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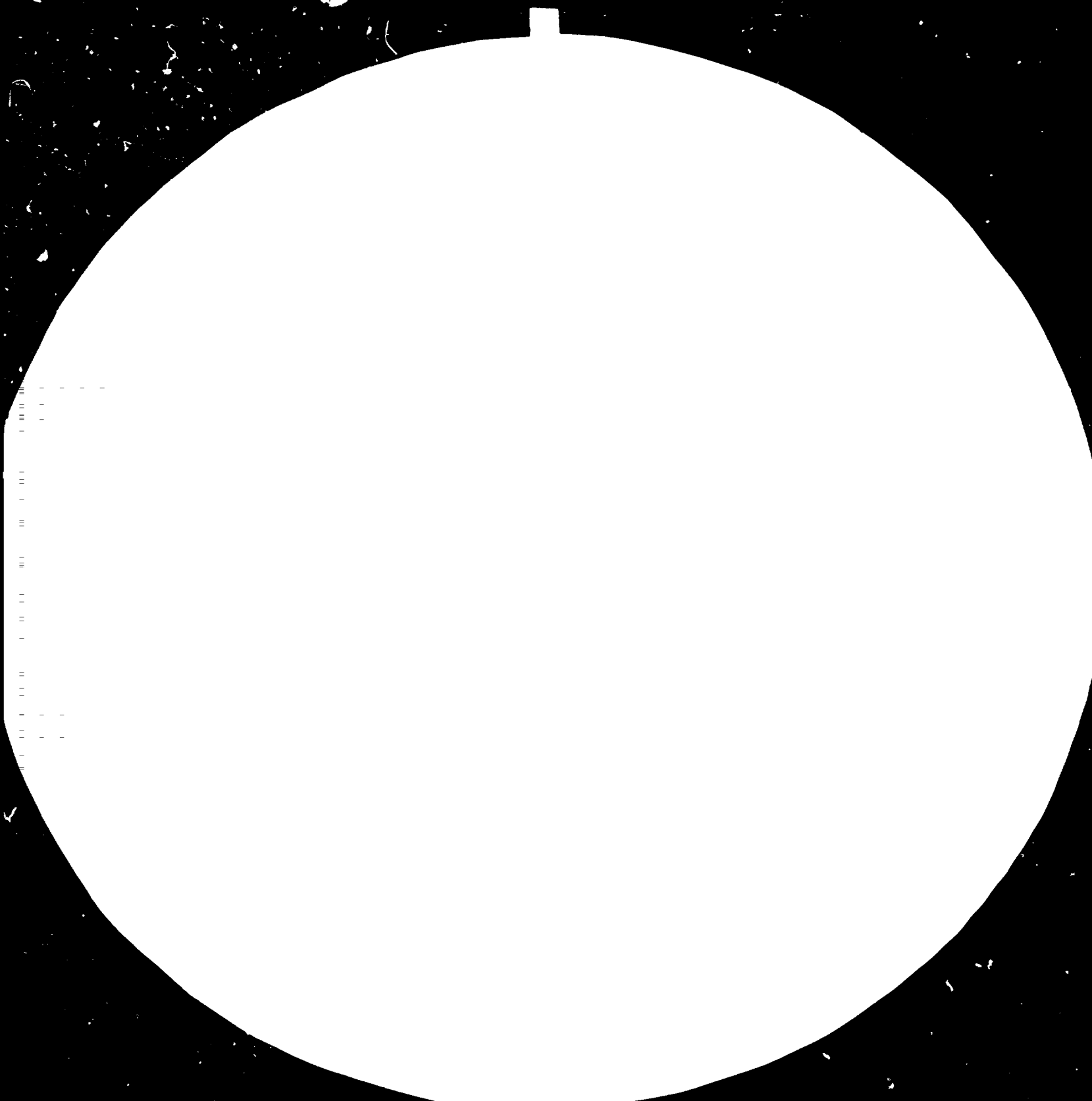
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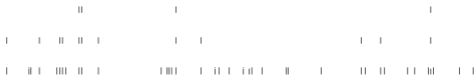
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REVIEW AND FORMULATION OF INDUSTRIAL DEVELOPMENT

STRATEGY AND POLICIES

SI/FIJ/84/801

FIJI

Technical report: Industrial strategy and policies:  
notes towards an approach to the industries sector for  
Fiji's Development Plan IX\*

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

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Based on the work of A. Eder, consultant in industrial strategy  
and policies and S.V. Yugandhar, regional adviser (ESCAP)

United Nations Industrial Development Organization  
Vienna

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Explanatory Notes

Value of local currency - FIJI DOLLAR (F\$)  
during the mission in terms of United States Dollars:  
1 US\$ = 1.02 F\$

Abbreviations

BOMAS - Business Opportunity and Management Advisory Service  
CPO - Central Planning Office  
DP - Development Plan  
ESCAP/RCTT - Economic and Social Committee for Asia and the Pacific /  
Regional Committee for Technology Transfer  
GSP - Generalized System of Preferences  
SPARTECA - South Pacific Regional Trade and Economic Co-operation  
Agreement

Abstract

Project SI/FIJ/84/801 was based on a short-term request of the Government of Fiji. The work was carried out from 27 September to 26 October 1984 in joint action by Mr. B.N. YUGANDHAR, Regional Adviser, ESCAP/UNIDO Division of Industry, and Mr. R. EDER, UNIDO-Consultant in Industrial Strategy and Policies, participating in the review and formulation of the industrial development strategy. The findings of the mission can be summarized as follows:

1. Fiji's industrial development strategy has mainly been based on import substitution with priorities given to resource-based industries. It may be considered as sound and appropriate.
2. Import substitution has reached a high level and comprises many fields: beer, flour, cigarettes, biscuits, soft drinks, textiles, steel roofing, paints printing, sugar milling, coconut processing, cement, matches, soap, detergents.
3. Nevertheless, import substitution has been achieved in many fields only under the umbrella of protection and concessions. In this sense it has been a success in a few industries only. Import substitution can not be called successful in fields where industries continue to need protection even after more than five years of concessions and protection.
4. It is hard to believe that entrepreneurs who have been protected for many years and who have not succeeded to become competitive, would be able to build up an export industry without continuous concessions and all kinds of assistance.
5. Some Fijian manufacturers accepted the challenge of international competition. They are successful, modern, well organized.
6. Most of import substitution manufacturers benefit from protection and are non-competitive manufacturers. They are surviving or profit making, because of a high price level only.
7. The main problem of most of the industries is a management problem.

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## 1. Recommendations

### 1.1 Recommendations on strategy and policies to the government:

- 1) All local industries should be exposed by and by to international competition. Under the present protection system they do not need to make any effort to modernise, to increase productivity, to increase quality and to improve management.
- 2) The government assistance to the industry should be shifted by and by from concessions (passive assistance) to an active assistance: more and better extension services, particularly in all phases of project development.
- 3) One major target of DP9 should be to make the industry competitive by all means, but without concessions beyond a limited period of time.
- 4) Other approaches like new export industries will have to be studied and discussed thoroughly.
- 5) The industrial administration should be strengthened to better fulfill its functions.

### 1.2. Recommendations on planning procedures to the Government:

- 1) The industrial development plan could be much more operational:
  - more attention should be paid to the review of the past development efforts on the micro-level.
  - the new plan should take into account the experience made in the past: failures and successes in project development.
  - the review should be consistent with the other parts of the plan.
  - a mechanism of planning, implementation and control should be built in.
- 2) The causality between strategy, targets and policy measures should be shown.
- 3) All studies and reports should be used, recommendations either refused or accepted, but not ignored.
- 4) The format could be more analytical.
- 5) The whole plan should be based on sound background studies and considerations which could be either added to the DP as appendices or used as reference for plan implementation and follow-up.



1.3 Recommendations on further collaboration between Fiji Government and UNDP (ESCAP-UNIDO) in the industrial sector planning and development:

1) 3 man-months in February-March

- to discuss with CPO current issues of planning;
- to do the necessary research to systematically identify investment opportunities for DP9;
- to analyse at the micro-level the impact of the actual incentive system;
- to advise on changes in the incentive system; and
- to complete and upgrade the review of the industrial sector.

The 3 man-months mission could be shared between ESCAP and UNIDO and comprise 1 consultant or expert of each organisation for 6 weeks.

2) Assistance could be given to write a manual on planning procedures for the industrial sector. The duration of such a project could be of 6 man-months.

## 2. Introduction

The 9th Development Plan is supposed to be ready for submission to the Parliament by the end of October 1985. In order to be in time, preparation will start now. First consultations within the Government will take place soon. Policy Issue papers for consideration by the Cabinet will be prepared. A comprehensive review of Fiji's industrial development policy and strategy is being undertaken by a Task Force comprising representatives from:

- The Division of Trade and Industry,
- The Central Planning Office,
- Finance,
- The Economic Development Board,
- The Reserve Bank of Fiji,
- The Customs Department  
with Private Sector inputs

ESCAP and UNIDO were invited to participate in the work of the Task Force, to discuss with CPO the approach to the industrial (manufacturing) sector of DP9 and to contribute a discussion paper on industrial strategy and policies.

### 2.1 Fiji's industrial development strategy since independence

The industrial sector was expected, at the very beginning of independent planning, to help to make optimal use of available human and physical resources and to reduce income disparities. It was said in DP6 that it would be of limited benefit to Fiji to produce internationally non-competitive products. Taking into account the limited domestic market, and the fact of ever-increasing economies of scale of other competitors, it was suggested that Fiji chooses among industrial projects with the following characteristics:

- allowing only moderate economies of scale,
- modest export potential,
- capability of enhancing value-added to existing,
- or potentially exploitable domestic resources.

Furthermore, it was said, not to seek full self-sufficiency in every import component, but to concentrate its attention on a narrower range of activities with significant export possibilities.

When the DP6 was written, import substitution had led to the establishment of very promising industries such as flour, beer, cigarettes, biscuits, soft drinks, textiles, steel roofing, paints, printing, sugar milling, coconut processing, cement, matches, soap, detergents etc. One may even say: import substitution had reached a high level. While DP6 does not particularly emphasise import substitution, DP7 does again.

In the DP8 both export industries and import substitution industries are encouraged. But priorities are defined according to other criteria:

High priority is accorded to

- industries based on local primary commodities,
- industries producing inputs required by primary and other sectors

Some priority is accorded to industries based on imported raw materials, but

- producing essential items for the domestic market and
- goods for exports

Low priority is given to industries based on imported raw materials and producing non-essential items. It was said in DP8 that it was not intended to discourage investment in lower priority industries but to encourage investment in areas of higher priority by means of incentives. An analysis of success and economic impact of Fiji's strategy choice would require research in many fields and cannot be done in this exercise. Nevertheless, some issue will be discussed later.

## 2.2 Fiji's industrial development policies since independence

Fiji's post-independence development plans show great continuity. In DP6 income redistribution, employment and economic growth are referred to as major objectives. DP7 sticks to the same objectives and DP8 uses slightly different terms only. Policies in the industrial sector are supposed to serve indirectly those objectives. Furthermore, DP6 contains a clear statement that it is the central aim of Government to ensure a favourable investment climate for both domestic and overseas investors against the broader background of national objectives. In DP6 three fields of activity were allocated to the Government with respect to industrial development:

- creation of appropriate infrastructure;
- creation of a favourable investment climate;
- concessions (incentives) to encourage private sector investment and
- other forms of assistance to industry.

To contribute to the creation of a favourable investment climate the government seeks:

- 1) to ensure the equitable treatment of investments and their profits placing no major restraints on overseas repatriation of funds, maintaining equitable taxation and allowing normal commercial operation of industrial activities;
- 2) to maintain stable political framework;

- 3) to improve skills of the labour force;
- 4) not to unduly impede the use of expatriate labour to meet the needs of investors;
- 5) insurance against the threat of nationalisation is covered under Fiji's Constitution.

According to DP6, concessions are conceived to encourage marginal investments. Profitable projects should need no concessions. Concessions are to have a finite duration to aid the initial development of a project. Concessions should allow the Government to influence private sector investment towards national priorities. They read in DP6 as follows:

- 1) tariff concessions on imported plant, machinery and equipment;
- 2) tariff concessions on imported raw materials;
- 3) income tax concessions like a five-year tax holiday or accelerated depreciation;
- 4) protection from imports by substantial tariffs or quotas;
- 5) refund of excise tax paid on inputs for export goods.

Under other forms of Government assistance to industry, one should be dealt with here: extension services. They are conceived to improve overall efficiency. Extension advisory services are supposed to relate to technical matters, plant operations, labour and managerial matters, financial questions, marketing etc.

The nature and extent of assistance awarded to a project in the form of technical assistance, concessions etc are supposed to be determined by a comprehensive appraisal which should take into account the following criteria:

- 1) contribution to national income;
- 2) employment potential;
- 3) inter-linkage effects;
- 4) contribution
- 5) contribution to long-term improvement in balance of payments, especially potential as a viable export sector
- 6) likely impact on domestic competition and price levels.

The policies in respect of industrial development listed in DP7 differ very little from the ones of DP6. In addition to the concessions of DP6, DP7 offers customs duty drawbacks for certain exports.

Of interest is the awareness of possible negative impacts and effects of concessions and protection in particular and the fact that related problems are raised in DP7.

In DP8 the application of incentives was criticised:

- a) investors have no way of knowing whether they are eligible for incentives and if so, for which particular incentive;
- b) the procedure of consideration for incentives results in inefficient implementation of the incentive scheme;
- c) there is no incentive within the scheme for increasing contribution in terms of value added, regional dispersal, or increasing local participation.

New forms of incentives are proposed for consideration: loans, technical assistance, subsidised wage rates, and equity participation by Government.

### 2.3 Issues proposed to be dealt with for the DP9 preparation Review of development

The review and analysis of the development during past plan periods are supposed to give the background to think about and discuss strategy and policy issues. It is recommended to complete and refine the analysis covering the whole time span from independence to the present. There is no doubt that this chapter has been neglected in the past. Further aspects should be included.

#### Strategy and Policy issues

An analysis of the impact of the industrial strategy and policies on the industrialisation process is necessary for improvement. At least 3 companies (projects) set up between 1970 and 1980 should be analysed in all necessary details (concessions awarded, problems encountered, impact of concessions and protection and other measures on cash flow etc). Such a micro-economic analysis could be illuminating in many respects. Various related issues will be discussed in the following two chapters. Most of the ideas would need to be pegged with more information.

Proposals on industrial strategy and policies made in the following chapters can only be considered as tentative and will need more indepth studies.

## Procedures and organisation

The planning procedure as such should be subject to continuous improvement. The best way to start with would be, to write down the actual planning practice. Only little will be said in this respect here.

Identification of industrial sub-sectors of priority and particular development opportunities.

Two approaches are possible:

- 1) some kind of intuition based on experience and general knowledge;
- 2) the systematic and purely rational approach, based on sectoral studies and thorough analysis of relevant factors.

It has to be made clear that most of the suggestions made in this report are of intuitive nature or partly based on available studies.

### 3. Review of development

#### 3.1 General Remarks

All plans contain some review of development, but only a weak connection with the planning procedure may be observed. We may consider as minimum requirement:

- a) the most precise comparison of plan objectives against achievements covering the whole period from independence (or even earlier) to the present:
  - GDP, value added by sectors (primary, secondary, tertiary), by economic activities and industries down to two or even three digits of ISIC.

Tables could be improved and completed.

- employment, both self-employment and subsistence activities and salary-wage employment for the whole economy and by sectors, economic activities etc as mentioned above.
  - income distribution, including estimates on the subsistence sector income, self-employment income and salary /wage income again by sectors, etc..
- b) indicators, which allow to discuss the impact of industrial strategies and policies on the industrialisation process and on national objectives:

- quantitative indicators of import substitution
  - indicators showing production volume etc of resource-based industries etc
  - changes in prices due to concessions or/and protection
  - influence of policies on government revenue and expenditure
  - other indicators of industrial development.
- c) some major international comparisons:
- structural changes compared with other countries in similar economic conditions
  - major indicators compared with other countries in similar economic conditions.
- d) some theoretical considerations on development and conclusions for the strategic approach:
- lessons from failures and recognition of success
  - identification of indicators, which could lead or suggest changes in the industrial development strategy.

The whole plan and in particular the section on the industrial sector would become more rational even if only some of the above items were taken into account. Any statement in the plan should be pegged by facts.

The following chapters should only initiate the discussion. The comparison of gross output and value added in manufacturing sub-sectors indicates the qualitative contribution in the generation of GDP.

### 3.2 Trends in Industries Sector during DP8 and earlier

Amongst all the Pacific island countries, Fiji has, consistent, clear and comprehensive policies and priorities in regard to Industrial development, and has developed an institutional structure and financial system to facilitate Industrialization. In all the three Five Year Plans since independence, diversification of the economy, self-reliance and promotion of employment through industrial development have been emphasized.

At the aggregate level, over the 12 year period between 1970 and 1982, the industrial structure and its share of real

GDP at factor cost have remained more or less unchanged as the following Table shows.

The trends as well as aspirations of the Seventies that the economy may move into new and higher structure with tourism and sugar processing as lead sectors were reversed and in 1982, the only really significant changes from 1970, appear to be the reductions in mining and quarrying and in building and construction, balanced by increases in Business Services and Transport.

In determining the strategy and Programmes for DP9, a more detailed analysis of the trends in different sub-sectors in manufacturing would be desirable. The diversification, import substitution and value added achieved in the manufacturing would not be clear unless more detailed and in-depth examination of annual trends in Gross output and value added is computed for major manufacturing sub-sectors. For instance, the broad spread of Fiji's manufacturing sector is evident from the following Tables taken from 1979, Census of Industries, Bureau of Statistics.

Manufacturing Sub-sectors - 1979

	Gross Output		Value Added	
	\$ Mn	% Total	\$ Mn	% Total
Food Manufacture	261.8	71.2	66.4	65.8
Clothing & Footwear	7.3	2.0	2.2	2.2
Wood Products	19.9	5.4	8.3	8.2
Paper & Printing	11.1	3.0	3.6	3.6
Chemical Products	19.6	5.3	5.3	5.2
Non-metallc Products	11.9	3.2	4.4	4.3
Machinery & Equipment	33.6	9.2	10.3	10.2
Miscellaneous Products	2.4	0.7	0.5	0.5
<b>T O T A L</b>	<b>367.6</b>	<b>100.0</b>	<b>101.0</b>	<b>100</b>

Manufacturing Sector - Value Added (1968-1970)

	\$000	% Change per Annum	% of GDP
1968	18,799	-7.2	
1969	17,447	-7.2	
1970	19,812	13.6	
1971	17,761	-10.4	
1972	25,656	44.5	
1973	33,766	31.6	10.0
1974	49,882	47.7	11.1
1975	56,219	12.7	10.0
1976	69,369	23.7	11.1
1977	78,570	13.3	11.1
1978	68,462	-12.9	11.0
1979	100,952	47.5	12.1



Manufacturing-Sub-Sectoral-Growth in Value Added (1968-79)

	% Total			% Change Per Annum		
	1968	1974	1979	1968-74	1974-79	1968-79
Food Manufactg.	73.0	64.8	65.8	15.3	15.5	15.4
Clothing and Footwear	1.0	2.2	2.2	34.5	14.9	25.2
Wood Products	7.0	8.8	8.3	22.4	13.5	18.3
Paper & Printg.	2.9	4.1	3.6	24.4	12.0	18.6
Chem. Products	4.3	3.1	5.2	11.3	28.1	18.6
Non-Mettalic Products	4.4	4.8	4.3	20.0	12.3	16.5
Machinery & Equipment	7.0	11.8	10.2	28.6	11.7	20.6
Miscellaneous Products	0.4	0.4	0.4	12.4	16.6	14.3
TOTAL	100	100	100	17.7	15.1	16.5

Viewed in a disaggregated manner the diversification, improvements in value added and annual growth of manufacturing sector appear to be satisfactory. The encouragement, incentives and protection provided especially for import substitution purposes during the previous plan periods have lead to the creation of a diversified and domestic manufacturing sector, which provides the basis for future momentum and further growth during DP9. In terms of increasing in the number of enterprises, employment and output, sustained growth is recorded. In the area of Food Manufacture, apart from the traditional sugar and coconut oil units; butchery and meat packing, bakery products, dairy, fruit and fish, beer, tobacco, and non-alcoholic drinks have proliferated.

Similar developments are seen in units to manufacture of garments, footwear, furniture and upholstery, sawmilling, curios and artifacts, printing, stationery and publishing, paints, soap and miscellaneous chemicals, retreading, plastic products, concrete products, structural metal products, agricultural machinery, electrical supplies, boat & shipbuilding and repair, bus body buidling etc. Other local products also include matches, cartons, toilet rolls, cans and various metal containers, plastic pipes, bags and wrappings, moulded bottles and other goods, various metal kitchen utensils and containers, motor repair shops, wooden handles, bread, biscuit, confectionery, tea, coffee, milk,oils etc., preparing, feed manufacture and several others. All these units of manufacture have developed and benefitted due to the strategies and programmes of development pursued in the industries sector in the previous Plan periods.

Although manufacturing output has fluctuated considerably in the last decade in value terms, and its share of GDP has increased very slowly, it is noteworthy that increases in value added have been maintained at a steady pace in most of these subsectors. The structure, the entrepreneurial abilities and the manpower skills which have already evolved over the years should serve as a good base for more dynamic

and sustained contribution of this sector towards Growth Prospects of the Economy.

The performance of the industries sector in DP8 should not be taken as an indicator of either of its strength or of its prospects. The initial years of DP8 were exceptional ones, with external factors considerably depressing the lead sectors of sugar and tourism and internal factors such as cyclones and droughts affecting adversely the agro-industria' and the resource based enterprises. Despite these, the non-sugar manufacturing rate of growth, which declined from 4.0% in 1981 to a negative 7.6% in 1982, has shown a positive growth rate of 13.6% in 1983. In terms of Physical output many industries are registering increases. However, the pessimism generated by the sector is largely due to absence of effective linkages with the rest of the economy, especially in agriculture, forestry, fisheries and a variety of other local raw materials, which are important for the Peasants, landholders and a large majority of other population. The import content of local manufacturing sector has remained fairly high and a sustained effort to foster linkages with domestic resources and endowments to reduce the import content of raw materials and enhancement of spread effects of manufacturing units assumes priority in this context. Given Fiji's resource endowments, and position in the South Pacific region, manufacturing should play a prominent role in the medium and long term prospects of the economy and for gradual evolution of the economic structure towards greater diversification, productivity, and growth. Having achieved a fairly reasonable standards of per capita income and growth among island developing countries, the future growth prospects and opportunities for Fiji's sustained development towards higher levels of living are to be increasingly located in its industrial sector, especially the part to be played in domestic production and export orientation of its manufacturing sector.

In DP8 as well as the earlier plans, attempts have been made to approach industrial development with sector-wide objectives or rather the overall development objectives were to be reinforced at every stage of the evolution and growth of the manufacturing sector. Thus the approach to industries sector was beset with multiplicity of objectives, and absence of strategic edge to the programmes and projects formulated under this sector. In DP8, industrial development was expected to subserve the following objectives in addition to contributing significantly towards the growth of the economy:- (a) Increase the employment absorptive capacity, (b) Promote more equitable distribution of the benefits of industrial development, (c) Expansion and diversification of export commodities, (d) Secure import substitution, (e) Encourage small and medium scale industries, (f) Contribute significantly to regional development, etc. This is an impressive array of multiple objectives, which are may be difficult to simultaneously realise through any consistent of coherent strategy and plans in a five year period. Similar is the case regarding the emphasis given to the five productive sectors in the economy and the categories

of industries selected for priority. All these have the cumulative result of diverting the focus and diluting the impact of policies and programmes initiated during the plan. This is reflected in the series of programmes and projects identified for implementation to enhance industrial development.

Fiji's industrial base and manufacturing development so far justify greater emphasis on this sector during DP8. In order to secure optimum results, an industry by industry approach, carefully identifying manufacturing subsectors of relevance, high potentiality and development prospects would be desirable. After having chosen this strategic approach and list of industries, it may become necessary to initiate deliberate, intensive and prolonged state support focussed on these product specific industries in the medium-term. In regard to traditional industries, Fiji cannot ignore them simply on account of their significance to their total economy. Similarly the industries which have come into being on account of import substitution protection so far given have to be selectively upgraded through improvements in competitiveness, productivity and quality so that ultimately they would serve the domestic markets as well as manufactured exports. After all, no export promotion drive by indigenous industrial sector is feasible unless it is built upon sound basis of technology and competitiveness in the domestic market.

Finally, it is essential that DP9 should carefully select for attention and support a few emerging and future oriented industries, whose development is likely to bring significant changes in the country's industrialization process and in the needs of export markets.

Thus in DP9 directions of State Policy and Priorities in manufacturing sector may largely be confined to a selective, industry by industry document activities and programmes in the following areas.

- (a) Strengthen traditional sub-sectors such as sugar, fruits, tourism, etc which have thus far contributed significantly to industrial development and foster increased and effective linkages with other sectors of the economy.
- (b) Further augment import substitution through appropriate readjustments and reorientation of the incentive, promotional, protective and financial packages.
- (c) Initiate an aggressive export - oriented approach in selective manner, keeping in view the developments in international trade and technology, while simultaneously make a beginning in modern non-resource based export products. Strengthen incentive systems for export.

- (d) Improve the incentive systems especially training and facilities for indigenous entrepreneurs, together with improvement in Project identification, preparation and appraisal capabilities in selected areas and
- (e) Improve Technological awareness and facilitate Technological upgradation.

### 3.3 The structural development of the economy of Fiji

In 1950 the contribution of the primary sector, comprising agriculture, forestry and fishing, to the domestic product was 44%. The secondary sector contributed about 22%, taking into account mining, quarrying, manufacturing, electricity, gas, water and construction. And the share of the tertiary sector was 34%. Manufacturing as major part of the secondary sector contributed 11%.

Twenty years later, in 1970, the structure was quite different. The share of the primary sector was 27%, the secondary sector contributed 20% and the tertiary sector 53%.

During the following 12 years the structural changes had continued. The primary sector had been shrinking to 20%, the secondary sector had kept more or less constant at 22% and the tertiary sector had continued to expand to 58%.

The share of manufacturing has been the same for more than 30 years, while the tertiary sector has expanded excessively.

No corresponding figures on employment are available. The only available estimates for 1970 show, however, that 55% of the total labour force produced 27% of GDP in the primary sector, 18% contributed 20% of GDP in the secondary sector and 27% achieved to contribute 53% of GDP in the tertiary sector.

The growth of the industrial sector in absolute terms is due to increasing import substitution, which has been accompanied by increasing protection of the concerned industries. Therefore, a considerable part of value added of those industries is due to protection which allows higher prices in the domestic market.

## 4. Strategy and Policy Issues

### 4.1 General remarks

Strategy and policy are quite different, but they are often dealt with together. Strategy shows - generally speaking - the way how to reach a target.

Policy comprises the measures to be taken in order to reach certain targets or objectives. In some marginal cases it is difficult to distinguish between strategies and policy

measures. But it is not constructive to argue too much about such academic problems. Nevertheless, an effort should be made to clearly separate strategies from policies or - more accurately speaking - policy measures.

Starting from a given situation of the economy, including prevailing problems, and from given objectives the development strategy may be conceived. The Fijian industrial development strategy mainly refers to major characteristics of industries to be developed first: origin of inputs (local natural resources), destination of output (domestic market in the case of import substitution or foreign markets in the case of export oriented industries). While the first argument has proved to be sound, the second (import substitution versus export orientation of industries) has become obsolete and rather a textbook strategy. More will be said in chapter 3.4 on this subject.

Anyway, there are many possibilities to formulate strategies. Five possible strategies are proposed here for further discussion:

- strengthening the existing industrial sector (4.2)
- augmenting import substitution (4.3)
- increasing intra-industry trade (4.4)
- aggressive export promotion (4.5)
- strengthening industrial administration and extension services (4.6) and
- meeting technological needs and strengthening technological foundations (4.7)

The order does not reflect priorities within the strategies. The policy measures necessary to implement the strategies and to achieve the objectives are dealt with under the respective chapters. It would be a good exercise to analyse and show the pros and cons of the various strategies. There is no need as such to change strategies in each new phase. The orthodox approach would be, to check, if the new economic situation can still be faced with the old strategy or if changes are required. The need for changes should always be shown and based on rational arguments. There is some evidence that by the end of DP8 priorities of strategies will change. It is suggested to put more weight on 4.6, 4.4 and 4.2.. But more arguments, more information, more research and discussion will be necessary to show it clearly.

#### 4.2 Strengthening Traditional Industrial Sectors

In Fiji's Industrial Value added agro-industries occupy predominant position. Agro-industries accounted for 58% of industrial value added in 1978 and 51% of industrial employment.

(Fiji, Agro-Industrial Development; World Bank UNIDO Report, 1983). In the export market the products of this sector have gained a unique position and irrespective of the cyclical fluctuations in international trade and export demand for these products, they are likely to play an important role in future development. Moreover, stock of traditional experience and a pool of skills have accumulated in the country in some of these agro-industries, which augur well for enhanced international competitiveness and growth prospects. Proportion of exports to local sales have been traditionally high in these industries and the agro-climatic conditions as well as the tropical uniqueness of these products have enabled Fiji to acquire distinction even among developed countries in those products. These traditional and inherent advantages should on no account be allowed to deteriorate.

Therefore in the programmes for Industrial development in DP9 this traditional and agro-industrial sector's performance should be considerably strengthened. These are (1) sugar, (2) coconut oil and other edible oils, (3) fruits (passionfruit, mangoes, pawpaw, guava, bananas, pineapples, rock-melon, etc) processing, (4) fish processing (5) dairy products, (6) forestry, timber and sawmilling. All these products have strong linkages with agricultural sector, and their multiplier effect on rural incomes and employment is bound to be extremely beneficial. The agricultural and related base of these products will no doubt be examined in detail by other task forces and suitable programmes identified and recommended. However, in so far as manufacturing of products in these areas is concerned the following points require highlighting.

(A) Although the number and scale of enterprises already established in almost all these areas are not large, the capacities already created are not fully utilised due to inadequate availability of raw materials. Surprisingly this is true even in regard to coconut oil. In general the production base of agro-industrial raw material has not responded to the fixed market demand established through agro-industrial units. In a country of Fiji's agro-climatic, soil and other resource conditions, it could reasonably be expected that developments in the supply situation emanating from agriculture and allied sectors, fisheries and forestry development would exert greater pressure on industrial processing and export market development. Unfortunately this is not happening, thereby clearly establishing the need and necessity of achieving higher levels of technological development, intensity of production and improvements in yields in all these agricultural and related supplies. Indeed it would not be too much off course to identify the relative stagnation and poor export performance in recent years to the drag experienced in supply situation.

(B) Traditionally, the supply of agricultural produce for industrial processing was organised on Plantation Scale by the Manufacturing units themselves. This system has disintegrated all over the world. In Fiji, the new entrants into this field,

whether TNCs or indigenous firms cannot substantially contribute to the success of the supply of the requisite raw material. The sources of supply and the fountain of growth for these sectors should be increasingly localised in the traditional farming families, small holder operations and integrated delivery of extension services, inputs and marketing operations.

(C) Technology choices as reflected in the type of machinery and quality of processed products are extremely relevant in this area. Most of these products are for export markets, and the reputation and uniqueness of the country's products in these markets would suffer, if the technological developments in these areas are not assimilated on a regular basis and products upgraded. At present no systematic efforts for the appraisal and acquisition of the technologies in these important areas is being done. In fact, quite a few enterprises that have come up, have installed second-hand machinery using outdated processes, which have been discarded in developed countries markets due to their non-viability and poor quality. In the long-run inheritance of such technological obsolescence can be deleterious to the strength of the economy and its export share.

(D) Import substitution units in agro-industries, animal husbandry, poultry etc have emerged significantly in the country. Butchering and meat products; processed broilers, goat, mutton, bakery products have registered some exports together with increasing local sales. Improvements in supply conditions and technological upgradation through better processing and quality in these product would not merely improve the level of import substitution, but secure Fiji's presence in the sub-regional markets in a significant way.

(E) In view of the tax, tariff, and quota concessions enjoyed by Fiji under Lome II, SPARTECA and GSP Fiji's exports in all these traditional and agro-industrial products have gained significant price advantages (between 15 to 20%) compared to the products from its competitors in developing Asian countries such as Philippines, Thailand, Indonesia, Malaysia etc. Several buyers from Lome Countries, and other developed areas are keen to purchase these products provided sustained supply and quality. This advantage should be fully exploited during DP9.

(F) In DP9 sectoral targets in agricultural and related areas, have to be properly integrated with those for agro-industrial products in related fields. Upgradation of existing capacities can be worked out in consultation of existing enterprises. Similarly in regard to new capacities, detailed feasibility studies especially on technological and marketing aspects deserve to work out carefully. The investment policies of major TNC in food-industry need to be closely followed. Given a set of detailed feasibility studies, and appropriate promotional efforts, new investment both by domestic entrepreneurs and by TNCs in this field is likely to show buoyancy and significant improvement. Studies for a number

of these products already exist and their recommendations require to be converted into product specific programme of development.

(G) Finally in view of the importance of this sector not merely for industrialisation, but for its linkages with agricultural and rural incomes and its potential for multiplier effect on agrarian productivity and employment, the role of public sector agencies, enterprises and organisations require to be carefully analysed and determined in DP9. In circumstances where anticipated private sectors may have to play a more active role in view of the importance of this sector and the conclusive comparative advantage the country enjoys. Public sector investment programme deserves to be worked out in detail in advance and such preparations might induce greater private sector interest and involvement.

#### 4.3 Augmenting Import Substitution Industries

Fiji's emphasis upon the role of private sector and on import substitution have contributed significantly to the expansion of entrepreneurial base and diversification of manufacturing activities. A wide range of agro-industries resource based on manufacturing industries and even non-resource based industrial units have come up in the country all of whom have been progressively contributing to the increases in the value of products domestically consumed and thereby reducing the share of imports. Live animals, meat and preparations, dairy products and eggs, fish and preparations, cereals and preparations, fruit and vegetables, sugar preparations, coffee, tea and spices, animal feeds, miscellaneous food, beverages, tobacco and products, vegetable oils, hides and skins have featured significantly in import-substitution and in some instances have shown improvements in value of domestic exports. Similarly textiles and clothes, furniture, paper products, paints, soap, toiletries and chemical products, plastics, cement and concrete products, metal furniture and fixtures, fabricated metal products, electrical equipment, boat and shipbuilding and repairs etc have all significantly enhanced local sales contributing to reduced dependence upon imports.

In the on going discussion upon import substitution versus export orientation, it is important to recognise that abrupt shifts in strategies and policies seldom contribute to accelerated industrialization. On the other hand, a flexible step by step approach organically responding to developments within the industrial sector, building upon inherent strengths and perceived opportunities has often facilitated rapid industrialization process. Further, export orientation can more easily be built upon strengths and experiences gained in import substitution process and this will be more sustained than enclave-type of export oriented drive. Fiji possesses the infrastructure, strengths and experiences as well as widely diversified base achieved through import substitution process which can save well the requirements of export-promotion. While as a general policy measure, imports substitution may continue,



several readjustments and fine-tuning of this policy and related measures on the basis of experience so far may deserve attention in DP9. The levels of protection, fiscal incentives and financial support require to be reoriented to the current level of industrialization and future domestic and export market situation.

A. The levels of protection afforded to domestic manufacturers require critical review. While demands for continuously raising them may exist, there is also a danger already voiced that effective rates of protection are excessive, thereby contributing to a net outgo of resources. Given the size and the nature of domestic market in Fiji, modernization of manufacturing sector cannot be achieved through high and long-sustained levels of tariff protection or other restrictions. Productivity improvements, quality consciousness and cost reduction efforts would all suffer within the import-substitution sector, if disproportionately high levels of protection are afforded for too long a period.

Similarly, there would be demands for restricting competition within the industry through arguments against excessive capacity creation, duplication, etc. High protective tariff barriers, together with restrictions on healthy competition through licencing or other restrictions upon new comers is a dangerous road, which would ultimately lead to industrial stagnation, high costs and quality deterioration. This trap into which several developing countries, who have followed vigorous import substitution policies have fallen should be avoided in DP9.

Indeed it is often said that in any manufacturing activity, at least a small proportion of domestic requirements should be imported. This would enable quality consciousness, technological awareness and cost-reduction efforts. Similarly healthy competition within even the small range of firms operating in a sector, and the constant threat of new comers entering with better cost and quality aspects would spur managerial and technological improvements in existing domestic units. Therefore the principal elements requiring re-examination at this juncture in regard to import substitution industries are (a) Levels of protection with a view to reducing them to reasonable limits, (b) Promotion of competition and expansion of domestic industrial base, and (c) Maintenance of a small fraction of imported element so as to foster consciousness of international developments.

B. The rationalization of the approval mechanisms and Licensing Procedures have been emphasised during DP8. In fact a one-stop-agency securing all these clearances in a time bound manner had been averred. There is need to review if this has been achieved in practice. Registration would be a simple administrative task and incentives would need to be automatically made applicable.

C. Domestic industrial capital promotion and entrepreneurial drive would continue to be important. While attracting foreign investments and responding to foreign entrepreneurs, it should not be forgotten that external investment flows and enquiries from expatriate firms are usually made after very careful analysis of present and future trends, and thoroughly worked out project ideas, preparation and appraisal. But local capital and entrepreneurs are usually shy towards investment in manufacturing. Therefore industrial extension services, identification of project ideas, technological aspects, feasibility studies, financial tie-ups, have all got to be thoroughly prepared into comprehensive packages and shelves of projects prepared for domestic entrepreneurs. These functions should not be lost sight of in investment inducement drives and preoccupation with regulatory and clearances giving functions. Industrial promotion, project preparation, technical support, financial feasibility exercises especially for potential private sector investors from Fiji should be as far as possible institutionally and functionally dealt within a distinct and different manner.

D. Given the size, potentiality and limitations of Fiji's domestic market, the role of fully owned foreign expatriate firms in purely import substitution industrial development may require re-examination. Although in the very initial phases foreign capital and firms do play an important role, as the domestic manufacturing base expands, and domestic investment capabilities are enhanced, constraints of capital, expertise, managerial skills etc in the import-substitution sector are substantially reduced. An examination of this, with a view to reassess whether the concession and promotion system even in regard to purely import substitution, actually favours foreign investors to the detriment of local investment may be useful. After all the *raison d'être* of prolonging import substitution phase is to enhance domestic manufacturing capability and domestic entrepreneurs so as to limit the net outgo of resources outside the country. At present wholly owned foreign companies even in purely import substitution sector enjoy all the incentives and concessions as local companies. Categorization of import-substitution industries where domestic entrepreneurs and investment would be preferred to foreign investment and progressive involvement of indigenous shareholders though dilution of foreign equity are a few of the measures which may be considered.

E. Just as linkages with agricultural developments are important for agro-industries, progressive improvements of local content and value added to import substitution industries is very essential in non-agricultural areas. A large number of import substitution industries have continued with large import content of inputs and raw materials for long periods even while backward linkages and localization of some sources of inputs was possible. This exercise systematically undertaken would have greater multiplier effect, and diffuse the benefits of import substitution industrialization. Packaging, maintenance, substituting local raw materials and similar

peripheral elements of manufacturing easily lend themselves to localisation. A programme for increasing local content of raw materials used, requires to be pragmatically established.

F. Fiji is closely approaching level of wage structure in the unionised sector which may effectively price its manufacturing sector out of competitive levels. Experience of even advanced countries suggest that in the long run wage increases not supported by improvements in productivity would be deleterious to the industrialization process. Moreover even in advanced countries, prevalence of dualism in wage levels and wage differentials within and in between different industries are common. These are determined on the basis of demand supply situation and consensus reached between managements and unions. Examination of industrial relations and trade union practices with a view to identify methods which would sustain and support industrialization are required in DP9. It is observed that competitiveness of industrial units operating in the non-unionised sector is better than those unionised wages. To this extent local indigenous firms are enjoying an advantage over the foreign firms with unionised wage levels. These dichotomies and dualism in the wage structure inevitably coexist as indigenous industrialization proceeds.

#### 4.4 From import substitution to export: increasing intra-industry trade

It is often criticised that more than 65% of world trade takes place among industrialised countries (IC). A closer look at it shows that by far the largest part of trade among ICs is intra-industry trade. As an example, Austria will at the same time export and import large quantities of machinery, but still it imports more than it exports. The deficit of this sub-sector will be balanced by more exports in another sub-sector. Within the sub-sector machinery, even pumps will be at the same time imported and exported. The more exports and imports in one industry are balanced, the higher is the so called inter-industry trade. High inter-industry trade means that industrial structures in both countries are quite similar.

Industrialization can only mean that industrial structures are converging. But even between countries of the same industrial structure there is plenty of room for product differentiation.

In most countries import-substitution has played an important role in industrialization. It can hardly be otherwise. Import substitution means that goods imported will be produced or manufactured locally. It is not innovation, but imitation. The product was invented somewhere else. The production process, machinery etc may be bought from other manufacturers. It corresponds with the process of imitation in any country or among countries. There is nothing wrong with

import substitution under two conditions: if the choice of the consumers is not limited by restrictions, quotas etc., and the manufacturer is exposed to competition, without tariff protection.

Often manufacturers of developing countries ask for protection and refer to the infant-industry argument. There is no doubt that in many cases initial protection will be necessary. In many cases the infant-industry argument is no longer applicable, because a project may be perfectly prepared, including quality and productivity guarantee. However, after a certain time any import substitution industry should be gradually exposed to competition, otherwise other industries or mainly the agricultural sector has to directly or indirectly subsidise the very industry. This is not desirable.

By and by an industry which was originally established for import substitution must succeed in competing with imported goods, without eliminating them entirely. Successful import substitution will always mean that an industry is prepared to enter into exports. This means that the country enters the stage of inter-industry trade for the interests of consumers of all participating countries.

Some of Fiji's industries seem to have reached that stage, others have not. We come to a few conclusions, which have to be discussed:

- 1) Many industries go through the same stages:
  - import substitution under protection and concessions
  - import substitution under free competition with other local and foreign competitors
  - competition on the world market or regional market
- 2) In a country with selective concessions and protection the successful entrepreneur will feel punished for being successful.
- 3) Therefore, Government assistance should be of a nature not to discriminate successful entrepreneurs.
- 4) Neutral assistance in this sense comprises:
  - technical assistance of any kind or/and extension services
  - a favourable tax system as such, without distinction and discrimination, it is at the same time a major factor responsible for a favourable investment climate.

#### 4.5 Aggressive Export-Promotion

Within the Industries Sector, in DP9, export oriented investment, production and promotion deserves the highest priority. Export oriented production can principally come from three sources viz (i) Expansion, diversification of existing enterprises (ii) new investment from both domestic and foreign sources and (iii) efforts of Public Sector enterprises. Vigorous measures to identify, induce and promote export production from all these three sources are necessary.

Further, an analysis of the manufacturing sector in Fiji reveals several potential and feasible lines of export oriented production. In several lines exports have either been already established or are in incipient stage. These lines are both in resource-based exports and non-resource based exports. For instance among resource-based products the following are the prominent and potential lines.

1. Sugar, raw and refined
2. Animal feed
3. Coconut and other vegetable oil
4. Poultry and Meat, Chilled or Frozen
5. Processed Fruit Pulp and Juices
6. Shaped and worked wood and furniture
7. Veneer and Plywood Boards

Among the non-resource based products the following are the prominent and potential lines:

1. Garments, clothing, cotton fabrics and made up textile fabrics
2. Toys, games and sports goods
3. Foot-wear
4. Leather
5. Travel goods, handbags
6. Lime, cement and building materials
7. Printed matter and stationery
8. Medicinal and pharmaceutical products
9. Passive electrical and electronic components

10. Plastic products, tubes, pipes, etc.

In addition, a few future-oriented high value and low volume products also need to be thoroughly examined for promoting investment and production. These are

1. Assembly of Electronic Components and sub-assemblies including television, radio sets and components
2. Clocks and watches
3. Medical instruments and sound recorders
4. Scientific measuring and optical instruments
5. Office machines, typewriters, calculators and micro-computers
6. Automobile parts such as antennas, piston rings and brake lining
7. Electrical lighting; and
8. Simple hand tools

The important points to be borne in mind are:

- (a) A consensus approach involving the Government private enterprises, trade unions and educational and research institutions is extremely important in existing and future units towards sustained exports. Any isolated plan whose objectives and activities are not shared by all the elements involved seldom achieve impressive export goals. Therefore during DP9, mechanisms and consultative machinery may be devised which includes Government, Export Manufacturers Association in all specific industries, labour representatives and other related scientific and technological institutions in determining policies, procedures, targets etc. This consultative mechanism should be continuous not ad hoc as well as a result and decision oriented rather than deliberative. The possibility of promoting big entrepreneurs and enterprises into export houses on the pattern of trading companies in Japan or the Republic of Korea may be examined and considered.
- (b) The operations of TNCs have provided ample opportunities for export-market penetration and acquisition of technological requirements. Therefore a special programme to analyse TNCs interests both for subcontracting and subsidiary formation in their global Corporate Planning

is essential. TNC's often respond not so much for incentives as to efficient and sound infrastructure such as telecommunications, labour conditions, stable operational conditions, transport and other infrastructural facilities. Therefore adequate infrastructural investments in public sector require to be provided in DP9.

- (c) Highest priority should be given for investments for 100% export based activities. Even in the absence of an export processing zone, it should be possible to provide adequate infrastructure and efficient as well as fast administrative and fiscal decisions and procedures to facilitate import of raw materials and export of finished products for these industries.
- (d) While South Pacific markets are desirable and relatively more accessible for exports, they should not be the sole aim of export promotion efforts. In quantitative and qualitative terms these markets are different and main export effort should be directed towards Europe, Americas and developed Asian countries. In these countries Fiji's exports enjoy a distinctive tax and price advantage compared to the exports of other developing countries from ASEAN and South Asia. This advantage should be fully exploited during DP9, without giving up on the basis of initial difficulties. A small share of developed country's markets even in a small item is more preferable to larger share of the qualitatively and quantitatively restricted island developing country's market. (This was sharply brought home to us when it was stated that 1% of dog collar market in the US would give a formidable boost to tanning and export of leather products in Fiji).
- (e) Due to increasing internal competition, several manufacturing units, especially those owned by expatriates have stepped up their efforts to increase their exports. Export-promotion incentives and concrete governmental assistance to their efforts have not yet been perceived to be tangible by them. It is essential that during DP9 period, all established industrial units feel concretely the export bias through tangible government assistance programmes. The more important of these programmes are (1) Market development assistance, (2) Additional tax concessions on exports (3) Export credit Insurance cover through appropriate Institutional arrangements, (4) Improvements in procedures for duty draw-backs, (5) Forward Exchange cover .

(6) Concessionary and preferential supply of raw materials. It is also essential to make available these tangible incentives over a large period without any uncertainty to all firms both for their existing levels of exports and additional value and volume of exports achieved in any given year. Diversification for export of already existing enterprises should become an important and essential programme in DP9.

- (f) Revenue or Resource criteria should not inhibit export promotion incentives. The calculations, procedures and provision of existing export incentives under the income tax act, as well as on export sales are both cumbersome and inadequate. For 100% export oriented units and the operations of TNCs in this area, comparability of facilities and incentives with other locations in the world is an important aspect. The facilities and concessions should therefore match those provided by other developing countries.

In regard to existing enterprises which seek to promote exports the following incentives may be seriously considered. Some of these incentives are already existing, but the procedures and promptness of their implementation require considerable improvements.

- (i) Remittance of tariffs paid on imported inputs, if they are used in production of goods for export
  - (ii) Exemptions or substantial reductions of all indirect taxes on exports.
  - (iii) Prompt import replenishment and priority allocation of foreign exchange to exporters.
  - (iv) Income tax concessions on earnings from exports.
  - (v) Preferential credit for exports
  - (vi) Government assistance for marketing abroad
- (g) Finally, one aspect which have a long-term bearing on competitiveness in regard to exports require examination. That is the gradual reduction in the levels of protection, through reduction in the range of protective rates for different industries, which over a period of time lessens the home-market bias and renders exports more profitable.



#### 4.6 Strengthening industrial administration and extension services

##### 4.6.1 General ideas

Fiji has indeed reached a stage to think about achievements and failures. This is one of the main tasks of the industrial administration.

The Government may very well be happy with its industrial administration; there are good results. Still, there are many possibilities and ways to be better.

Some suggestions:

- 1) Put down in writing the functions and of all institutions dealing with industrial administration. Draft an organisation chart with a detailed description of the functions to be assumed by each institution or up-date existing ones.
- 2) Elaborate job description for all staff members, starting on the top.
- 3) Compare functions and responsibilities, identify overlappings and other inconsistencies.
- 4) The studies elaborated by consultants etc should be fully used.
- 5) The effectiveness of extension services should be analysed, additional needs be identified.
- 6) Special attention should be paid to the project development services:
  - project identification; who does it, how is it done ?
  - project preparation (feasibility studies) who and how ?
  - project implementation: experience, success, failures, etc.
  - project evaluation or appraisal: who does it ?
  - follow-up of project development, analysis of performance, control etc.

A review of all activities in this field should be made to allow detailed and operational recommendations for DP9.

#### 4.6.2 Strengthening of BOMAS and improvements in organisational and functional activities to promote Fijian Businesses and enterprises

Development of entrepreneurial skills and enterprises among indigenous Fijian population has been an important objective in the past and should continue to be so during DP9. There is dissatisfaction at the widening disparities of participation in the Industrial and Commercial sector and relative failure of organizational and other arrangements made for promotion in this regard.

BOMAS is a unique institution set up for this purpose. In addition, the Fiji Development Bank and other industrial promotion institutions were to give priority to the industries and development of Fijian businesses and enterprises.

During DP9 a determined endeavour to integrate these facilities and services, improve their efficacy and launch a sustained support services for enhancement of the Fijian entrepreneurial base is essential. Some of the directions of these efforts are enumerated in the following paragraphs.

A. In the past BOMAS has suffered an account of inadequate and incompetent staff. Entrepreneurial development, especially among social groups without previous tradition in industrial and business ventures requires highly motivated, trained and competent managers and extension staff. The best talent requires to be attracted and retained for a period of time. There is need for technical, and managerial experts in the relevant problems to attend to all the functions.

B. The functions should be clearly demarcated and sequentially linked in order to be mutually self supporting. For instance training of potential entrepreneurs, project identification and preparation, management, technical and marketing assistance and financial support have all to be undertaken in an integrated manner so that the entrepreneur feels confident and reassured in his endeavours. He should be enabled to secure all these services and support functions in one easily accessible place (BOMAS) rather than deal with a variety of institutions for these purposes.

C. There is need to organise training programmes in a systematic and regular manner in management and entrepreneurial development. Elsewhere the use of case studies of successful entrepreneurs and attachments to efficiently run enterprises have proved to be good in motivating and inspiring. These should be integrated into Training programmes. The training programme should not be too general and theoretical but should assist in the early identification of the ventures into which the entrepreneur is likely to enter and the managerial, technical, marketing and accounting aspects of training should be oriented towards these projects. This project oriented training programme coupled with actual on the job attachments with successful enterprises would infuse greater confidence

and motivating among the entrepreneurs. The training programmes should be organised in modular fashion and run for adequate period. At present, they are disjointed, segmented, too short and disconnected with the project or enterprise into which entrepreneur is likely to take up. Organisation of these modular entrepreneurial training programmes on a sustained and efficient basis is a basic prerequisite of entrepreneurial development among Fijians.

D. Project identification, and preparation is an important area which requires improvement. Since Fijian entrepreneurs are unlikely to have identified the opportunities and enterprises to be started by them, it is essential to prepare these projects for interesting and involving them. Great care is required in this. Normally the tendency is to prepare projects in low profitability areas, leaving the more attractive and profitable ventures to those who are capable of working out their own enterprises. Management, Technical and Marketing aspects, should be worked out in as precise a manner as possible. Project profiles often prepared by ill equipped staff have proved inadequate and these profiles coupled with wrong locational decisions have ensured certain failure. Upgradation of opportunities identification, project preparation and precise estimates of marketing and technical requirements the essential for successful projects. All projects should inherently be bankable with adequate financial returns so that appraisal and approval mechanisms would be automatic and smooth. As already pointed involvement of potential entrepreneurs in the preparation of these projects at the training phase itself is desirable.

E. Coordination of infrastructural requirements and financial sanctions in the initial periods of a venture can often prove frustrating and demotivating. Active assistance at every stage of project implementation through efficient extension and follow-up activities are essential. The aim of this should be active assistance rather than mere advise.

F. Several enterprises often suffer on account of under financing. Margins, loan provisions, and working capital requirements should be worked out properly so as to enable the ventures to take off smoothly and successfully. Very often absence of support on equity, excessive interest rate burden and inadequate working capital have created lots of difficulties to the ventures. Fiji Development Bank have been operating a separate window for indigenous entrepreneur. The requirements of equity, concessional credit for long term fixed capital and adequate working capital requirements should be thoroughly looked into. Credit reservations and efficient monitoring of credit requirements should also be thought of. Activities of BOMAS and Fiji Development Bank as well as other financial institutions may be integrated in such a way as to deliver all the financial services in one package together with managerial support. This requires coordination among all institutions involved and suitable mechanisms have to be devised.

G. Support to Fijian entrepreneurs should not stop with Project preparation and approval. Regular assistance should be provided for Marketing, supply of raw materials and Technical aspects of management. For this purpose suitable teams and procedures should be devised in BOMAS so that existing enterprises are constantly supported and assisted in this regard.

H. Finally, it is essential to remember that the mortality rates of enterprises in the initial stages of entrepreneurial development of non-traditional groups is bound to be high. Instead of developing pessimistic and conservative procedures on account of failures, it is better to build on successes and replicate them wherever possible. In entrepreneurial development, nothing succeeds like success.

#### 4.7 Meeting Technological Needs & Strengthening Technological Foundations

Technology is the master-key for development. Historically among countries at the same level as Fiji's current development stage, Technology alone has contributed as much as 50% of their annual improvements in GDP. In every sector of National economic development of Fiji technology's importance is felt, the needs for technological upgradation have been emphasised and enhancement of Technological capabilities have been recognised. Therefore in DP9, technology assumes important across all sectors, more especially in Industrial development.

Technology is man-made and is mostly produced in the Research and Development organizations either independent or within an enterprise. Technology can either be developed or acquired, assimilated and adapted. Since technology is usually embedded in all industrial machinery, processes and tools, the integration of technological considerations in the overall national development effort in DP9, requires new approaches, mechanisms and techniques. The major responsibilities of Central Planning Office in this regard may include:

- (a) Establishing the proper tool of Technology for the development of the country;
- (b) Assessment of the technological needs and capabilities of the country;
- (c) Building up of indigenous technology absorption and development capabilities through promotion and demand for indigenous technologies, monitoring acquisition and regulation of imported technologies and provision of support systems;
- (d) Setting up priorities and providing incentives for R&D activities; and

(e) Integration of all technological aspects in DP9.

Technology Policy necessarily cuts across all major policy areas of the nation, it is not a compartmentalised policy, but rather a mode of analysis, promotion and control that affects most policies, deals with goals and programmes in many areas, makes use of a variety of intervention mechanisms, operates through many departments of the government and has the Universities, industrial firms and non-profit institutions of the country as its field organisations.

Countries which have established technology policies list the following as their major aims:

(a) Promotional Aspects

- (i) Lay the foundation for accumulation of skills;
- (ii) Improve the Technological infrastructure;
- (iii) Encourage R&D efforts in the private sector;
- (iv) Mobilise human and financial resources;
- (v) Foster increasing pace of innovation;
- (vi) Provide adequate protection through patents.

(b) Directional Aspects:-

- (i) Balance the mix of foreign and internal technologies;
- (ii) Require unpackaging of imported technologies;
- (iii) Attain technological self-reliance by reducing vulnerability in strategic and critical areas;
- (iv) Maximise use of indigenous resources;
- (v) Recycle waste materials and make full use of by-products;
- (vi) Prevent environmental pollution.

(c) Co-operational Aspects:-

- (i) Cooperation with developed countries;
- (ii) Cooperation with developing countries;
- (iii) Sub-regional cooperation

Promotion of Technology development through the Private sector has usually been done by the following measures:

- (i) Tax Incentives for Research and development activities;
- (ii) Support for establishment of R&D units;
- (iii) Support in negotiation, acquisition and adaptation of imported technologies and commercialization of indigenous research and inventions;
- (iv) Establishment of financial intermediaries;
- (v) Support for industrial research associates.

In Fiji the importance technology awareness, choices and upgradation in traditional sector and in the import-substitution sector have been recognized. In addition to these, eventual technological development requires future-orientation and involvement in future-oriented activities through a definitive programme of "Popularization of Technology", which may be done in the following ways:-

- (i) Increasing people's awareness of usefulness of technology in their daily lives such as through the mass media, films and radio-programmes;
- (ii) Demonstrating the usefulness of technology through exhibitions, fairs and carnivals;
- (iii) Demystifying the role of technology by involving rural people, students and women in the organization of technology-based national competitions;
- (iv) Educating people to emphasise self-help and self-reliance in solving everyday problems;
- (v) Democratizing technical knowledge through publication of technology journals;
- (vi) Creating a desire to be innovative by introducing momentary and recognition incentives.

A reappraisal of technology institutions, arrangement, and training facilities during DP9 in order to enhance the role of technology in the development process would be desirable. Mere implicit or remotely explicit elements of technology assessment and consideration may be inadequate. Although a new institutional structure at this stage is not straightaway recommended, it is felt that the Central Planning Office should undertake concretising technological objectives among all sectors and assist in inter-sectoral identification of technological needs and capabilities. A small cell in CPO can comprehensively put together technological constraints, suggested remedies and technology activities in all sectors which

together with clearly spelt out objectives would form the nucleus of a technology Plan in DP9. Some of the import elements requiring consideration in this Plan are:

- (a) Monitoring the flows of technology through records of technology agreements, import of machinery, processes etc.
- (b) Collection and dissipation of Technology information through adequate linkages with regional and international networks of technology information available through United Nations agencies such as ESCAP/RCTT; UNIDO; UNCTAD; and other international bodies such as EEC; etc.
- (c) Establish nucleus capability for technology assessment and forecasting and provide directions to field ministries and organisations.
- (d) Insist upon adequate consideration of technological aspects in all programmes and projects under the plan.
- (e) Provide support and assistance to private sector and voluntary associations engaged in technological adaption, assimilation and development.
- (f) Ensure adequate training facilities of scientists, engineers and technologists.
- (g) Examine the implications of emerging technologies such as Micro-electronics, material sciences, biotechnology and genetic engineering to the development problems and issues in Fiji.
- (h) Determining fiscal policies such as tax-credits, loans, grants, risk-insurance and incentives which can motivate the private sector to invest in R&D and upgrade their technology.
- (i) Utilise non-governmental organisations such as Chamber's of Commerce and manufacturers associations etc.
- (j) Improve the provision of government supported information systems, technical assistance and extension services, etc.

Finally in regard to institutional arrangements, the question of creating a National Technology Centre deserves greater examination. However, as a preliminary to this the establishment of a National Technology Council presided by the highest executive authority in the country, and comprising of leading figures from the government, private sector, Universities and academics may be considered. The periodical meetings of the council including the preparation of the agenda, servicing etc. can be looked after by the Technology cell in the Central Planning Office.

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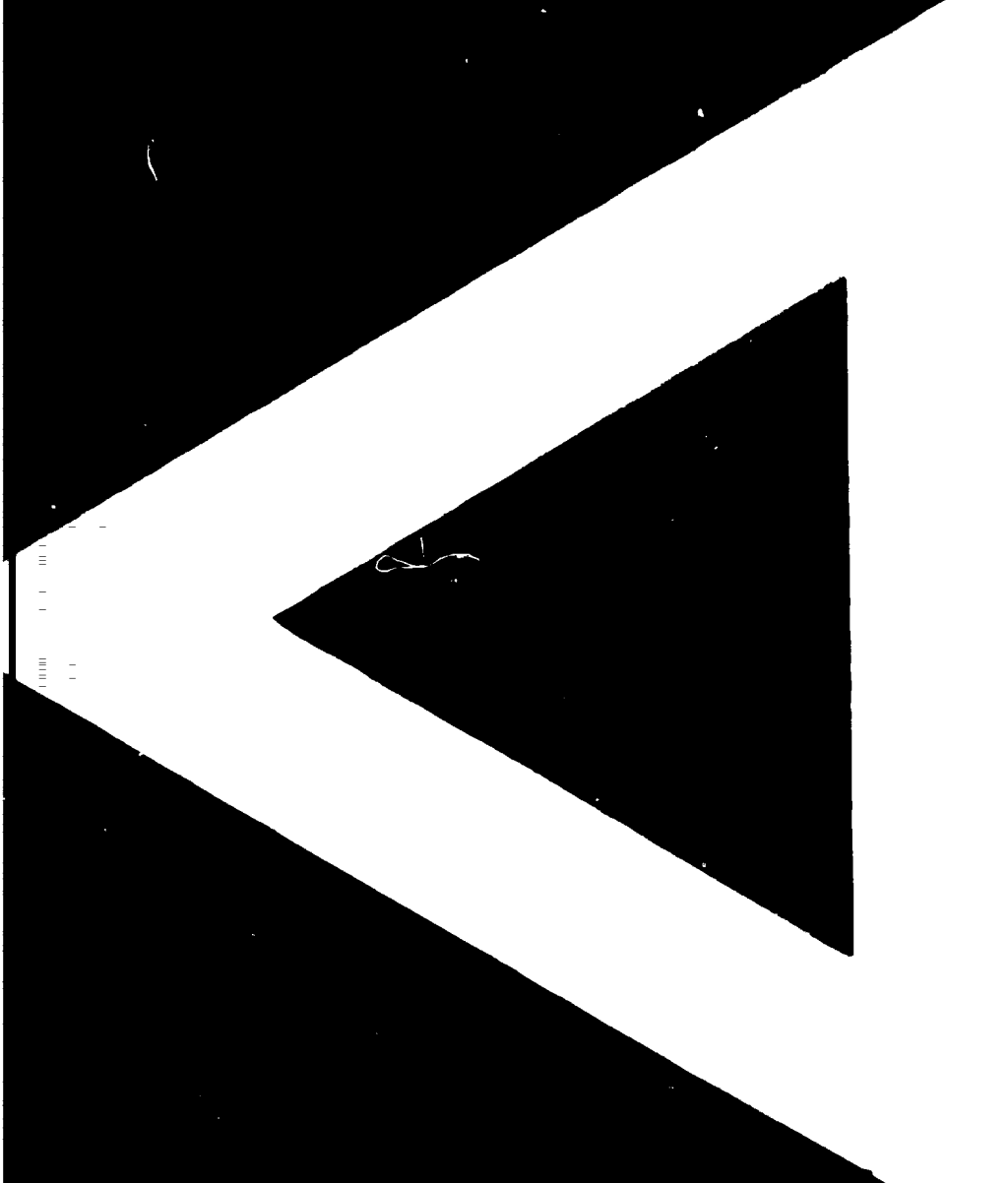
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