of these groups must understand the contribution required of it, and all must be capable of joint effort towards the attainment of increased productivity.

24. Small enterprises already play a vital role in the economy of Iran and the existence of the Organization for Small Scale Industries and Industrial Estates recognizes the importance of their further development. Local entrepreneurs who are prepared to launch operations and invest capital, even on the smallest scale, and who have drive and ability, are a scarce and valuable resource for economic development. Moreover the output of many larger organizations in Iran in the future will become more and more dependent upon components or services which smaller firms can supply. It should, therefore, be the policy of the government to tailor programmes of assistance which fit the contrasting motivations and capacities of small company owners. This will involve assistance in management development, availability of financial resources, training, marketing and the proper co-ordination of programmes intended to contribute to small industry growth.

25. Adequate and economic transportation is vital to economic development and future industrial growth can be strongly influenced by the cost and quality of transportation services. With the growth and development that has occurred in Iran in the past decade, existing transportation services will need to be upgraded in terms of variety, cost and quality. In terms of long-term regional development, road transportation presents more problems of co-ordination and development than any other element of the whole Iranian economy. The importance of developing an efficient well co-ordinated rail, road and air transportation system can hardly be overstated. Certainly plans for regional development cannot be attained unless ways and means can be devised of improving the efficiency of transportation in these areas.

26. To respond effectively to the challenges ahead will involve improved transportation planning. As a first step, a comprehensive evaluation of Iran's transportation situation and prospects should be undertaken. An integrated, region

by regional study of all modes of transportation is needed. The objective should be the formulation of a co-ordinated programme aimed at orderly transportation development, at reasonable cost, consistent with the objectives of master plans for the economy as a whole. This should involve an inventory of the present transportation system, an assessment of the potential impact of various transportation services upon economic growth, an estimate of transportation needs 10, 20 and 25 years hence, and the establishment of goals, and a timetable for their attainment.

27. Availability of an adequate, continuous and reliable supply of energy is a pre-requisite for industrial development. Energy sources in Iran comprise natural gas, oil and water, and properly organized and integrated these could be used as a tool for economic development at costs comparable with other industrialized nations. This may involve a re-organization of the existing industry structure but it is believed that lower cost power and energy could be achieved provided the latest expertise in power system engineering is adopted and a completely integrated programme for the use of Iran's water and fossile fuel energy resources is followed. As a means of encouraging development, the policy of the government should be to provide reliable low-cost energy; and this will involve a continuing programme of forward planning based on predicted requirements. In view of its resources, Iran should be able to consider a deliberate policy of incentive power rates to power intensive, energy consuming industries with high development potential. Many such industries serve as catalysts for the locational decisions of others and thus help build up demand for energy at regular rates. Closely allied to the development of power is the matter of safety and reliability requirements.

28. An adequate and diversified supply of capital is the lifeblood of economic development. Up to the present, it does not appear that availability of finance has been a constraint on industrial growth. As Iran grows, however, existing financial machinery must respond and adapt to changing needs and if necessary new financial institutions for the industrial sector must be created. Financial institutions must ensure that their lending attitudes are outward looking and characterized by a development mentality.

29. Foreign investment is playing an increasingly important role in development in Iran. To encourage a continued influx of foreign capital, Iran must create a positive image as a good place to invest. This can be fostered through action

promotional programmes which show that important developments are happening in Iran, that profits are being made, that existing investors have been successful and are satisfied with the investment climate, that new opportunities for investment exist and that foreign capital is welcome. Consideration should be given to the strengthening of investment incentive schemes in certain sectors. Measures should be continued which encourage the re-investment of profits. It is further suggested that the government review its policies regarding requirements for foreign companies to share ownership with domestic investors.

30. Economic development in Iran has now reached the stage where future decision-making by governments will require a better analysis of overall priorities, economic feasibility and international comparative advantage. Industrialization must be integrated with other sectors of the economy. The achievements to date in Iran are due in no small part to well prepared master plans and the development strategy followed. Nevertheless at this time there is an urgent need for the preparation of a comprehensive evaluation of the costs, potential and inter sectorial linkages of industry, of the natural resource base and comparative advantages of the economy, and of measures most apt to promote development along desirable lines.

31. Officials charged with the responsibility of encouraging industrial development must be in a position to make well informed choices between possible alternatives, and to develop the proper framework for implementing them to ensure there is no large commitment to uneconomical lines of production. This will require constant review and upgrading of existing statistical services so that decision-making can be based on more informed judgement. Equally important will be a practical and effective working relationship at all levels between various economic development agencies by comprehensive co-ordination of economic development plans and their implementation. A review of many administrative procedures and regulations that appear to [illegible] and [illegible] [illegible] administrative [illegible] should be undertaken. [illegible] should also be given to [illegible] strengthening the machinery for project [illegible] and [illegible] [illegible] work.

SECTION 2. RECOMMENDED POLICY MEASURES

32. A statement of Iran's General Policy of Industrialization was made by His Excellency, Whahang Ansary, the Minister of Economy at the inaugural session of the Iran Investment Conference in May 1970.

33. The Advisory Group was asked to consider the policy measures required to achieve existing policy objectives. The machinery and procedures needed to implement these measures are considered in Section 3.

34. It was evident that a number of policy measures were under review at the time of the Mission's visit; for example: tariff policy, physical import controls and import deposits, measures to ensure greater use of domestic resources and higher value added in new projects, and the procedures for evaluating applications for a license for new investments. Most of the recommendations outlined below therefore relate to other matters which the Advisory Group feel may warrant attention. They are general recommendations applicable to all branches of industry. Recommendations specific to the pharmaceutical and textile industries are included at the end of Sections 3 and 4 dealing with those industries.

35. Based on a broad assessment of the issues raised by its terms of reference the Advisory Group has reached a number of conclusions and suggests consideration be given to the following recommendations:

A. Policy on share ownership by foreign investors in Iran

36. To increase foreign investment in selected industries the government either modify or withdraw its present requirement that foreign owners share ownership with domestic investors, establish such industries agree to locate in areas designated by the government, agree to provide satisfactory technical and commercial training of local personnel, agree to purchase an agreed great percentage of its supply requirements from local suppliers, provide technical assistance in the establishment of small industries to supply their requirements

if such industries do not exist, and agree to establish a plant large enough to serve export markets. This last requirement should specify a minimum amount and should be guaranteed by the parent company involved. Provided these requirements are met, foreign-owned companies should continue to be eligible for all benefits available to tosher industries operating in Iran. It is not recommended this suggestion be applicable to resource based industries, or to industries which might be termed in the national interest or to financial institutions. To encourage foreign-controlled firms to seek Iranian equity participation consideration might be given to offering special tax provisions to manufacturing and processing enterprises which comply with certain requirements such as (a) that at least 25 per cent of the firm is owned by Iranians and (b) that there are a minimum proportion of resident Iranian directors on the company's board.

3. Machinery for dealing with foreign investors

37. To encourage and facilitate private overseas investment in Iran the present procedure whereby overseas investors are required to consult many government departments and agencies be replaced by one that provides for a central agency to examine, consult with other government departments and agencies on behalf of investors, and approve applications from private overseas investors within the shortest possible period of time. This agency should report to a senior committee of Ministers and senior officials which would also provide policy guidance. Provided that the Investment Promotion Centre is strengthened and is made a strong autonomous agency it would appear to be the logical agency to carry out this task.

4. [illegible] and regional development

38. To encourage the dispersal of new industries and expansion of existing enterprises to areas designated by the government, that [illegible] be made available to [illegible] The grant form is [illegible] which are used in Iran at

present, because it is simple to administer and because it provides measurable help to the company at the time when it is most needed irrespective of the profit record achieved in the project's early life. It is further suggested that the amount of the grant should depend on the employment created directly by the project as much as on its capital cost. (In Canada, the formula used is up to 25% of the capital cost plus C $5,000 for each new job created with a maximum grant of C $20 million). Expansion or modernization schemes involving an addition of 20% to the original capital cost of the project could qualify for this incentive. It is suggested that other conditions should include: a minimum level of investment equivalent to US $50,000 in the case of a new plant, and equivalent to US $25,000 in the case of expansion or modernization; restriction on withdrawal of equity investment; government approval prior to contractual commitments to the project and appropriate penalties if commitments are not carried out; agreement to train and employ local residents, agreement to purchase supplies locally if competitive; industries made eligible for regional development incentive grants should be carefully selected. The costs involved in implementing this new form of incentive should be determined in advance and compared with the cost of continuing the present system of tax incentives.

D. Promoting investment in industries producing intermediate goods and capital goods

39. To stimulate greater utilization and processing of domestic natural resources, the existing structure of protection should be modified and new measures, including export subsidies, adopted to equalize the incentives given to the production of intermediate products. The present structure of tariff protection and the non-selective nature of tax incentives appear to have made private investment in industries producing consumer goods more attractive than investment in industries producing intermediate products. One way of correcting this situation could be to adopt criteria for selecting industries benefitting from investment incentives which

offered more generous incentives for industries producing intermediate goods. To be successful, of course, such a programme must ensure projects receiving assistance are of good technical design, economic size, and that capital costs are reasonable and the viability based on proven availability of resources and other factors of production which can be used efficiently and at low cost. The high cost of modern industrial establishments cannot be justified where markets are too small and for that reason a more gradual approach to the development of industries producing capital goods is recommended. Where the Iranian market does not and will not in the foreseeable future be large enough to facilitate an economic scale of production opportunities for regional co-operation should be considered.

2. Promoting investment in agro-industries

40. To rapidly accelerate the development of large scale food processing and related agri-business and provide an impetus to specialization and improved technology by Iranian farmers, consideration should be given to a programme of special incentives in the form of tax free holidays for a period of up to ten years to well established international firms who are prepared to establish large scale operations in rural areas designated by the government, and are prepared to accept responsibility for organizing, training and supervising the farmers to produce the necessary raw materials profitably but simply through the use of modern technological innovations. The type of industries envisaged include those producing vegetables, concentrated animal feeds, and large scale commercial feedlots. Such industries should be required to reinvest all profits in the Iranian economy during the tax free period but should be eligible for regional development grants and other incentives available to other industries and should not be required to share ownership with local investors. It is also suggested ownership of these lands should not be permitted by the participating companies. Such a programme will require very close co-operation between farmers, industry and the government to ensure maximum benefits of high quality raw materials are available

for industrial use. This can only be accomplished by improved farm management, larger scale operations and improved technology by Iranian farmers. It is believed this can be best accomplished by experienced and well established firms if they can be induced to invest in Iran.

C. Assistance to exporters of manufactured goods

41. To assist medium and small companies to export successfully on sound business lines, it is suggested that, in addition to existing incentives, new programmes be considered which provide for the payment of a portion of the cost of private consultants retained to establish market potentials in export market areas with the balance being paid by the sponsoring firm or firms. In addition, it is proposed that in those instances where small and medium sized firms are prepared to organise joint exporting corporations with central showrooms and/or warehouses in proven market areas with a minimum sales potential of US $250,000 annually, these firms be made eligible for market promotion grants for a period of two years to cover a portion of the cost of renting and operating such central facilities. A successful exporting programme for small and medium sized firms will require the establishment by exporting firms of organizations with sales and service facilities located in export market areas - in other words they must be totally customer oriented. They must be staffed and so organized as to be acutely sensitive to market changes and be capable of rapid adjustment in the light of actual and anticipated changes in demand. This is a function which cannot be performed by government agencies as they cannot be sufficiently expert in the shifting tastes and trends to provide the marketing concept required to promote the sale of goods produced profitably by Iranian firms. In addition, it would be difficult for such organizations to ensure that goods produced in fulfillment of orders met required specifications in quality, design, packaging and delivery. The Export Promotion Grants should be promptly of an advisory, promotional, and co-ordinating nature and should not become involved in the actual buying and selling of goods. To

should concentrate on programmes designed to produce a wider appreciation of the profitability of exporting and the need for exporting; it should also continue to examine the impediments to exporting with a view to recommending measures to remove the impediments. The Council of the Export Promotion Centre should have increased membership of businessmen knowledgeable in exporting.

6. Raising the productivity of existing industries

42 To achieve a sustained rate of productivity improvement, which is essential if Iran's industrial development is to proceed on a sound basis and its industries are to be competitive, will be a most complex and difficult task. Nevertheless an urgent target for Iran's economic development must be higher productivity. A detailed study on an industry by industry basis would be necessary in order to determine the exact nature of changes required and the industries affected and is beyond the scope of this report. Such an investigation should be undertaken as soon as possible. In the meantime, and to assist in moving toward higher productivity in Iran, it is recommended that the Industrial Management Institute supplement its present excellent programme by establishing a special functional group within its organization to monitor the productivity of Iranian industry. Such a group could formulate and compute productivity indexes for major branches of industry. It could be responsible for developing accurate measures of productivity. It could be responsible for developing accurate measures of productivity. It could study the degree to which different levels in capital investment and mechanization account for differences in productivity levels. It could issue and distribute on a regular basis to the business community a management intelligence report which should include comparative productivity data, along with case studies and general supporting information. In time, in addition to its productivity function, it could be concerned with monitoring marketing plans and other programmes, designed to stimulate total business effectiveness. Because many companies frequently will not act to improve productivity simply because potential savings, and hence profit improvements have

not been clearly identified, the Industrial Management Institute should at the request of individual firms be prepared to carry out annual productivity audits with a view to pinpointing inefficiency and weaknesses so that corrective action can be taken. To be effective the results should be monitored at least quarterly so that improvement in productivity can be measured and the goals of further productivity of improvement programmes defined with some precision.

H. Expanded assistance for small industries

43. To encourage the development and strengthening of small enterprises, and to encourage prospective entrepreneurs with strong qualifications, it is suggested that the government review present measures and institute new measures designed to help overcome factors which inhibit the healthy growth of small enterprises. The present Organization for Small Scale Industries and Industrial Estates should be given authority to operate with complete autonomy. It should also be authorized to approve applications for the licensing of small enterprises on behalf of the Minister of Economy and should act as a central agency on behalf of individual small company owners and managers with all government departments and agencies. The government should ensure that small enterprises are eligible for all incentives available to large companies and that the services of the Organization For Small Scale Industries and Industrial Estates are available to the owners of small companies to carry out the necessary negotiations and procedures to obtain these benefits. As small scale industry usually can constructively employ more financial resources than they can frequently obtain, it is believed that the Organization For Small Scale Industries and Industrial Estates should be authorized to guarantee a portion of loans made by chartered banks to small enterprises up to a specified amount. To carry out programmes intended to contribute to small industry growth it is essential the Organization For Small Scale Industries and Industrial Estates be staffed with personnel with practical business experience in or provide advisory services in the technological, marketing, financial and managerial fields. Finally it is urged that programmes to assist small scale industry

be concentrated on individuals and small company owners who have some diverse experience in operating small business or exceptionally strong qualifications and could benefit from outside assistance or advisory services from specialists.

i. Assistance for training skilled industrial labour

44. A long term programme is needed to overcome the current shortages of skilled labour and it is suggested training programmes be organised by industry to provide for the training, retraining and upgrading of workers now employed in factories. To ensure training of practical value to management and labour calls for education and training based on an analysis of production methods to determine which skill classifications are required. This can only be accomplished by training in actual plants under the supervision of specialised international consultants. This will require maximum co-operation between management, labour and government with substantial financial assistance by the latter. Business firms must be encouraged and assisted to adopt manpower inventory management to ensure that both actual and potential skills within a company are matched with current and anticipated requirements. This will permit management to make sound decisions on the desirability of hiring versus internal skill development and on scheduling and budgeting for additional skill requirements. Selected Government owned plants should also be utilized for training and more special training centres established where workers can receive practical training on modern production machinery supervised by experienced personnel familiar with modern management techniques.

j. Assistance for research and development

45. To overcome the existing deficiencies in the overall effort on applied research and development which is needed in a modern dynamic manufacturing economy, a long term programme of 5 and 7 years should be undertaken to increase the efficiency of existing local industry and to encourage a fuller utilization and expansion

of existing industrial capacity. Unless such a programme is made sufficiently attractive financially, it is unlikely firms will take advantage of the power of R and D for stimulating economic growth. R and D grants should be available to firms for contracting for such services by outside consulting organizations, or for building applied research capability within Iranian firms wherever they are of sufficient size to support such activities. In all instances careful technical appraisal should be carried out before grants are approved. Iran also needs an expanding applied research organization which emphasizes the country's special problems and is oriented to its special needs. This organization should be in a position to provide medium-sized and smaller firms such services as analyses of product performance, product and process development research, technical assistance in feasibility studies, and market and economic research. A strengthening of the Institute of Standards and Industrial Research to perform more of these activities on a wider front would have the advantage of the special relationship that this agency enjoys with the business community and help to ensure that the approach taken is practical and oriented to the needs of business.

K. Transport, communications and energy

46. Although the subjects of transportation, communications and energy were not specifically included in the terms of reference of the Advisory Group, it became evident as studies proceeded that more effective planning and co-ordination in these fields is vital to continued economic growth. In fact, it is believed industrial and other development may be adversely affected if these subjects do not receive immediate attention. It is therefore recommended that two high level interdepartmental advisory commissions be established. Both commissions should be assisted by a small but highly qualified research staff. A formal progress reporting system should be established for both commissions.

(a) In order to upgrade the country's transportation system to match the industrial expansion which has already occurred and future goals for economic development, and to benefit fully from new technical developments in transportation and communications a Transportation and Communications Commission under the chairmanship of a senior deputy minister be organized as soon as possible. The Commission's membership should include representatives of the appropriate government departments, the Plan Organization, all transportation modes, rural development associations, and other interested groups. The function of the Commission would be to advise the government on appropriate transportation and communication policies to ensure proper planning and co-ordination of all methods of transportation and communication in the country so that these can be used in a creative and positive manner as development tools. To carry out its tasks the Commission will be required to continually assess new concepts and techniques in the transportation and communication industries and must develop data banks and models of various transportation and communication systems in different areas of the country. This will facilitate analysis of transportation and communication services, rules, and patterns. The Commission's first task should be to arrange for the evaluation of Iran's [illegible] simulation as outlined in the first section of this report. A similar study should be undertaken of the country's telephone and telegraph system as soon as possible.

(b) In order to recommend policies that will ensure that an adequate supply of the different forms of energy at lowest possible rates be well distributed throughout the country to serve industrial and consumer markets an [illegible] be established. The Commission to be under the chairmanship of a senior deputy minister and

membership to include senior representatives from Government, the Plan Organization, oil, gas and electric utilities, rural development associations and industrial and consumer users. The functions of the Energy Advisory Commission should be to carry out long range planning designed to ensure the maximum integration of the energy resources of Iran. This will involve the creation of a long-range provincial energy plan, recommending policies and actions that are required to ensure favourable rates and security of supply to industrial and consumer users and studies to determine the feasibility of a national power and/or energy grid. A continuing responsibility of the Commission should be the identification of energy intensive industries and recommending policies to supply such industries with incentive power rates for three to five years where significant benefits would accrue. Among the possible benefits to be weighed in considering whether to grant incentive rates to a particular industry are creation of employment, utilization of resources as yet unused, development of dependent industries, rural development and optimum utilization of energy resources. Incentive power rates should be available only to industries of high development potential and each decision to offer incentive rates should be preceded by an investigation to establish that the cost of offering such rates is offset by increased public benefits, and that revenues derived from the services will at least cover incremental costs.

SECTION 3. ACTIVITY OF THE PHARMACEUTICAL INDUSTRY

47. The Pharmaceutical Industry in Iran has started as a processing industry based on imported bulk basic drugs. The main activity comprises formulating imported bulk drugs into dosage forms like tablets, capsules, ointments, liquid preparations and injectables either as single drug or multiple drug formulations.

48. The products manufactured in Iran are mostly proprietory products and sold under trade names. They can be classified into major groups. The total number of individual products is estimated at 1500.

1.	Antibiotics (anti-infection)	10.	Antifungal products
2.	Anaesthetics	11.	Antitubercular products
3.	Analgesics (antispasmodics)	12.	Antidysentry products
4.	Antacids	13.	Antirheumatics
5.	Antiamoebics	14.	Coronary vasodilators
6.	Antiasthmatics	15.	Corticosteroids
7.	Antidiabetics	16.	Diuretics
8.	Antihistaminics	17.	Enzymes
9.	Antihypertensives	18.	Veterinary preparations

49. In order to meet the Iran's requirements of medicaments a wide range of finished preparations are being imported to supplement local production. The total number of individual products which are still imported was estimated for the Mission at 1000. The Mission faced the handicap of lack of detailed information (a) on the production of local manufacturing firms and (b) on the volume and type of products imported. Rough estimates suggest that the value of local output increased from about Rials 600 million in 1966 to perhaps Rials 1200 million in 1968 and that it has continued to expand rapidly. It therefore appears that Iran still imports a major part and perhaps as much as 70% of its requirements for pharmaceutical products in finished form (see Table I).

TABLE I

Year ending March 20	Import of finished drugs and raw materials	Estimated breakdown: Raw materials	Estimated breakdown: Finished drugs	Estimated sales value of local production	Total Demand	Percentage self-sufficiency
	Riels millions	Riels millions	Riels millions	Riels millions	Riels millions	%
1956	718	5	713	25	738	3.4
1957	550	8	542	25	567	4.4
1958	820	8	812	32	844	3.8
1959	1136	16	1120	55	1175	4.7
1960	1400	30	1370	90	1460	6.2
1961	1600	40	1560	120	1680	7.1
1962	1800	45	1755	140	1895	7.4
1963	2000	50	1950	150	2100	7.2
1964	2114	54	2060	160	2220	7.2
1965	2526	70	2456	210	2666	7.9
1966	3000	100	2900	300	3200	9.3
1967	3750	200	3550	600	4150	14.5
1968	3400	300	3100	900(1)	4000	22.5
1969	3720	400	3320	1200(1)	4570	26.0

Sources: Estimates for the period up to March 1968 are taken from "Consumption, production and imports of pharmaceuticals during the Second and Third Development Plan periods". Thamra Thanlimdeh, Plan Organization.

The estimates from 1966 onwards are more tentative and assume that imported raw materials account for 25% of the local selling price. The 25% assumption is open to question. Even more important, we cannot be sure of the classification of imports.

Notes: (1) Estimates by the 17 major firms in the industry (Table II) indicate sales of Riels 850 million in 1968 (1967) and Riels 1750 million in 1969 (1968).

50. Some of the problems faced in developing the pharmaceutical industry were identified by the Ministry of Economy and Ministry of Health during the Exploratory Mission which preceded this Advisory Group.

51. The main purpose of this section of the Mission's report is therefore to outline the policies which the Government might follow (a) to increase the range and volume of drugs formulated in Iran and (b) to introduce gradually the manufacture of pharmaceutical chemicals which are all imported at the present time.

52. The discussion falls in four parts:

I. The structure of the existing industry
II. Existing policies
III. Future growth of the industry
IV. Conclusions

I. The Structure of the Existing Industry

53. There are about 60 firms in Iran mostly in Tehran manufacturing pharmaceutical products; of these, 17 major firms produce over 70% of the total output. Most of the major firms have foreign collaboration and nearly all of them are foreign-owned or joint ventures.

54. Table I lists the names of these major firms, their foreign collaborators, and the number of products which they are licensed to produce and the date of initial permission given by Government to set up a factory. It also indicates total capital investment, percentage of foreign capital holding, and value of products manufactured in the years ending March 1969 and March 1970.

55. It has taken considerable time since the date of initial permission for many of the new firms to start production. Even today many of them have not achieved capacity production and are operating at less than 50% of their installed capacity.

TABLE II

	Name of Firm	Number of products licensed	Date of initial Government permission	Foreign holding (per cent)	Total capital investment	Production year ending March 1968	Production year ending March 1969	Name of foreign collaborators
				%	Rials millions	Rials millions	Rials millions	
1.	[illegible]	30	1956	Nil	20	27.5	27.5	Nil
2.	Bayer (Pharma) Iran	42	1960	80	80	60	68	Bayer (Leverkusen) W. Germany
3.	[illegible] Iran	40	1967	70	72	-	-	Schering (Berlin) W. Germany
4.	Cyanamid [illegible]	61	1964	50	167	130	144	American Cyanamid, USA
5.	[illegible](1)	166	1957	Nil	297	250	275	ICI (UK)(1) Glaxo Group (UK)(1) Collet. (Norway)(1) MSD (USA)(2) Schering (USA)(2)
6.	[illegible] Iran	42	1957	20	20	59	66	[illegible] (USA)
7.	Bayer	27	1960	Nil	12	-	50	Bayer (France)
8.	[illegible] Iran(4)	95	1965	70	105	-	150	Farbenwerke Hoechst (W. Germany)
9.	Lepetit Iran	60	1963	72	78.5	70	78.5	Lepetit (Milan) Italy
10.	[illegible] Iran	30	1967	70	90	-	63	Merck (Darmstadt) W. Germany
11.	Organon Iran	73	1964	70	50	60	67.5	Organon N.V. (Holland)

Name of Firm	Number of products licensed	Date of initial Government permission	Foreign holding (per cent)	Total capital investment	Production year ending March 1968	Production year ending March 1969	Name of foreign collaborators
			%	Rials millions	Rials millions	Rials millions	
12. Parke Davis Iran	40	1966	70	67.5	70	78.5	Parke Davis (USA)
13. Pars Industrial Co.	40	1968	Nil	27.5	40	45	
14. Pfizer Iran (3)	47	1964	100	45	200	220	Pfizer (USA)
15. Squibb Iran	36	1961	100	96	200	220	Squibb (USA)
16. Tehran Chemie	39	1965	50	60	-	30	Chemie Grünenthal (W. Germany) Boehringer (Manheim) (W. Germany)
17. Tolidaru	200	1957	Nil	111	90	150	Mackesson (Foremost) USA Alcon (USA) Vickschemical Co. (USA) Boehringer (Engelheim) (W. Germany) Bairsdorf Desitin (W. Germany)

Notes: (1) This factory being run by the Pahlavi Foundation and profits used for charitable purposes, import of capital equipment, testing equipment and raw materials are exempt from duty. Products of the first three listed collaborating firms are produced on royalty basis.

(2) The products of these firms are made as a custom job and charged rates of conversion. Imported raw materials being supplied by the firms concerned.

(3) No royalty on products paid.

(4) Also produces textile auxiliaries and synthetic glues.

II. Existing Policies

56. The main policies which have affected the growth of the industry to date and will continue to affect its growth in the future are (a) licensing policy; (b) price controls; (c) tariff policy and import controls; and (d) the legal framework within which the industry has developed and will continue to operate; and (e) the terms of foreign collaboration agreements.

(a) Licensing Policy

57. Establishment of a new pharmaceutical plant requires the approval of the Ministry of Economy; the range of products envisaged and the sales forecast for each of them is indicated in the license application. The range of products is then approved in principle but before the products are actually manufactured and marketed, two further permissions are required:

(i) The products must be deemed essential by the Ministry of Health. This needs an application on a separate prescribed form. The permission is valid for only three years.

(ii) Approval for the selling prices of the products; this is now considered by the Ministry of Economy. The approval is also valid for only three years.

58. The major criterion for the first approval appears to be that the product can be manufactured and sold in Iran if this product is already manufactured and sold in the country of origin of the collaborating company. This policy when followed too rigidly (as it has been in the past), prevents the introduction of preparations required to treat special diseases prevalent in Iran which do not exist in the country of the collaborating firm; for example, new anthelmintics for worms, drugs for treating conditions of malnutrition; lower dosage preparations that can be used by a less resistant population also do not meet this criterion. The introduction of special formulations to withstand

the extreme heat experienced in summer months in parts of the country and maintain stability are also discouraged.

59. These licensing procedures appear to have caused delays in the start up of some new manufacturing plants. Limiting approvals to three years has created uncertainties which may discourage long-term development programmes by existing firms or prospective new investors.

(b) Price Controls

60. The system for establishing controlled selling prices is also very elaborate. The procedures used for fixing prices are very complicated and take time to negotiate.

61. First an evaluation of the price of the product in other markets is made; especially the domestic market of the country of origin. This and the imported c.i.f. price is taken as the main basis for fixing the controlled selling price.

62. The formula used is as follows:

Consumer price = Ex-factory price + profit (12% on paid up capital + interest actually paid on borrowed capital) + a mark-up of 32% on the total of these two items.

63. The 32% mark-up is intended to cover marketing costs (17%), wholesalers commission (2%) and retailers commission (13%).

64. The reasonableness of this ex-factory price is evaluated based on the detailed data given in the price control application. In practice, the price is usually fixed by personal discussions with the factory management which involves considerable bargaining. This price is reviewed at the end of three years, the whole process being publicly reported.

65. The present system of establishing controlled selling prices should be replaced by a more rational system which will enable the industry itself to fix its prices under Government supervision. Norms for conversion charges and packing charges should be worked out based on a costing of existing units. Provision should be made in the price formula to provide for raw material costs, fixed conversion and packing charges for different dosage forms and packs and a mark up to cover all expenses for distribution, promotion, freight, commission to wholesalers and retailers and profit. The industry should be asked to work out its price on this basis and come up with proposals for approval only in special cases to which the price formula cannot be applied.

66. This approach would remove the uncertainties which prevail under the present system as the firm can evaluate what price it can charge for any product even before setting plans to produce a given item; it would avoid the need to go through the price fixing procedures all over again at the end of three years.

67. Norms for conversion and packing charges has been established in the Drugs Price Control Order 1970 of the Government of India. It would not be difficult to work out similar norms of conversion on a similar basis for Iran.

(e) Tariff Policy and Import Controls

68. Tariff policy permits life saving drugs (antibiotics, anti-cancer and antimalarial drugs, etc.) to enter duty free. The duty on penicillin has been recently raised from 0 to 5%. The effective rate on proprietary drugs was raised from 30 to 35% in March 1969 without a corresponding increase in the permitted selling prices.

69. The raw materials and packaging materials required for making a drug formulation attract the same rate of duty as the final product. This is to obtain results in a lower tariff for packaging materials and for packing drugs than would apply under

the general tariff for pharmaceutical materials.

70. Import licences for raw materials required for the manufacture of approved products are given without restriction of quantity or value. However they are valid for a period of only 3 years.

71. The continued high level of imports of finished preparations suggests that the present system permits imports of some products even where there is idle capacity available to produce the same product in Iran. Furthermore, despite considerable efforts to limit the range of drugs imported, the number of different products imported is still very large.

72. In the future, imports of finished preparations should be restricted to essential items not produced in the country or where such production is not adequate to meet Iranian needs. It will also be useful to publish a list of essential drugs which can be manufactured or imported into the country.

(d) The Legal Framework

73. The laws which govern manufacture of drugs were introduced before any drug manufacture worth the name was undertaken in the country. It can be seen that provisions contained therein are not conducive for the rapid and healthy growth of an industry and give no guidance to manufacturers in setting up and running their factories or engage in the business of import, distribution or sale of drugs.

74. A modern Drugs Act to regulate import, manufacture, distribution and sales should be enacted and adequate qualified staff, government inspectors and analysts appointed to inspect the premises and test samples taken and guide the industry and trade and also safeguard the interest of consumers. Several modern drugs are very potent and when used without proper guidance can do more

harm than good and dispensing of such products should be on proper prescription. A proper Drugs Act to regulate their use is therefore necessary; the Drugs and Cosmetic Act and Rule of India which is a modification of the Drugs Act of developed countries and suited for developing countries might be used as an example in drafting a new Drugs Act for Iran.

(e) Foreign Collaboration

75. The policy on foreign ownership appears to have varied considerably over the years. Full foreign participation up to 100% was permitted at one time. The maximum foreign participation permitted was then progressively brought down first to 70% then to 50% and now only minority participation is contemplated. Established foreign holding companies are not compelled to reduce their foreign capital participation; in one case a 50% foreign holding company has been permitted to buy the local partners share and become a 100% foreign company. More recently a foreign company has been permitted a 100% holding on condition that no royalties will be paid and that after five years 25% of the shares will be sold to the public.

76. Technical 'know-how' fees are mainly paid as a royalty on the value of the finished preparations produced and sold in Iran. An one time payment up to 10% of the price at which the manufacturing company sells to the trading company was allowed. For subsequent projects this was reduced to 7% for 5 years and 2.5% for the next 5 years. Further scaling down for new ventures to 4% and 1%, respectively is contemplated.

77. Whilst complete uniformity on these two closely related subjects of negotiation with foreign investors may not be desirable, clearer guidelines might help create an improved investment climate.

III. Future Growth of the Industry

78. The pharmaceutical industry in Iran can certainly improve its contribution to the national economy and the health of Iranians if a proper atmosphere is created and the industry given definite direction for its future plans.

79. To create the right atmosphere for a healthy growth of the industry, a number of steps have been recommended above. The further steps recommended below concern:

(a) The introduction of a national pharmacopeia
(b) The introduction of official preparations without brand names
(c) The extension of quality control work by the Government
(d) The collection of more detailed information on production and imports
(e) The adoption of more flexible licensing procedures to use idle capacity
(f) The preparation of a phased programme for the manufacture of pharmaceutical chemicals
(g) The promotion of local research and development

(a) The introduction of a national pharmacopeia

80. Simultaneously a pharmacopeia committee and a national formulary committee should be set up comprising eminent physicians, pharmacists and technical men drawn from the industry to prepare a pharmacopeia and a national formulary to suit the special needs of the country and also revise it from time to time. This can form the basis for the manufacture of official preparations in the country as recommended below.

(b) The introduction of official preparations without brand names

81. There ought to be encouragement to make approved pharmaceutical and national formulary preparations (official preparations) using existing or new capacity and market them under their generic names.

This will assist in better utilisation of installed capacity and bring about a healthy competition in these products as no trade marks and trade names are involved. It will be unnecessary to control prices once competition is adequate. It will help hospitals and other Government-aided institutions to get many of their requirements in the form of official preparations at reasonable prices.

82. Along with a more rational system of fixing controlled selling prices which is recommended above, the encouragement of production of official preparations (which may need no price control system) will relieve the Government and the industry of the present cumbersome and time consuming price control procedures.

83. For certain drugs the choice of dosage form is very important as the extent; the intensity and duration of their therapeutic response of its active ingredients is dependent on particle size, the excipients and vehicles used in making the dosage forms. But this is usually more important for very special drugs; in the case of simpler medicaments it is not so important.

84. One of the views expressed in Iran for not encouraging such preparations was that testing facilities with the Government, being meagre, would not be able to ensure the quality of production, while reputable firms for similar branded preparations will automatically maintain quality in order to maintain their reputation. This is certainly not an alternative to providing a proper check on quality and the Government will have to improve their facilities for this purpose.

(c) <u>The extension of quality control work in the Government</u>

85. The major factories have good quality control laboratories which are well-equipped where both raw materials and finished

products are tested. Firms with foreign collaboration also have a system of counter check by the laboratories of the parent organization.

86. The central control laboratory in Tehran run by the Government which is fairly well equipped and has competent staff. Imported products, both raw materials and finished preparations, are tested by random sampling. The tests are made according to the approved pharmacopeias like USPXI, USP, B.P., F.P., G.P. for new drugs methods of analysis given by the manufacturers are adopted. Factory production as well as samples drawn from the trade are also checked. But as they have no drug inspectors, these samples are drawn by staff of Public Health Department and Health Centres.

87. This laboratory is a very good nucleus; however it is not able to cope with the work involved now. In the future, the work should expand rapidly.

(d) <u>The collection of more detailed information on production and imports</u>

88. Detailed information on imports and existing production capacity is needed as a basis for policy decisions on (a) the licensing of imports, (b) the licensing of new formulatory capacity and (c) the feasibility of establishing new plants in Iran for the manufacture of basic ingredients.

89. In the present custom classification, import statistics group together not only the raw materials and finished drugs but also the packaging materials. This makes it impossible to get an idea of the volume of imports of the different essential drugs coming into the country both in bulk form and the final preparations. A more detailed classification of pharmaceutical imports is essential. Raw materials, packaging materials and finished drugs should be in different categories; the type of drugs should be

broken down into a much larger number of categories. To change the existing classification will take time, but the information gathered will be very useful in the future. In the meantime steps should be taken to compile this information for recent years from other sources. The best source would be the copies of invoices received by the Drug Control Department to draw samples for test before release to the consignees. This department also has technical staff who are able to identify the products easily and compile the information without making any major mistakes.

90. When this information is compiled, the data will show that a majority of these imports would be related to a limited range of essential drugs (being a major constituent in the case of imported finished preparations) and required for the treatment of the common diseases of the country. Any likely modification that may take place in the demand for these drugs can be easily visualised in relation to the new health plans that are being launched for control and eradication of specific diseases. Here again these health plans should provide an indication of what impact the plan's objective is likely to have on the country's disease spectrum and the consequent increased needs for pharmaceutical products.

(c) <u>The adoption of more flexible licensing procedures to use idle capacity</u>

91. It will also be useful to assess capacities of different manufacturers for the various processing operations involved and to investigate the causes for unutilised capacity which exists in many firms today. When a large percentage of drugs are being imported in finished form it should be considered a national waste to keep capital equipment idle. The value added is considerable in these operations and fuller utilisation of capacity will reduce foreign exchange expenditure, provide more employment for skilled workers and improve the economics of manufacture. This will benefit both the industry and the consumer and help develop auxiliary industries such as printing material, excipients, etc.

92. Once the capacity installed by each manufacturer for each of the dosage formulations such as tablets, capsules, ointments, liquid preparations, injectables, etc. has been determined, this should be recognised by the Government and the firm permitted to make the approved products as well as the official preparations within the overall capacity. Any new products resulting out of product development carried out by the firm should also be permitted to be made within the overall capacity after examining the usefulness of the new preparation.

93. There is an urgent need to remove the uncertainties which manufacturers experience with the present system of having to renew permission every three years and by doing so help them to undertake development programmes with more confidence.

(f) The preparation of a phased programme for the manufacture in India of basic pharmaceutical chemicals

94. The pharmaceutical industry should be guided in its future growth to switch over progressively to basic stages of manufacture to reduce its dependence on bulk imports of pharmaceutical chemicals and other materials. Simultaneously, steps should be taken in planning the production of chemicals and chemical intermediates required by this industry by the chemical and petrochemical units that are being set up. This would result in a cohesive growth of the pharmaceutical industry integrated with the chemical and other industries of the country.

95. To identify the products suitable for basic manufacture, details of present and future trends of consumption will have to be examined after information has been collected in the manner recommended above. It cannot be too strongly emphasised that lack of this information (which it was suggested should be collected in the report of the Preparatory Mission by UNIDO in July 1969) is the main obstacle to a start being made on the development of basic chemical manufacturing units.

96. Based on this data, priorities can be given for setting up units for the production of basic chemicals for items where demand permits setting up of economic capacities and where there is likelihood of major raw materials available from local sources.

97. One of the most likely fields which will be feasible will be production of antibiotics. The country already has the required nutrients such as starch, sugar, protein sources and needs only to import solvents, precursors etc. to start with. Certain economies can be achieved if products involving the same technology are grouped together e.g. products involving fermentation technology, like Penicillin, Streptomycin, Tetracylin and vitamin B_{12} could be undertaken under one project while those involving chemical synthesis like sulfadrugs, P.A.S. chloramphenicol and vitamin C could be included in a separate project.

98. There are already several firms in the country who possess the technical know-how to undertake such basic manufacture. They will have to be persuaded to do so with well conceived inducements to go into further capital expenditure in this branch of industry because it is not so remunerative as the processing operations. The most suitable parties for negotiating for putting up such schemes will be the firms who have established good markets in Iran for preparations which utilise the basic material concerned.

99. The capacity of each plant should be capable of meeting not only the requirements of the sponsoring firm for its own processing operations but the overall requirements of other processors in Iran and possibly the needs of some neighbouring countries. Although firms in Iran with different foreign collaboration agreements will indicate they require intermediate products with different specifications, it should be possible in most (if not all) cases to insist that they purchase their supplies from the newly established Iranian plant once supplies become available.

128. To be able to plan for the production of various chemical intermediates of the drug industry, it will be necessary to check the requirements of the same or similar items of other chemical based industries that are being planned such as synthetic fibres, synthetic rubber, rubber chemicals, plastics, dyes, detergents, etc. Grouping of their demands will make their production more economical. For this to be possible, a detailed exercise will have to be undertaken by the Government and the industry based on the expansions that are being planned in the various branches of the chemical-based industries. This will no doubt be a gigantic jigsaw puzzle, but it will be essential if the petrochemical industry and its down stream units are to be properly planned. This class of industry is not only tied to raw materials for its functioning but also to an assured off-take of the multiple production for its economic viability. For this reason, it is essential that integrated complexes of this kind are meticulously planned, choosing appropriate technology ensuring coordinated implementation of the different components, achieving optimum exploitation of raw materials and services and phasing production in a manner that matches the off-take pattern.

(d) The promotion of local research and development

129. The progress achieved so far in the manufacture of pharmaceuticals in India has helped collect together the technical skills needed to start bulk and pharmaceutical chemical manufacture. It has brought together persons trained in different branches of science who are pooling their knowledge and experience in the effort to produce useful products under carefully controlled conditions and are gaining practical experience. The technological processes involved and the safety measures taken have helped to form a nucleus of highly skilled labour which is very essential for the further progress of this industry.

102. The Government should encourage major manufacturers to establish product development laboratories to work on improving the formulations produced and making newer preparations to cater to local needs. Encouragement in this field will bring about production of more staple products to withstand the rigours of climate and more effective remedies to suit the peculiarities of race, food habits and stamina of the people. In addition these laboratories will provide opportunities to young scientists in Iran to gain experience in this field and get more confidence.

103. With the progressive development of the industry, the leading firms should be also encouraged to set up independent research laboratories in Iran to carry out(along with their normal programme of formulation)research to improve the dosage forms of existing drugs, improve the manufacturing processes to give higher yields and reducing manufacturing costs, substitute imported raw materials with those that become indigenously available, to screen the various local remedies and determine their therapeutic properties. This will contribute to useful knowledge and the continuous search for new remedies for ameliorating human suffering and at the same time eliminate many useless preparations that may be on the market.

Conclusions

104. About one third of the drugs required in finished form are formulated and packaged in Iran at present. There are some indications (a) that drugs are still imported where production capacity exists in Iran and (b) that most of the firms established in Iran are not making full use of their existing capacity.

105. To determine the scope (a) for increased reliance on products already formulated and packaged in Iran and (b) for widening the range of products produced in Iran, a comprehensive and detailed survey should be undertaken

(i) the present and future demand

(ii) the capacity of existing enterprises.

106. To encourage further growth of this final-processing end of the industry along sound lines, the policy on imports of finished products should be reviewed and licensing and price control procedures simplified.

107. To provide an appropriate legal framework for the further development of the industry, a new modern Drugs Act should be enacted. A national Pharmacopea should be produced and constantly up-dated. Existing firms should be encouraged to produce the most widely-used drugs as official preparations marketed under generic rather than brand names.

108. Existing firms can be encouraged to produce some of the basic chemical ingredients, which are imported at present, once the present and future size of the market has been assessed. One plant capable of supply the needs of the industry as a whole in Iran and export markets is recommended. Some economies in production costs may be achieved by grouping production of similar products in a single plant.

109. Assurance of adequate protection from competing imports and possibly investment incentives may be needed to promote investment in these plants.

110. Simultaneously, steps should be taken in planning the long-term development of chemicals and chemical intermediates needed by the pharmaceutical industry as well as for other end-uses.

111. Existing firms should be encouraged to establish locally (a) product development laboratories and (b) research laboratories.

7

SECTION 4: A REVIEW OF THE TEXTILE INDUSTRY

112 The Textile Industry is considered to be a sick industry in Iran; it is out of fashion and the solution of its problems would appear to warrant more attention in official circles. The chief problems are well-known and were identified by the Ministry during the preparatory mission organised by UNIDO which preceded this Advisory Group. They relate chiefly to the cotton and rayon spinning, weaving and finishing industries.

113 Whilst the difficulty of solving these problems may perhaps have been overestimated by some in the past, the importance of solving them has never been underestimated. The Textile Industry is the most important manufacturing industry in the country as an employer of labour and as a transformer of indigenous raw material. Enlightened policy during the past 40 years sponsored the industry with such dynamism that it now supplies most of the textile needs of the country; consumers' purchasing power is therefore strongly affected by the price and quality of its products. It is a prime resource-based industry with a very low share of imported inputs in sales value, it was classified in a recent IBRD report as one of the most important industries with the rating "High value added and relatively low prices".

114 The Textile Industry is complicated industry. Further detailed study of the industry in collaboration with the business community is essential before new policies for this branch of industry are chosen, defined and implemented. It has been possible to touch on only a few of the more important questions which will have to be considered when formulating this new policy in this brief report.

115 This section of the Mission's Report is divided into four parts:

I. The Cotton Textile Industry
II. The Woollen Textile Industry
III. Synthetic fibres and rayon
IV. Conclusions

1. The Cotton Textile Industry

116 Direct observation of 70% of the capacity of the industry suggests that the main problems are as follows:-

1. Inadequate Management
2. Unproductive Labour
3. Antiquated Marketing
4. Inferior Quality
5. Poor quality raw materials
6. Unsatisfactory plant location, buildings and layout
7. Unsatisfactory Plant and Machinery for Spinning, Weaving and Finishing

117 These problems are discussed in detail below and possible solutions are suggested under each heading.

1. Inadequate Management

118 The fundamental problem of the textile industry in both developing and developed countries is the lack of trained, responsible, modern management. The Iranian textile industry is no exception.

119 To a large extent self-sufficiency has been achieved by forcing the growth of the industry. An alien technology was brought to Iran by foreign managers, technical staff and erectors of machinery; in many cases, it appears that they were withdrawn without leaving properly trained Iranians to succeed them.

120 In the meantime, there has been a technological and managerial revolution in the world's textile industries, particularly in the last ten years; it is late in reaching Iran except to a very limited extent.

121 A Managerial Re-think is urgently required, and massive practical assistance is needed from all the available sources, including outside consultants. However, modern management techniques will have to be introduced with discretion in all cases.

122 [illegible] and the Iran Management Institute have initiated training seminars and courses for top management; their sophisticated and specialized work should now be supplemented by a long-term programme of technical management training for middle and junior staff. This is an urgent need.

123 The following modern techniques require to be learnt in most mills:-

Production Standards	Standard Costing
Quality Control	Stock and Spare Parts Control
Time and Motion Study	Scientific Maintenance
Merchandising and Production Planning	Personnel Organization

124 The foregoing remarks do not apply to several exceptional mills which have already introduced modern management methods; but in order to introduce modern management methods to other mills, there are two ways in which UNIDO might be able to help:

(a) The organization at an early date of a Management Clinic lasting two to four weeks which would help to interest representatives of the industry in improving their management techniques and planning the industry's reorganization and future.

(b) The textile industry might be encouraged to form a new kind of Productivity Centre in which joint effort and organic growth based on further extensive management and labour training would be the guiding principles.

2. Unproductive Labour

125 Experience in many countries has proved that the potential of workers in the textile industry under rational management is remarkably similar; there is no reason to believe that Iranian workers cannot reach high levels of productivity; rather the contrary. Yet most mill owners and chief executives complained about labour problems, in part caused by the existing labour laws

126 Compared with other countries the number of workers in Iran employed by the existing mills of average efficiency is excessive.

127 The present situation of generally low productivity means that textile workers have a standard of living which they may eventually find to be unacceptable. Improved productivity, based on Modern Management, is needed to permit the higher level of wages that other industries in Iran can afford to pay.

128 Extensive retraining of workers over a period of years will be essential before they can be employed in a modernized textile industry. This is the second major step that is needed to improve the existing situation.

129 It is recognized that modernization of the textile industry will raise social and political questions which require deep study before new policies are adopted.

3. [illegible] Marketing

130 It is well-known that Iran suffers under a consumer-oriented marketing system controlled by merchants, whose interest is to handle small quantities of a tremendous range of varieties of cloth.

131 The large integrated textile mills require large runs of standard qualities, counts, constructions and finishes in order to produce economically.

132 There are two solutions worth investigating:-

(a) To further rationalise the whole group of Government and Bank owned mills under the control of a semi-private body such as the [illegible], and to allocate production lines so as to achieve longer production runs of standard varieties of cloth;

(b) To encourage the rapid development of the garment industry and to link it for production planning with the large vertically-integrated textile groups.

4. Inferior Quality

133 Some of the existing mills are producing vast quantities of narrow cloths of antiquated types. As the standard of living rises and more of the poorer people change from subsistence level buying to consumer status existing standards of quality and design will become increasingly unacceptable. Consumers will look for new types of fabric, new fibres, new blends and new designs. Iranian textile mills should be encouraged to become more flexible and dynamic; better quality wider cloths of modern design will be needed as taste is elevated to higher standards. A limited volume of imports of these types of cloth might be permitted more freely on a temporary basis, if the industry does not adapt itself quickly enough.

134 The role of the very efficient Bureau of Standards in improving quality and standards should be extended and strengthened. As a matter of detailed policy, the component of pure and blend cloths should be marked clearly so as to reduce fraudulent trading.

5. Poor Quality Raw Materials

135 It is inexplicable to an outside observer that equal quantities of home-grown cotton and imported viscose rayon are used in Iran rather than much larger quantities of local-grown cotton. In most countries, viscose rayon is thought to be a poor substitute for cotton for most uses; it is poor value for money and the use of rayon is in decline.

136 Simple, but compelling economic distortions account for the large imports of rayon into Iran at present. The price of cotton fluctuates widely and the quality of ginning is inadequate; cotton has to be bought

for cash, whereas 3-6 months credit can be arranged for rayon.

137 In the future, it is suggested that Government policy should encourage local mills to use as much home grown cotton as possible. Imports of rayon cost about £20 million at their present level, and cotton growing not only saves foreign exchange but creates employment opportunities.

138 Although outside the terms of reference of this report, it seems appropriate to suggest that a new cotton improvement scheme might be set up under an independent autonomous Government Marketing Board, perhaps with technical assistance from FAO. The Marketing Board should offer a fair and stable price to cotton growers and extend financing to the textile mills on favourable terms to promote greater use of cotton. The Board should encourage a substantial increase in the cotton crop by subsidising the use of fertilisers and pay particular attention to improving the ginning process.

6. Rationalising Plant Location, Buildings and Layout

139 Many large textile mills are located in or near the centre of cities such as Tehran and Isfahan, or in tourist towns beside the Caspian Sea.

140 Many of these mills should be gradually re-located in more suitable districts away from major cities and far from areas which are being developed for heavy industry and engineering complexes.

141 The sites of these factories are valuable. If they were sold, funds could be raised which would finance at least part of the re-location costs. In addition, the Government might consider making cash grants as an incentive for re-location in areas chosen as poles for new industrial development. The textile industry then can be used to accelerate development of new industrial areas chosen by Government.

142 The reasons for proposing such relocation is that modern methods of production cannot be accommodated in existing buildings and layouts. Proper flow, better spacing of machinery, more logical production flows, improved standards of lighting and atmosphere control, have to be provided in buildings which have been designed for a modern textile operation with modern facilities for staff and workers. Opportunity can be taken of the planned relocation of old mills to achieve an appropriate location and planning of newly installed capacity. The

Government should facilitate the training and relocation of workers and could bear part of the required compensation for termination of employment.

144 For the mass production of cotton and rayon materials it is suggested that units of around 1,000 modern conventional looms should be adopted, with integrated spinning, preparing and finishing. This is thought to be the largest unit that can be managed efficiently on one site.

2. Unsatisfactory Plant and Machinery for Spinning, Weaving and Finishing

144 Direct observation of 70% of the spinning, Weaving and Finishing Plant in the cotton and rayon sector permits the following general equipment modernisation policies to be recommended:

Recommendation A

Obsolete Openers, Cleaners, Cardings, Drawing and Intermediate Spring should be replaced with machines with:-

(1) Modern Blending equipment;

(2) Modern Opening, Cleaning and Lap forming;

(3) High Production Carding either by Converting existing cards or buying new H.P. Cards;

(4) Modern Standard high speed Drawing;

(5) Modern Large Package Controlled draft Intermediate Drawings.

The reasons underlying this rational policy are:-

(1) Modern Blending equipment has been proved to be essential especially when using irregular and unequal bales of cotton.

(2) Modern opening and cleaning is greatly superior to the earlier technology, Hydraulic lap forming results in heavier laps for high production Cards. Chute feed to cards is uneconomic for Iran at present.

(3) High Production Carding is a recent development whereby the actual output per machine can increase 1,000%, with halved wastage of material and improved quality.

(4) Modern high Speed Drawing increases production per delivery by 600% with better regularity enormously increased packages.

(5) Modern Controlled draft Intermediate Drawings give improved regularity, higher production and greatly increased packages, which improve efficiency of spinning.

Recommendation 4

Existing ring spinning frames should be retained and modernised.

145 It is fortunate that most of the Spinning machines observed are relatively modern, and the better earlier machines can be modernised at about 20% of the cost of new machines. The revolutionary new system of "Open-end" or "Break" spinning is still under development and it is not yet freely available commercially; but when it is, the coarse ring spinning frame will become obsolete. This is a further reason against buying new spinning unnecessarily.

146 The advent of the automatic winding has made small spinning bobbins comparatively unimportant.

147 As a policy measure, it is recommended that new ring spinning machinery should only be imported to increase capacity. Improvement of all processes prior to spinning should result in sizeable increases in productivity of existing ring spinning machines with cleaner, more regular and stronger yarn. It will also be possible to spin the finer counts which will be required.

Recommendation 5

All obsolete winding, warping and sizing machinery should be replaced with latest standard machinery.

Recommendation 6

Weaving machinery should be retained and renovated for the time being.

148 No licences should be given for the importation of narrow width looms (40" reed space or less) except in special cases, because efficiency of existing looms can be expected to increase when better and stronger yarn is available; the future is for wider machines.

149 There are still so many doubts as to the direction in which weaving technology is heading that undue investment in this process should be discouraged. Existing looms should be renovated and made efficient so that they become almost as productive as new conventional looms. The most successful shuttle looms are eight [illegible] intensive and are insufficiently flexible for Jamaican conditions in the present state of technology.

Recommendation 8

Finishing machinery needs to be planned and its use rationalized.

149 Large Iranian mills are rich in Finishing machinery, especially in narrow widths now for printing. Before embarking on costly additions it would be best to have a survey made by experts. This opinion applies also to Finishing for the woollen and worsted industry.

150 When the textile industry is reorganized there will be a unique opportunity to rationalize and standardize finishing. The New Groups of mills should be planned to manufacture grey goods which should be processed in properly designed central Finishing Units.

Estimated Cost of Implementing these Recommendations

151 Proper studies would be required to investigate the cost of renovating the cotton and rayon spinning, weaving and finishing industry. Recent experience in other countries indicates that the FEE cost of replacing the entire preparation machinery from Blending to Roving in the larger mills, which form 70% of the industry, would be about US $10 million as a rough order of magnitude. This does not seem to be a high price for the renovation of the spinning machinery.

152 A further sum of about US $10 million might be required for Weaving Preparation and for bringing existing looms up to a reasonable standard of efficiency.

153 For Finishing a figure of US $5 million might be required to purchase those machines that are necessary to balance production and to provide a proportion of more modern materials.

154 The total estimated cost of implementing these recommendations would be about US $25 million. These initial estimates of course require subsequent verification. It should also be recognized that these recommendations represent only the first phase of a long-term modernization programme. Further substantial investment would require much more detailed justification and should be preceded in most mills by the other improvements recommended above.

II. Woollen Textile Industry

155 Some of the major problems were identified in the Exploratory Mission's Report dated July 1969.

156 The extension of this industry is complicated by the problem of producing suitable wool in Iran; earlier attempts in this direction have failed. It therefore has to be faced that wool tops, which form a large percentage of the cost, will continue to be imported.

157 In the future, the initiation of an Iranian top-making industry should be encouraged based on imported scoured wool. Any suitable local wool could be mixed for the lower qualities.

158 Secondly, the use of materials such as Polyester and Acrylic fibres, in blends with fine imported wool, should also be encouraged.

III. Synthetic Fibres

159 Whilst the world-wide use of natural fibres (cotton and wool) has been nearly static for the past 20 years, the use of synthetic fibres has increased from nothing to 8,000 million pounds or 20% of world textile fibre consumption. Synthetic fibres such as nylon, polyester and acrylics could form 20% of the Iranian fibre consumption within the next 10 years time, providing sufficient capacity is installed. The synthetic fibre industry might be developed by foreign investors with know-how, who set up joint enterprises with Iranian interests. The initial scale of plant should be economic by world standards so that substantial exports can be planned from the outset. These industries should eventually be able to use locally-manufactured petro-chemical raw materials such as caprolactam for Nylon 6 B.M.T. and Dimethyl Glycol for Polyester, and eventually Adiponitrile for Acrylics. There is reason to believe that these raw materials for synthetic fibres could eventually be produced in Iran at rock bottom prices providing that the cost of natural gas and other feedstocks is not inflated, and providing that the manufacturing plants are economic in size and economical in capital cost.

160 Existing spinning and weaving mills are quite unsuitable for the production of high quality synthetic blend cloths now properly designed and equipped factories, particularly for Polyester/Cotton blends in standard

widths, counts and constructions will be required if consumption of synthetic fibres is to expand quickly to the level needed to justify economically-sized fibre plants.

162 If this policy of promoting the use of synthetic fibres is accepted, the wastage of foreign currency caused by importing viscose rayon (i.e. about US $20 million annually) could be sharply reduced. It is surely easier to reduce this single item than to generate exports to the tune of $20 million; the effect on the balance of payments is identical.

163 It appears doubtful if the production of viscose rayon should be encouraged in Iran, especially if it is planned to use imported wood pulp. A 40,000 ton rayon factory would provide employment for less than 1,000 even if generously staffed. The production of an equivalent amount of raw cotton (i.e. say 45,000 tons to allow for waste) would occupy 400,000 acres of marginal land, if a yield of 250 lbs of ginned cotton per acre is assumed. These 400,000 acres would support 80,000 farming families on the assumption that each family lived on 5 acres of cultivable land. It is for this reason in addition to the purely financial attraction of saving a massive sum in foreign currency that we recommend a policy of encouraging a switch from rayon to cotton. Owing to out-of-date machinery and technology cotton is not being properly treated in the mills; it is not being given a fair chance. The various positive measures recommended above will take several years to implement; but when they have been put into effect the cotton textile industry of Iran should use mainly domestic raw materials - cotton and synthetic fibres. There should be no necessity to import rayon.

Conclusions

164 The alternatives for the cotton-rayon industry from a broad policy aspect are:

A. To continue as a protected high cost industry with poor quality products out of touch with modern technology and designs etc.

B. To progress rationally towards a more efficient lower cost industry which can both satisfy the domestic market and compete in world export markets when granted subsidies or incentives similar to those provided by other competing countries. This will require a global analysis of the problems of the existing industry by the Government

and the industry, [illegible] investment in modernising [illegible] capacity and the establishment of [illegible] mixed and [illegible] mills as demand warrants.

165 To reduce the efficiency of existing [illegible] industry, an all out concentration of improved management and [illegible] retraining of labour is [illegible] and there is no room for unskilled labour in a modern textile industry.

166 This should be accompanied by [illegible] amount of new investment to replace some obsolete machinery. Some plants [illegible] and the layout of some plants should be improved in the process.

167 This will require a clear policy on [illegible] structure of the industry in the future and its geographical location. In this connection, it is suggested that 1000 weaving looms represent an optimum managerial unit.

168 Improved marketing, longer production runs and [illegible] emphasis on improving quality would also be major goals of this first phase of modernisation of the textile industry.

170 Further re-equipment of existing enterprises is not recommended at the present time. Technology has changed dramatically in the last ten years and is still changing. Considerable care would have to be taken, therefore, before embarking later in the 1970s on any major scheme to replace existing machinery and equipment with new machinery which requires highly skilled labour.

171 A more urgent need is to consider how to satisfy the expanding demand and changing tastes for textiles in Iran. It is suggested that new weaving looms should be for wider cloths and be capable of producing polycotton blends, which experience elsewhere suggests will be increasingly widely used in Iran.

172 In the future, Iran should use more locally-grown cotton and synthetic fibres; the use of rayon, which is unusually high at present for special and temporary reasons is likely to decline.

173 On the other hand, experience elsewhere suggests that Iranian demand for synthetic fibres should increase rapidly and perhaps account for 20% of fibre consumption within the next ten years.

174 The feasibility of establishing large scale plants producing polyester and nylon fibres and the petrochemical raw materials which are required for their manufacture therefore warrants urgent detailed examination with suitable potential investors.

SECTION 5. ADMINISTRATIVE MACHINERY AND PROCEDURES

175 The time available on this visit did not permit the Advisory Group to obtain a clear and detailed impression of the way in which the Ministry of Economy operates; emphasis was placed on understanding the overall picture of industrial and economic development and more detailed study of the textile and pharmaceutical branches of industry. Furthermore, the Advisory Group understood that the organisation and procedures of the Ministry of Economy and its subsidiary agencies had been studied by a previous UNIDO expert.

176 The Advisory Group did however form some general impressions of areas which they feel may warrant attention. On so complex a subject, some of the observations may reveal a lack of understanding of the real situation, but for what they are worth our impressions are given below under the following headings:

A. Inter-departmental co-operation on reviewing basic economic policies

B. The proliferation of autonomous agencies

C. Basic information needed for policy decisions

D. Technical appraisal of new industrial projects

E. Using the advice of experienced businessmen

F. Regular reviews of legislation affecting business

G.- Conclusion

A. Inter-department co-operation on reviewing basic economic policies

177 The Ministry of Economy is the principal department of the Government which is in touch with the businessmen of Iran who develop the trade, commerce and industry of the country. It should therefore be in a position to give an informed opinion of the effect on industrial and trade development of such important basic economic policies as the exchange rate, import controls, imports deposits, tariffs, the taxation of industrial enterprises and monetary and

credit policy. The magnitude and complexity of the task facing Iran in reaching the goals it has set for itself will require new measures to strengthen and focus the efforts of government departments and related organizations on the crucial job of economic development and to link together the work of these agencies. In one way or another almost all government departments and agencies are involved in economic development and their activities frequently affect economic development policies and programmes in critical areas. At the present time, there appears to be a need for an improved mechanism for maintaining continuous and formal surveillance of the progress and problems of Iran's economic development and the activities of all government departments and agencies and outside organizations affecting achievement of economic goals.

178 Accordingly it is recommended that consideration be given to establishing a more direct mechanism whereby the Council of Ministers obtains quarterly or semi-annually, on a confidential basis a vigorous, independent appraisal of policy matters relating to industrial expansion and economic development. This would include all matters affecting the economic growth of the country such as education, agriculture and rural development. The government could also ask for assessment and advice on matters and policies which could have significant impact on economic development or technological advance, or which might create, expand or sustain productive capacity.

B. The proliferation of autonomous agencies

179 The rapidity of growth has resulted in a proliferation of agencies and there is some evidence of duplication and overlapping. Consideration might therefore be given to reviewing and assessing the purposes, organization and achievements of the numerous agencies involved in economic development to ascertain the possibilities of amalgamation of at least some of them to avoid duplication and more important to better co-ordinate certain development programmes. Such a review should also critically examine the lines of responsibilities between economic development agencies and the Plan Organization with a view to better co-ordination..

180 Policy areas affecting the development of industry in Iran where there would appear to be some immediate benefit to be derived from such a review include:

- The identification of investment opportunities
- The promotion of investment in industrial projects
- The development of industrial areas and estates
- The mobilisation of the expended volume of equity capital, loans and working capital required for future industrial development
- The training of skilled labour

181 For example, to better co-ordinate activities relating to publicising business opportunities and contacting potential investors both at home and abroad, and to identify overseas markets for Iranian producers careful consideration should be given to combining the programmes and responsibilities of Investment Promotion Centre, the Export Promotion Centre, the Handicraft Centre and the Iran Carpet Co. Certainly if it is intended to open overseas offices, it would appear advantageous to have all these agencies in one location; this would help create "overseas business centres" with a business atmosphere, where both Iranian and foreign businessmen would feel at home, and where they could obtain factual and businesslike information on economic conditions in Iran, investment and trading opportunities, and where practical local market intelligence could be assembled for the use of Iranian exporters. In addition, of course, such a proposal would increase efficiency and reduce overhead costs. A prerequisite to the successful operation of such a combined agency would be experienced senior management personnel.

6. Basic information needed for policy decisions

182 The important decisions which the Ministry takes when licensing new investment, setting targets for greater use of domestic resources and high value added, establishing tariff levels and offering investment incentives, require detailed information on the structure of existing branches of industry and important inter-relationships between different firms and industries.

183 The experience of the Advisory Group suggests that although much of the required information is available within the Ministry, only in a few cases has it been collected and presented in a systematic form which can be quickly absorbed by senior officials.

184 The team was unable to obtain a clear picture of the overall structure of the existing industrial sector. Whilst useful information was available on the structure of the textile industry, the information on the pharmaceutical industry was mostly collected during the course of the mission itself. It would therefore appear worth reviewing (a) what type of information is needed for basic policy decisions, (b) drawing up a standard format which can be applied to each branch of industry, and (c) deciding how this information can best be collected.

185 A more pragmatic approach involving the collection of data from the more important individual enterprises appears to be needed as well as some expansion and revision of the traditional forms in which industrial statistics are collected.

D. Technical appraisal of new industrial projects

186 There is wide consensus that the standards of project appraisal could be improved; there is also evidence that some investment projects were based on inadequate studies and that capital and operating costs are too high.

187 For projects implemented by private investors, the new emphasis on competitiveness and the intention to provide protection for only a specified period will force the private investor himself to take more care over the selection of technology and the scale of production.

188 Nevertheless, the expense of obtaining the best possible technical advice may loom large at the pre-investment stage of project formulation. It might therefore be worth the Ministry of Economy considering establishing a Pre-Investment Studies Fund to which

private Iranian investors can apply for a loan to finance 50% of the cost of detailed market and technical studies; the loan would be repayable by the company if the project was established.

189 For projects in which public funds are involved, it would be worth considering establishing a policy for a limited period (3-5 years) whereby competent private consultants are retained to review major projects and advise on their technical and economic viability prior to the commitment of public funds. The terms of reference in retaining consultants should include a provision that Iranian government officials will be totally involved in such assessments to reduce the costs, and more importantly, to gain practical experience and expertise for Iranians. If the project is recommended as viable and proceeds, the costs of retaining the consultants should be repaid by the company carrying out the project.

Greater use of the advice of experienced businessmen

190 Government departments responsible for guiding and controlling the development of industry in industrially-advanced countries are making increasing use of experienced businessmen either in an advisory capacity or as temporary civil servants on loan from their business employer. In some industrially-advanced countries, the planning and regular review of progress in specific branches of industry is carried out by permanent advisory committees on which the principal members are businessmen representing the industry; government officials are also members of the committee and help to guide its work. In this way, representatives of the particular industry feel involved in the plans and policies for its future development. A more substantial involvement by experienced Iranian businessmen in an advisory capacity in the activities of government departments and agencies before industrial policies are enunciated would appear warranted. The Research Centre within the Ministry of Economy would benefit from even more frequent contact with businessmen and business in their day-to-day activities. More experienced businessmen should be appointed to the Governing Councils of the Research Centre, IMPD, the Export Promotion Centre, and

other advisory committees these plans, policies and procedures relative to industrial development are considered.

E. Regular review of legislation affecting business

191 Some of the more important legislation affecting investors is reviewed annually; for example, tariffs in the Export-Import Regulations, investment incentives in the Income Tax Law (last revised in 1967). Other laws are of a more permanent nature; for example the Commercial Code (dating from 1932 but amended recently), the Law governing the Registration of Companies (1931) and the Foreign Investment Law. It therefore appears that some care has been taken to keeping the legislative framework modern and up-to-date.

192 However as a matter of policy, consideration might be given to arranging for the regular review (at least once every five years) of all legislation and regulations affecting the establishment and operation of businesses in Iran. Such reviews might provide for public hearings or other forms of consultation where businessmen doing business in Iran can bring to the attention of government, matters which they believe adversely affect business operations in the country, or suggested amendments to existing legislation and regulations which they believe would encourage expansion of existing industries or attract new investment.

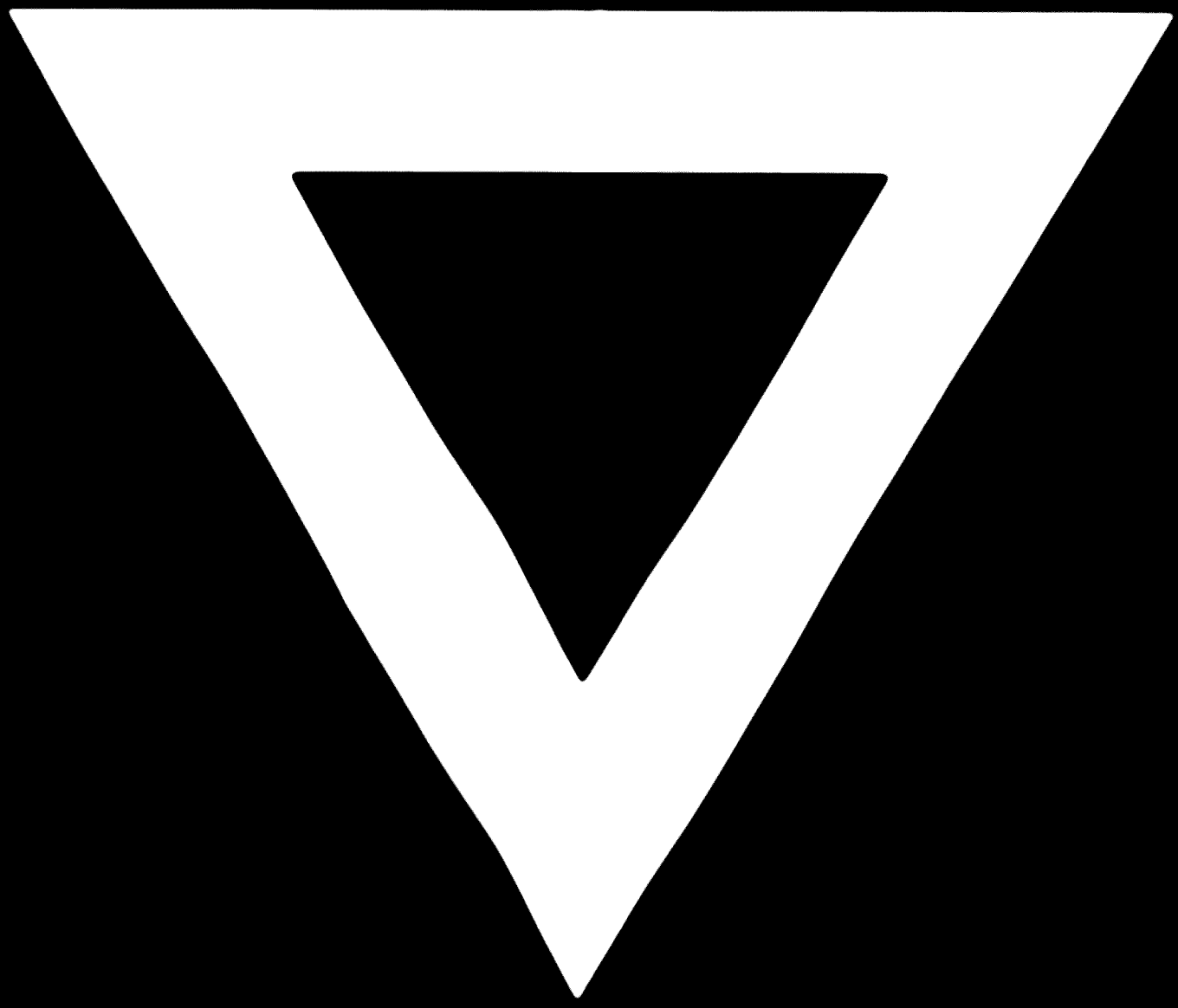
193 Areas which will require continuing attention in the coming years are likely to include: rules of competition, patent laws and trademarks, standardization of product specification and design, company legislation and the expansion of share ownership through the stock exchange.

F. Conclusion

194 The new industrialization policy of Iran relies heavily on the encouragement of private initiative. The Government will maintain an element of control over the type of project established and the location, but the main responsibility for the viability of each

investment will rest with the promoter of the project and the Government.

135 The success of this approach will depend on the ability of new policy measures to promote investment of the right type in the areas of industry to whose development the Government attaches a high priority. It will require a change in emphasis away from <u>control</u> to <u>incentives</u>. This in turn will mean that where controls are necessary, the procedures used must be streamlined; where Government decisions are needed, they must be taken quickly and without undue delays.



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