INDUSTRIALISATION IN A DEVELOPING ECONOMY

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CONTAINS PULLOUTS

C O N T E N T S

Page

PART II. PROPOSED INDUSTRIAL PLANNING APPROACH

Page

LIST OF TABLES

DIAGRAM NO.

LIST OF ANNEXURES

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INTRODUCTION

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To escape from national poverty is the principal goal of the Developing Countries. A large number of current national statements of development indicate a growing awareness of the need to pursue plans that are increasingly sensitive to socio-economic problems. The development of industrial activity is most likely to supply the dynamics and momentum to mobilise the necessary resources to start this escape from poverty.

My approach to and proposals for more effective industrial planning, are based on an analysis of the relevant literature, and the comparison and evaluation of a considerable number of national and industrial plans.

Part I deals with the ever-increasing gap between the GNP per capita of the Developed and the Developing Countries during the last 100 years. I show that this gap has widened more rapidly between the 1960's and the 1970's. The literature on the industrialisation efforts since the late 1950's is surveyed and the experience gained is assessed. In this way, the major constraints shared by almost all Developing Countries, although varying in background, starting-point and social aspiration, are scrutinized.

Part II provides an outline of situations and decisions which directly affect the process of industrialisation in the majority of Developing Countries, while the planning process is broken down into its main elements. Each element is then discussed in accordance with its practical consequences, with the emphasis on overcoming observed difficulties and avoiding mistakes.

In attacking the most common issues, I am guided by two principles: firstly, that these situations and issues are indeed the most important and, secondly, that by adequate planning, better practical results can be obtained - provided that the planning principles and their application are kept clear and simple.

Planning is not only the design of a desired future, but it means, in its proper sense, taking decisions - and following them up - in order to bring this desired future about.

This thesis suggests, therefore, a pragmatic approach which is reinforced by my practical experience over several years in a variety of Developing Countries, where I prepared industrial development plans and industrial studies.

PART I. THE DEVELOPING ECONOMY

"Il n'y a qu'un problème philosophique vraiment sérieux: c'est le suicide."

Albert Camus - Le Mythe de Sisyphe

SECTION 1. THE GREAT DIVISION

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The division of the world into "developed" (or "industrialised") and "developing" (or "underdeveloped") countries is an unfortunate fact.

When did this polarisation start among the individual countries, what happened in the last decade and how are we to define a Developing Country?

1.1 DEVELOPING VERSUS DEVELOPED COUNTRIES UP TO 1960

There is a standpoint according to which the division started with the industrial revolution, since "in the early nineteenth century there was not much difference between the living-standards of the British and the Chinese peoples" (Dr. J. Bognar).

According to S.J. Patel in 'Economic Transition in Africa' per capita national income in dollars in the industrial countries (Western Europe, North America, New Zealand, Australia and the East European countries) and the developing countries was as follows:[1]

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[1] Oswaldo Sunkel in "Underdevelopment in Latin America: Towards the Year 2000" in Jagdish Bhagwati edt. Economics and World Order from the 1970s to the 1990s, Macmillan Company, London, wrote: "the USA achieved a per capita income of $200 around 1832, the U.K. in about 1837, France in 1852, Germany around 1886 and Italy only in 1909. Around 1850 the average per capita income of the countries now regarded as "developed" or "advanced" reached some US$ 150, while the rest of the world "enjoyed" incomes per capita of somewhere in the region of US$ 100."

	1850	1960
Industrial countries	150	1100
Developing countries	100	120

Thus, the ratio between the Industrial and Developing countries in the mid-nineteenth century was 1 : 1.5 and in the 1960's it was 1 : 9.2.

According to other opinions, the now developed countries were already much more developed in the nineteenth century than the developing countries are now. Kuznets[1] made efforts to approach the problem from other aspects and with different methods.

According to his calculations, per capita income increased in the Developing countries in the last 100 years at most by 50 per cent, while in the developed countries it grew four-fold. Since according to his assumption GNP per capita in the poorest countries, around the middle of the twentieth century, was approx. $75 and in the most advanced $1,400, thus the ratio was 1 : 19. Therefore, a hundred years ago the ratio was 75/1.5 : 1400/4 i.e. 1 : 7.

	1850	1960	Growth
Industrial countries	350	1400	300%
Developing countries	50	75	50%
Ratio	1:7	1:19	

In this sense the present huge difference is also considered by Kuznets to be relatively recent.[2]

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(1) Simon Kuznets: "Modern Economic Growth: Ratio Structure and Spread," Yale University Press 1966. See also "Economic Growth and Economic Inequality," American Economic Review, Vol. 45/1955.

(2) In "Reshaping the International Order" (RIO) coordinated by Prof. Jan Tinbergen, Nov. 1976, is written that the ratio between average incomes in countries accounting for the richest and poorest 10% of the earth's population may be calculated at 13.1; in other words, in about 120 years the income gap between poor and rich nations widened more than 8 times.

1.2 THE POLARISATION TO DATE

It appears almost certain that the gap between the industrialised and the developing countries has come about during the last 100 years. The question naturally arises: has the polarisation intensified in the last decade?

To answer this question I have compared the 20 "richest" and 21 "poorest" countries over the period of 1960 to 1970 and the results are given in Tables 1 and 2. These two tables are based on Annex A. It is notable that during the 1960's the population growth rate in the 21 "poorest" countries was more than double the rate of the 20 "richest" countries (2.3% versus 1.1% respectively).

During the same period, GNP in the 20 "richest" countries grew from $1,536.46 Bn to $2,578.24 Bn (68%) and in the 21 "poorest" countries from $74.80 Bn to $108.12 Bn (45%).

To illustrate this situation, one may compare the 21 "poorest" countries with a total population of 1.077 Bn and total GNP of only $108 Bn to the U.K. with a population of 57 million and a GNP of $130 Bn.[1]

To demonstrate the increasing polarisation I calculated the GNP per capita in the two groups of countries for 1960 and 1970:

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[1] This dry factual example puts "burning issues", raised these days by environmentalists, such as depletion of non-renewable natural resources by new industries in poor countries or environmental pollution they cause - in their right perspective.

TABLE 1: The 20 ("Richest") Developed Countries.

No.	Country	1960 GNP per Capita $	1960 Population '000	1960 GNP Bn $	1970 GNP per Capita $	1970 Population '000	1970 GNP Bn $	1960-1970 GROWTH RATES GNP per Capita %	1960-1970 GROWTH RATES Population %
1.	United States	3,470	192,926	669.45	4,760	217,386	1,034.76	3.2	1.2
2.	Sweden	2,780	7,764	21.60	4,040	8,325	33.63	3.8	0.7
3.	Canada	2,500	19,579	50.87	3,700	23,403	86.59	3.6	1.8
4.	Switzerland	2,590	5,830	15.12	3,320	6,766	22.46	2.5	1.5
5.	Denmark	2,220	4,752	10.54	3,190	5,095	16.25	3.7	0.7
6.	France	1,980	48,311	95.51	3,100	53,365	165.43	4.6	1.0
7.	Germany Fed.	2,080	58,572	121.65	2,930	64,700	189.57	3.5	1.0
8.	Norway	1,910	3,728	7.14	2,860	4,037	11.55	4.1	0.8
9.	Australia	2,080	11,368	23.62	2,820	13,858	39.08	3.1	2.0
10.	Belgium	1,840	9,398	17.27	2,720	9,977	27.14	4.0	0.6
11.	New Zealand	2,190	2,589	5.68	2,700	3,064	8.27	2.1	1.7
12.	Germany (East)	1,650	17,250	28.46	2,490	17,250	42.95	4.2	0.0
13.	Netherlands	1,660	12,205	20.22	2,430	13,888	33.75	3.9	1.3
14.	Finland	1,630	4,557	7.43	2,390	4,838	11.56	3.9	0.6
15.	United Kingdom	1,830	54,088	98.76	2,270	57,422	130.35	2.2	0.6
16.	Czechoslovakia	1,540	14,040	21.57	2,230	14,906	33.24	3.8	0.6
17.	Austria	1,370	7,208	9.88	2,010	7,577	15.23	3.9	0.5
18.	Israel	1,240	2,486	3.08	1,960	3,406	6.54	4.7	3.2
19.	Japan	770	98,372	75.55	1,920	108,664	208.63	9.6	1.0
20.	USSR	1,020	228,712	233.06	1,790	257,688	461.26	5.8	1.2
Total & Averages		1,910	803,735	1,536.46	2,880	895,615	2,578.24	4.2	1.1

NOTES:

1. This Table is based on Annex A.
2. The reason that 20 "richest" Developed Countries are compared with 21 "poorest" Developing Countries is to have, as far as possible, comparable populations, i.e. 20 "richest" countries have a total population of 896 million and the 21 "poorest" countries have 1077 million.

TABLE 2: The 21 ("Poorest") Developing Countries.

No.	Country	1960 GNP per Capita $	1960 Population '000	1960 GNP Bn $	1970 GNP per Capita $	1970 Population '000	1970 GNP Bn $	1960-1970 GROWTH RATE GNP per Capita %	1960-1970 GROWTH RATE Population %
1.	Rwanda	70	3,102	0.22	60	4,169	0.25	-1.5	3.0
2.	Burundi	55	3,210	0.18	60	3,913	0.23	0.8	2.0
3.	Upper Volta	65	4,853	0.32	60	5,974	0.36	-0.6	2.1
4.	Mali	45	4,522	0.20	70	5,567	0.39	4.4	2.1
5.	Somalia	80	2,512	0.20	70	3,184	0.22	-1.1	2.4
6.	Malawi	65	3,905	0.25	80	5,048	0.40	2.1	2.6
7.	Afghanistan	75	12,952	0.97	80	15,788	1.26	0.5	2.0
8.	Ethiopia	60	22,087	1.33	80	27,456	2.20	2.8	2.2
9.	Indonesia	70	104,672	7.58	80	127,595	10.21	1.0	2.0
10.	Yemen Arab Rep.	65	5,140	0.33	80	6,389	0.51	2.0	2.2
11.	Burma	75	24,862	1.86	80	30,605	2.45	0.6	2.1
12.	Nepal	75	10,116	0.76	80	12,092	0.97	0.5	1.8
13.	Chad	75	3,330	0.25	80	3,980	0.32	0.4	1.8
14.	Zaire	70	16,376	1.15	90	21,584	1.94	2.7	2.8
15.	Dahomey	90	2,347	0.21	90	3,124	0.28	0.1	2.9
16.	Niger	110	3,485	0.38	90	4,638	0.42	-2.0	2.9
17.	Pakistan & Bangladesh	80	113,932	8.99	100	148,713	14.87	2.4	2.7
18.	Vietnam (North)	75	18,423	1.38	100	24,282	2.43	3.2	2.8
19.	Tanzania	70	11,729	0.82	100	15,014	1.50	3.6	2.5
20.	Haiti	120	4,409	0.53	110	5,374	0.59	-0.9	2.0
21.	India	100	480,295	46.89	110	602,927	66.32	1.2	2.3
Totals & Averages		87	856,259	74.80	100	1,077,416	108.12	1.4	2.3

NOTE: This Table is based on Annex A.

	GNP PER CAPITA		
	1960	1970	Growth
20 ("richest") Developed Countries	$1910	$2880	51%
21 ("poorest") Developing Countries	$ 87	$ 100	15%
Ratio	1:22	1:29	

It took 100 years between 1850 and 1950 to increase the ratio between the developed and the developing countries from 1 : 7 to 1 : 19, it needed only 10 years to increase the ratio from 1 : 22 to 1 : 29.

In spite of increased economic activity in the Developing Countries, after the majority of them gained independence, the polarisation intensified and accelerated between 1960 and 1970. Unfortunately there are no signs that this trend will change.[1]

1.3 WHAT IS A "DEVELOPING COUNTRY"

It is not easy to find a single index capable of determining whether a given country or region is "developing" or "developed". The difficulty is largely in that there are enormous differences in political and social structure, cultural background and natural resources. One may, for example, contrast the relatively abundant natural resources in various countries of Latin America and Africa with their very low national income per capita figures.

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[1] According to David Morawetz: "Twenty-five years of Economic Development" (1950-1975) Washington, 1977, the over-all growth rates of Developing countries did not even begin to close the absolute gap in income per capita during 1950-1975. He says in pp. 27-29: "In fact, during the 3rd quarter of a century, there was not a single region or country (apart from oil-rich Libya) where the absolute income differential did not at least double; even in fast-growing countries such as South Korea and Taiwan."

Some developing countries have a major source of income in foreign trade (Singapore or Malta), yet others - Ethiopia or Somalia, for instance - do not. Furthermore, there are some very important conditions ranging from areas of primitive agriculture to areas of advanced industrialisation.

1.31 Other Points of View

A useful approach may be found in seeking some form of common denominator among developing states.
Liebenstein[1] has classified common characteristics such as:

- economic: a large proportion of the population is engaged in agriculture; there is a low income per head and foreign trade per head figure; a low rate of savings and capital formation exists; a high proportion of income is expended on food; there is a low standard of housing; credit facilities are poor.

- demographic and health: there are dietary deficiences; both fertility and mortality rates are high; health is poor and there is inadequate sanitation.

- technological: this is at a crude level; labour productivity-yield is low; there is a poor communication and transport system.

- cultural and political: illiteracy is prevalent; there is a high level of child-labour; there is no middle-class; values are traditional; women have inferior status.

Bennett's[2] non-monetary index was contrived to compare consumption levels of various states and also the various stages

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(1) Harvey Liebenstein: "Economic Backwardness, Economic Growth," Wiley (N.Y.) 1957, pp. 38-45.

(2) M.K. Bennett: "International Disparity in Consumption Levels," American Economic Review, September 1951.

of development they undergo. He took the level of consumption as the total of food, fuel and non-durables utilised, the services of durable and semi-durable goods used, together with personal services. His measurements were:

(a) Food: total number of calories per head per day at the retail level, and the percentage of calories derived from sources other than roots and flour.

(b) Medical Services and Health: the number of physicians and of hospital beds per 1,000 of the population.

(c) Housing: the figure for the average of sawn-wood consumption in cubic metres per 1,000 of the population.

(d) Clothing: metric pounds of cotton, wool and rayon textiles consumed per head.

(e) Education: total school population enrolled at schools, newsprint consumed per head of the population. (He also measured leisure in terms of the number of cinemas per 1,000 of the population, but this is not universally accepted as a sound idea, nor is it universally applicable.)

(f) Transport and Communication: passenger and commercial vehicles per 1,000 of the population, kilometres of railway track per 100 sq.km. of land, annual freight per head (ton/mile), and the number of telephones and radios per 1,000 of the population.

Additional indices suggested include the total energy consumed per head and the number of livestock units per head.

In the U.N. Report on International Definition and Measurement of Standards and Levels of Living (1954), the idea was to present the indicators listed by Bennett in absolute and in relative terms (i.e. showing each activity as a percentage of the indicator, the highest value being expressed as 100). The total of the relative figures would reveal the level of consumption in relation to the other states examined.

These indices were further developed in an attempt to quantify the Basic Needs of the poorest parts of the population. In Part II under 5.12 I examine this concept in relation to the identification of a long-term industrial strategy for a Developing Country.

Other attempts were made in the U.N. Report on the World Situation, N.Y. 1961, pp. 41 and 48, in which a different presentation was adopted as indicated in the following Table 3.

TABLE 3: Average Indicators of Economic Development and Standard of Living in Some Countries.
(classified by Gross National Product per capita)

GNP per capita in U.S. dollars by Country Groups I - IV	a	b	c	d	e	f	g
I. Above	1,366	3,900	24.9	885	98	3,153	17
II. Between 575-1,000	760	2,710	41.9	944	94	2,944	21
III. " 350-575	431	1,861	56.8	1,724	81	2,920	35
IV. " 200-250	269	536	97.2	3,132	70	2,510	53
V. " 100-200	161	265	131.1	5,185	51	2,240	64
VI. Under 100	72	114	180.0	13,450	29	2,070	74

Key:

(a) Per Capita Gross National Product (G.N.P.) (Average of 1956-8).

(b) Per Capita energy consumption, in kilograms of hard coal equivalent (average of 1956-8).

(c) Infant mortality (average of 1956-8) per 1,000 live births.

(d) Inhabitants per physician.

(e) Ratio of those able to read and write from population aged above 15 years, estimate for 1950.

(f) Per Capita food consumption in calories (est.).

(g) Agricultural employment as percentage of total manpower (males only, estimate for 1956).

Country Groups referred to in Table 3:[1]

Group I : EUROPE, NORTH AMERICA, OCEANIA:
Australia, Canada, New Zealand, Sweden, Switzerland, U.S.A.

Group II : EUROPE, NORTH AMERICA, OCEANIA:
Belgium, Czechoslovakia, Denmark, Finland, France West Germany, Netherlands, Norway, Soviet Union, United Kingdom.
LATIN AMERICA: Venezuela.
ASIA: Israel.

Group III : EUROPE, NORTH AMERICA, OCEANIA:
Austria, East Germany, Hungary, Ireland, Italy, Poland.
LATIN AMERICA:
Argentina, Chile, Cuba, Puerto Rico, Trinidad & Tobago, Uruguay.
AFRICA: Republic of South Africa.

Group IV : EUROPE, NORTH AMERICA, OCEANIA:
Bulgaria, Greece, Spain, Turkey, Yugoslavia.
LATIN AMERICA: Guyana, Costa Rica, Jamaica, Mexico, Panama.
ASIA: Malaya, Japan.

Group V : EUROPE, NORTH AMERICA, OCEANIA:
Albania, Portugal, Romania.
LATIN AMERICA: Brazil, Columbia, Dominican Republic, Ecuador, Honduras, Nicaragua, Paraguay, Peru.
AFRICA: Ghana.
ASIA: Ceylon, the Philippines.

Group VI : LATIN AMERICA: Bolivia.
AFRICA: Congo (Kinshasa).
ASIA: Burma, Cambodia, Taiwan, India, Indonesia, Laos, Pakistan, Thailand.

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[1] Source: Report on the World Social Situation, U.N., New York, 1961, pp. 41 and 48.

Evidently, from the above "key" (& Note) it is an almost impossible task to collect fairly accurate and comparable data for the same period for all developing countries. Consequently, the usefulness of compiling all such out-dated information is doubtful indeed.

1.32 GNP to Define State of Development

The most commonly used indicator of the level of development is taken from national income data; e.g. measuring GNP per capita. This convenient measure is widely used. Some of the limitations are noted in Annex A, others it may be appropriate to point out here:

(a) Economic Development should refer also to the quality of life. National income statistics, however, cannot include all the appropriate elements, particularly the "non-economic" ones such as the extent and degree of well-being of society within its political and social frame-work. Moreover, these statistics tell nothing about distribution of the output and income and little about the adequacy of employment opportunities they have generated.

It is also true that the national income can increase, without the inhabitants of the country deriving much direct benefit.[1]

(b) The statistics may not be uniformly accurate and may not be comparable.

(c) It is difficult to convert national income data into a common monetary standard (usually the U.S. $) for comparison, since exchange rates are themselves arbitrarily and artificially fixed.

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[1] R.S. MacNamara, President of the World Bank, criticised Mexico and Brazil at the 1972 Santiago U.N. Trade and Development Conference, on the fact that only a small proportion of the population benefited from high growth rates.

1.4 PROPOSED DEFINITION

A more useful definition would divide the world into three groups: the Developed, the Less Developed (LDC s) and the Developing Countries.

There are some countries, e.g. Brazil, Mexico, South Korea, Hong Kong, which are industrialising rapidly and therefore could be classified as LDCs.

There are others, about 60, to include all the countries in Africa south of the Sahara and the majority of countries in Latin America and Asia, where the conditions for development hardly exist at present. This last group could be classified as "Developing Countries".

For the purpose of this dissertation I have developed the following definition by T & E tests based on Annexes A2 and A4.

The definition of a "Developing Country" is therefore a country where at least 2 of the following 3 situations persist:

(i) the GNP per capita in 1970 U.S.$ is less than $400 per annum.

(ii) the annual growth rate of GNP per capita is less than 2.0 per cent.

(iii) the population growth rate is more than 2.0 per cent per annum.

It is the "Developing Countries" with which this dissertation is concerned.

1.41 The 'Industrial Revolution' and the Developing Countries

The above definition implies that the polarisation between the Developed and Developing Countries occurred because of the difference in growth rates per capita. It is also noted that the

phenomenon of the progress of North America, Western Europe and Japan so far ahead of all other countries, occurred mainly during the last 125 years (1.1 & 1.2). It is therefore generally accepted that this phenomenon was, in fact, the 'Industrial Revolution'.

At the end of the 18th century the 'Industrial Revolution' manifested itself and it gained momentum in the 19th century. Its most spectacular results became apparent during the first half of the 20th century when it finally led to the post-war economic boom period of the last 25 years.

The Developing Countries were not by-passed in the process of the 'Industrial Revolution', they simply fulfilled their role in this new "Imperial" system, namely primary activities. The small number of 'Centre' countries has been engaged in manufacturing activities and developed jointly, while the rest of the world - the 'Periphery' - remained stagnant.

SECTION 2. AIMS, PLANS AND REALITY

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Nehru said: "Real progress must ultimately depend on industrialisation." Indeed, industrialisation is more than an efficient method to manufacture goods - it is a comprehensive system of thinking. This is why 'industrialisation' served as a synonym for progress and development in many newly independent Developing Countries.(1)

The pre-occupation of many Developing Countries with industrial expansion from the 1950s onwards, has led to modest results.

During the 1960s, for example, some of the 21 poorest Developing Countries recorded on average an annual increase of about 7 per cent in their manufacturing activity as against an average increase of about 3.75 per cent in their total gross national product.(2) There was, however, a wide dispersion in the experience of individual countries.

Some of the poorest countries, because of their extremely low starting base, experienced an annual increase of 10 per cent or more in their manufacturing activity, whereas others recorded an annual rate of 5 per cent or less.

To summarise the achievements and failures of the industrialisation effort in the last decades, it is essential to review the various policies that led to the results obtained. Equally relevant is to discuss the development statements of various Developing Countries and to perceive the reasons for the need to industrialise.

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(1) For elaboration see 4.5

(2) It can be seen from Table 2 that the change in GNP during the 1960s was from $74.8 Bn to $108.12 Bn, i.e. an average growth rate of 3.75% p.a.

2.1 INDUSTRIALISATION - PAST EXPERIENCE

The current plans of many Developing Countries project a continuing industrialisation drive. For the first half of the 1970s these countries have set, on average, a target of an annual increase of around 10 per cent in their manufacturing output.

The actual record in this regard since 1970, although short of this target, shows a significant acceleration over the average growth rates of the 1960s. Up to the closing months of 1975, manufacturing output was exceeding the indicative target of 8 per cent annual increase included in the International Development Strategy for the Second United Nations Development Decade.

Some countries have projected an annual increase of 14 or 15 per cent in their manufacturing production; some others have as a target an annual increase of only 4 or 5 per cent. By the end of the 1970s a few Developing Countries expect manufacturing to account for a quarter or more of their gross domestic product; but there are some others in which this share is still envisaged to remain less than one tenth. Some are manufacturing consumer goods for the home market as well as for export; a number are manufacturing capital goods, in rare cases for export.

According to United Nations estimates, the Developing Countries, which accounted for less than 7 per cent of world manufacturing output in 1960, have not increased their share since then.

From 1963 to 1970, the Developing Countries' share of world exports of manufactured goods, apart from processed foods, beverages and tobacco products, barely increased from just under 6 per cent to just over that figure.

2.2 CONSIDERATION OF INDUSTRIALISATION AIMS

The Pearson Report[1] throws interesting light upon development targets in relation to industrialisation. It suggests that the two objectives of increase of GNP rate and decrease of unemployment may well be incompatable:

> "The failure to create meaningful employment is the most tragic failure of development. All indications are that underemployment and under-utilisation of human resources have increased in the 1960s and that the problem will grow even more serious."

This is true. The target concerned with maximising output conflicts - in many cases - with that of maximising employment. In fact, even more fortunate Developing Countries with around 6-8 per cent per year growth in GNP per capita, meet with rising unemployment.

During the 1950s Venezuela and Jamaica were among those with an 8 per cent growth rate, yet each in 1960 had a higher level of unemployment than it had ten years before. Morse[2] has suggested that 280 million persons will be added to the world's labour force during the 1970s and that 173 million will be in Asia, 32 million in Africa and 29 million in Latin America.

Authoritive estimates also state that the total of unemployment and underemployment in Developing Countries rose from 166 million to 248 million between 1960 and 1970, or from 24.7 per cent to 29.5 per cent of the labour force (see footnote related to 3.21).

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(1) Committee on International Development (Chairman: Lester Pearson) "Partners in Development," 1969, p.68.

(2) D.A. Morse: "The World Employment Programme," International Labour Review (Geneva) Vol. 97, June 1968. See also D. Turnham: "The Employment Problem in Less Developed Countries," OECD 1970.

These facts must be taken into account in the establishment of the industrialisation target in any development plan. Technological progress will usually result in an increase in productivity per man-hour and this, in turn, gives rise to possibilities of economising in labour. The pattern of industrial development shows itself in capital-intensive (and labour-saving) forms so that the number of available jobs is reduced.

It is now being recognised that there is continuous scope in many Developing Countries for labour-intensive products to meet the demands of both domestic and foreign consumers. It is suggested for instance that necessities may be supplied in the form of hand-pounded rice rather than machine-milled, or hand-woven cloth instead of factory-produced, or wooden or brick houses instead of re-inforced concrete buildings.(1)

However, the creation of such "Intermediate Technologies" or "new" practices borrowed from the past, requires much time, scientific and technical sophistication and a good deal of very expensive expertise which is difficult to organise. These technologies, if implemented, may, more often than not, reverse the process of seeking a higher degree of industrial efficiency and competitiveness, in order to create additional employment in the short-run.

To emphasise the different approaches to industrialisation, it is worthwhile taking some actual examples of planning in Developing Countries and examining briefly the way in which these efforts fit into the general context.

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(1) The late E.F. Schumacher developed this theme during the last decades. His work "Small is Beautiful," Blond & Briggs, 1973, sums up his efforts very well.

2.21 India[1]

The general objectives of Indian Planning are stated to be strengthening the base of Indian society and rendering it more resilient, to maximise the utilisation of her own human and physical resources, remove want and misery and make human life richer and fuller. In other words, the removal (at least the reduction) of mass poverty.

The simple target for economic growth is 5.5 per cent per annum. However, as the Planning Commission reports:

> "... a growth-oriented strategy must have woven in it a series of redistributive measures which in turn requires planning not only for a high growth rate, but also for a particular composition of growth which favours the weaker sections of society."

Part of the strategy involved, therefore, includes creation of employment opportunities, the development of a programme of minimum needs, regional development, as well as the official procurement and distribution of essential commodities. And, since half of India's national income is generated by agriculture, output from that sector is an important element in growth.

Individual industrial output targets include, specifically, those for mild steel, and basic inputs such as fertilizers, cement and electricity. Other priorities emerging from the massive increase in capital investment also envisaged, are the adequate production of such consumer goods as sugar, textiles and drugs, together with basic services such as education, drinking water, housing and so on.

The motivation of decreased reliance upon imports is also the reason for the boosting of domestic production of much of the machinery needed for industrial expansion.

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[1] Indian Planning Commission, "Approach to the Fifth Plan," 1973.

2.22 Malaysia

In Malaysia there is the official "New Economic Policy," the vehicle of which was recently the Second Malaysia Plan (1971-1975). The stated objectives here are: the eradication of poverty in Malaysian society and the elimination of the identification of race with particular forms of economic activity.

However, the twin objectives are difficult to achieve (being very much the core of the state's economic and political disputes) and it appears that an overall slower growth rate has to be accepted in order to raise the level of the rural population by allocating to it more resources for communal and industrial activity.

The actual growth rate established by the Plan was 6.5 per cent per annum, but this was not achieved in 1971 or 1972. The decision now is to aim at communal adjustment first and then at a high growth rate. One often-quoted target is that by 1990, 30 per cent of Malaysia's wealth must be owned by the Malay community, as compared with the 5 per cent they own at present.

Industrialisation in the region is subordinated to the social objectives - for example, any enterprise in Malaysia must have a work force which reflects the structure of the population at all levels, yet managers at middle level are hard to recruit from the Malay community. Industrial location is mainly in Kuala Lumpur, Penang and Johore, but the Government is seeking to persuade entrepreneurs to site factories now in predominantly Malay areas.

Industrialisation began in the early 1960s and the emphasis was then on import substitution - mainly for consumer goods. When opportunities for this form became fewer, the emphasis changed to export industries (largely dependant upon the area's cheaper labour). But, despite the fact that industry has grown at twice the rate of the economy as a whole for some years past,

the industrial employment rate remains at only 8 per cent of the total labour force and is a major problem. In 1972, industrial exports accounted for about 10 per cent of total exports.

2.23 Nigeria

In this country the primary objective of the second National Development Plan 1970-74 was to achieve a growth rate of 6.6 per cent per annum, with additional aims of redressing the balance of income distribution and reducing the foreign control of strategic sectors (mainly industrial and mining). A specific target figure was established for government investment in both private and public sectors and several priorities were established for agricultural development, transport and manpower development.

Before the above plan expired, a new plan 1973-77 was launched. The main features of this new Plan are:

(a) Import-Substitution

The policy of import-substitution pursued since Independence has earned dividends. It was the main determinant of the high growth rates recorded in the manufacturing sector.

For a few industrial products like cement, flour and beer, the process is nearly complete. As the country's manufacturing consists mostly of the supply of goods to final consumers, import-substitution brought in its wake a rise in the importation of raw materials and intermediate and capital goods. The manufacturing sector has thus became highly dependent on import.

(b) Recognising the Problems

The value added as percentage of gross output in most industries remains remarkably low. The exceptions are food, beverages and cement. Imported raw materials are also known to constitute about 45% of the industrial costs in the country.

The problem is worse in the metal production industry where value added is as low as 7%. At present all the stages of metal production are undertaken abroad except the final stage of metal fabrication.

Manufacturing in Nigeria has yet to achieve a high level of interdependence between the different sectors. This low linkage has serious implications for the structure of industry and employment as well as for the level of income and foreign exchange earnings.

To achieve a high level of linkage, local production must be upgraded to embrace intermediate and capital goods for sale to other industries. Nigerian manufacturers still remain a perpetual appendage of foreign industrial complexes.

Another problem facing industrial development in Nigeria is the low level of indigenous ownership and control. This is an unsatisfactory situation which may lead to future undesirable economic and political complications, if not reversed now.

The Government believes that the efforts at attracting foreign investment should proceed simultaneously with the drive for greater Nigerian participation in production process on mutually beneficial terms. While welcoming foreigners to invest in the industrial sector, it is now Governments policy that Nigerians must have an effective stake in the ownership and management.

(c) Industrial Policy and Objectives

The industrial policy of the Government in the present Development Plan is intended to check the undesirable trends of previous plans and lay a solid foundation for long-term steady growth and development of the industrial sector.

The stated objectives of the new policy could be summed-up as following:

(i) promote balanced development and fair distribution of industries in all parts of the country;

(ii) ensure a rapid expansion and diversification of the industrial sector of the economy;

(iii) increase the incomes realised from manufacturing activity;

(iv) create more employment opportunities;

(v) promote the establishment of industries which cater for overseas markets in order to earn foreign exchange;

(vi) continue the programme of import-substitution as well as raise the level of intermediate and capital goods production;

(vii) initiate schemes designed to promote indigenous manpower development in the industrial sector; and

(viii) raise the proportion of indigenous ownership of industrial investments.

In pursuance of these objectives, the government has the intention to lay down priorities from time to time and initiate positive measures to achieve them. Apart from setting priorities in respect of public-sector programmes, the government will also endeavour in its investment promotion to give guidelines to private-sector investments in priority areas through appropriate selective incentive measures.

It is clear from the new plan that the authorities recognise only some of the problems facing the country, but failed to establish a clear 'strategy' in respect of stimulating investments and regulating the Ownership complexity. Furthermore, no clear policy was formulated towards solving the severe problems of foreign exchange shortage (in spite of important oil revenue) and no system was introduced to combat the low added value of the industrial sector.

SECTION 3. WHY INDUSTRIALISE?

SECTION 3. WHY INDUSTRIALISE?

In the majority of '5-year Plans' of a great number of Developing Countries, the following reasons are given for the need of Industrialisation:

(a) National Prestige (rarely mentioned as such).

(b) The provision of work for the growing population and/or for under-employed rural inhabitants.

(c) The raising of the standard of living.

(d) The improvement of the balance of trade position and/or decreased dependence upon foreign sources of goods and services.

(e) The creation of a progressive (as opposed to a stationary or "stagnant") environment through development of inventiveness, technology and modernity of outlook which industrialisation brings in its train.

What about the validity of these reasons:

3.1 NATIONAL PRESTIGE

Several countries are cited by Alan Mountjoy[1]: Yugoslavia, The Argentine and Egypt. All these had such a reason in the past. Murray Bryce[2] points out that industry is often wanted "to show the world that manufacturing is not something that can

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[1] Alan B. Mountjoy: "Industrialisation and Underdeveloped Countries," Hutchinson University Library, 1963, p.65.

[2] Murray D. Bryce: "Policies and Methods for Industrial Development," McGraw Hill series in International Development, 1965, pp. 58-60.

be done only by those who have become rich by doing it in the past." In such cases, industry represents a "higher form of economic activity" and so is regarded as "something more worthy of pursuit by those who aspire to make progress."

However, the sad truth is that the development of 'prestige projects' will strengthen the vested urban interests and give rise to a distortion of the internal price structure, to result in a waste of scarce capital resources (usually in foreign exchange as well).

3.2 PROVISION OF WORK

Something has already been said about the failure of economic growth to keep pace with rising unemployment. In fact, as Bauer and Yamey in their standard work point out:[1] "the statistical relationship between real income and other indices of development and the proportion of people engaged in manufacturing industry, is not as straightforward as is often suggested." They cite the USA as having a smaller proportion of the occupied population engaged in manufacture and yet providing a higher figure in real income per head than the U.K. Even up to 1941, the level of employment in manufacture in the USA, was below that of agriculture and yet she has been the richest state for some decades.

Indeed, experience in the 1950s and 1960s has shown that modernisation of agricultural methods (new varieties and improved seeds, machinery, fertilizers etc.) may well be an effective way of expanding mass-employment of the rural population.

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[1] Bauer and Yamey, "Economics of Underdeveloped Countries," Cambridge Economic Handbooks, 1960.

3.21 Industrial Wages and Unemployment

Industrialisation, with its higher wages, particularly when these increase fast, not only disturbs delicate equilibrium between labour and capital costs, but directly influences other wage-earning causing an overall-reduction in the labour force and an increase of actual unemployment.

Careful examination of the connection between wage increases and employment in Kenya and Tanzania has revealed some interesting facts.(1) From 1958 to 1965 the real wages in Kenya increased by 75% (as against 50% for the national income), while employment decreased by 6% during the same period. In Tanzania, wages rose by 17% from 1961 to 1965 and employment dropped by 6%.

From these facts a model was derived according to which employment falls by 6% per annum for every 15% increase in the average wage; employment falls by 2.5% when increase in the average wage is 10%; but employment increases by 5% if the increase in the average wage is kept to 5%.

The reason for such unfortunate situations is usually the inability to determine and achieve development goals on one hand, and the inadequacy of basic political, social and economic choices on the other.

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(1) "Employment in Africa, Part 1: Problems and Politics," International Labour Organisation, Geneva; see also O'Herlihy, C. St. J., "Capital/labour substitution and the developing countries: a problem of measurement," Bulletin of the Oxford Institute of Economics and Statistics, Aug. 1972, pp. 219-280; King, J.R., "Wages, employment and productivity in Kenya: a comment," in: Eastern Africa Economic Review, June 1972, pp. 71-74; Senga, M.W., "Wages, market imperfections and labour absorption in Kenya manufacturing industries," ibid., June 1973, pp. 55-72; House, W.J., "Wages, employment and productivity in Kenya; some further evidence," ibid., pp. 73-77.

3.3 RAISING THE STANDARD OF LIVING

The more highly developed countries usually have a significant proportion of the employed population working in industry, whereas less developed countries have a much lower one.

There is a link between the extent of industrialisation and the level of incomes as may be noted from the following table in respect of Ivory Coast, which is, of course, an extreme example.

The average annual increase in CFA Francs between 1960 and 1974 was for the GDP - 11.6%, Agriculture - 8.0%, Manufacturing - 18.3%, Wholesale & Retail Trade, Hotels and Restaurants - 15.5%. Industrial activity in the Ivory Coast is a trail blazer.

The increase in GDP is directly associated with a decreasing proportion of Agricultural contribution and an increasing contribution of Manufacturing. To illustrate this I calculated a 'least squares' Linear Regression on basis of the figures of Table 4.

TABLE 4: Ivory Coast, GDP by Kind of Economic Activity.

(in CFA Fr. billion)

	GDP	Agriculture	%	Manufacturing	%	Mining	Electricity Gas & Water	Construction	Wholesale & Retail Trade Hotels & Restaurants	Transport, Storage & Communication	Others: (Finance, Insurance Real Estate, etc.)	Exchange Rate CFA Fr = US$ 1.
1960	142.6	61.2	42	8.7	6	0.9	2.1	6.5	18.4	10.0	12.9	138.4
1965	214.0	83.3	38	24.0	11	1.7	3.9	12.8	27.5	21.0	27.7	165.8
1970	414.9	116.6	40	37.7	9	0.7	4.3	27.7	84.9	31.6	31.3	276.0
1971	439.8	121.1	27	43.5	9	1.3	4.7	33.2	76.9	37.3	37.1	261.20
1972	471.8	125.1	26	71.0	15	1.5	5.7	32.2	79.1	41.7	115.5*	256.25
1973	566.2	159.2	28	77.9	13	1.8	6.3	34.1	96.0	52.5	138.5	235.40
1974	739.0	193.2	26	107.7	14	1.8	8.9	38.2	159.9	63.6	166.6	222.22
1975	800.0**	n.a.		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	224.27

* Extra categories included from this year.

** Estimate

Source: Yearbooks of National Accounts Statistics 1974 & 1975, Vol. 1, U.N.; August 1976 monthly Bulletin of Statistics, UN.

TABLE 5: Ivory Coast - GDP Projections of Economic Activity 1980-1985

(in CFA Fr. billions)

Year	GDP Fr.Bn.	Agriculture Fr.Bn.	%	Manufacturing Fr.Bn.	%
1974	739	193	26	108	14
1980	1200	250	21	190	16
1985	1600	290	18	370	23

The conclusion is obvious: Manufacturing enjoys an increasing share of the national GDP while the vast majority of the population is engaged in agricultural activities.

3.31 Agro-Industrial Linkage

Past industrialisation record reveals that, in the area of agro-industrial linkage, the majority of Developing Countries have been very slow to accord priority to the manufacture of the inputs needed for modernising agriculture. On the other hand, they have put a great deal of efforts to produce high-cost consumer goods which have remained beyond the reach of the rural masses.

In the U.N. Monthly Bulletin of Statistics for August 1976 - Abidjan, with its nearly one million inhabitants, and Geneva were cited as the two most expensive cities in the world.

Industrial wage and salary levels have been allowed to rise very much beyond the incomes of the rural poor. The expectation of earning a high industrial wage created a vast migration from the rural areas to the towns. As a result two societies live in close proximity on totally different standards of living - the 'subsistence' masses and the salaried few.

3.4 IMPROVEMENT OF THE BALANCE OF TRADE

More often than not, industrialisation policy is put forward in order to boost exports which are expanding at a pace which is less than adequate to sustain required imports of consumer goods.

When Developing Countries cannot earn enough foreign exchange, there is always a strong argument for building-up manufacturing industry for substitution of imports and stimulating exports on improved terms, particularly when there is a wish for greater economic independence.

Until recently the terms of trade for agricultural products seemed, on the long-term, likely to be less favourable to a Developing Country than industrial products would be. However, as Bauer and Yamey[1] consider, the concept is meaningless as "over any prolonged period ... the volume and composition of world trade are likely to change so greatly that any particular base (for comparison) loses all significance."

True enough, the commodity boom of the last four years has made a significant contribution to the Terms of Trade of some Developing Countries. To what extent the present trend will be maintained is difficult to predict.

3.41 Import Policies

Developing Countries have been undecided and unclear in their choices of techniques for giving infant industries the stimulus they undoubtedly need. For several years many countries, without much regard for the potential size of their internal markets or capacity for specialisation, tended not only to concentrate their efforts on import substitution strategies, but chose forms of protection that were excessive for their needs.

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[1] Bauer and Yamey: "Economics of Underdeveloped Countries," Cambridge Economic Handbooks, 1960, pp. 238-9.

Barriers composed of tariffs, administrative measures, exchange rates and exchange controls have provided the domestic industries with either exceedingly high, or, in some cases, with absolute protection.

These barriers have denied domestic producers the stimulus of competition from imports, encouraged inefficiency, raised costs and prices to domestic users and yielded unduly excessive returns to the owners and managers of the protected enterprises.

3.42 Export Policies

The same set of policies have prevented other Developed Countries from exporting manufactured goods competitively. In many of the Less Developed Countries (LDCs) the remaining feasible room for import substitution is now narrowly limited. Both Governments and enterprises are looking more actively to exports, either to the world as a whole, or within the frame-work of cooperative effort at regional economic integration.

Recently, several Less Developed Countries scored successes in exports of manufactured goods. Some of these have been closely keyed to particular rapid growing economies of Developed Countries, especially of Japan; e.g. Taiwan, South Korea and The Philippines. Some of the LDC's depend on the marketing networks of the Developed Countries, particularly for manufactured components.

However, many Developing Countries have unsuccessful export records, as they have been slow to develop effective market research, selling and promotional skills.

Finally, the Developing Countries have done little about trade and economic cooperation among themselves. The general volume of manufactured goods that Developing Countries import from each other remains exceedingly low. Several regional economic integration schemes have faltered or failed, e.g. the East Africa Common Market.

3.5 CREATION OF A PROGRESSIVE ENVIRONMENT[1]

This sociological motive, although not regarded as a decisive one, has been researched by various people who indicated that a planned policy of industrialisation is worthwhile in this context.[2] Even Australia and Denmark, which are still regarded as predominantly agricultural, have large industrial sectors and they are progressive and technologically advanced, so they do not form exceptions to the general rule that the 'spin-off' from industrialisation creates the sort of environment which assists a state of progression.[3]

The American Bryce lists eleven elements of strategy found to be most effective in mounting a successful national effort for sound industrial development; in fact, a 'Western' planning effort. This approach is contested by Gunnar Myrdal's Asian work.[4] He regards many past development failures as the products of planning in terms of Western-oriented solutions which cannot apply to Asian situations. His point is that economists and planners, bent on industrialisation projects and nurtured in Western traditions, have done a disservice by concentrating unduly on economic conditions and by believing that the necessary (and desirable) changes in structure will automatically follow as per capita income rises.

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(1) This type of environment has no relation to issues raised by Western environmentalists, see footnote of 1.2.

(2) See also Jagdish Bhagwati: "The Economics of Underdeveloped Countries," World University Library, 1966, p.165.

(3) A good deal has been written on this subject but W.W. Rostow, "The Economics of Take-off into Sustained Growth," Macmillan/St. Martin's Press 1963, has been the main advocate of this thesis.

(4) Gunnar Myrdal: "Asian Drama: An Inquiry into the Poverty of Nations," Vols. I, II & III, N.Y. Pantheon 1968.

3.6 REALITY AND DIVISION - SUMMING UP NOTE

Industrialisation in the Developing Countries has been unsuccessful to date on the employment front. When account is taken of the size of the industrial base, the size of the labour force and the rate of labour force growth in most Developing Countries, it becomes quite clear that in most Developing Countries manufacturing can directly provide only a modest fraction of the needed gains in employment.

At the same time, industrialisation strategies frequently have failed to realise their employment potentials by neglecting, as noted in 3.31, to build adequate linkages to agriculture.

One may say that industrialisation has intensified inequalities in many Developing Countries. In fact, inequalities are a matter of countries' basic social and political choices. Despite the importance they accord to re-distribution of income in their statement of development priorities, many Developing Countries have not been very persistent in promoting this objective.

In consequence, industrial developments - have provided high returns to an urban and foreign population (directing the production of consumer goods to that market and widening the gap between city and countryside) - have accentuated the inegalitarian tendencies already inherent to the social and political environment. But in most cases, industrialisation did not by itself create those tendencies.

Nonetheless, a good number of political leaders in the Third World developed an ambivalent attitude to the industrialisation process and are often infatuated with conflicting strategies and policies borrowed elsewhere. It is the purpose of this dissertation to propose a fresh industrialisation approach, suitable to overcome the constraints amplified in the foregoing.

PART II. PROPOSED INDUSTRIAL PLANNING APPROACH

"O my soul, do not aspire to immortal life, but exhaust the limit of the possible."

Pindar Pythian III

SECTION 4. SETTING THE SCENE

SECTION 4. SETTING THE SCENE

In 1985 the population on this planet will surpass the 4½ Bn mark. Rather less than 1½ Bn will live in the Industrialised Countries. One billion will live in Less Developed Countries (LDCs) which are now fast industrialising (see 1.4) and the balance of the world population will live in the Developing Countries, i.e. the "Poorest."

The appearance of the LDCs on the world market to compete on the one hand for food, scarce raw materials and, in particular, for energy and on the other hand offering cheaper manufactured products, will most probably create world-wide pressures and structural changes which could be envisaged as follows:

4.1 THE INDUSTRIAL COUNTRIES

The "Richest" countries will shift their manufacturing activities towards much more sophisticated products aided by much higher technology. The high added value of these activities will compensate for the higher costs of energy, food and raw materials. In the vast majority of cases the GDP in real terms will be well maintained or might even improve.[1]

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[1] This view will probably be contested, in the long run, by Daniel Bell: "Notes on the Post-Industrial Society," Winter & Spring 1967. But other writers may well agree with my views; especially because no attempt has been made to speculate about the future beyond the end of the 1980s.

4.2 THE LESS DEVELOPED COUNTRIES

The LDCs will have started to create sufficient industrial base to sustain a growing GDP and a fair possibility of paying for the higher costs of food and energy.(1)

4.3 THE DEVELOPING COUNTRIES

In many cases the "Poorest" countries with their newly created industries, will have to face the growing competition from the LDCs like Brasil and China. The above trend, combined with a much dearer import bill due to the increased costs of energy and capital goods, will cause a continuous deterioration of the Terms of Trade which consequently will create a foreign exchange starvation which in turn will lead to a reduced volume of investment and a stagnation of GDP growth.(2)

In spite of this gloomy scenario it must be stressed that the success of the Industrialised Countries was mainly due to the Industrial Revolution (1.41) and that there is nothing to suggest that this process cannot be repeated and perpetuated in the Third World. There is also no reason why this process can not be established in Developing Countries in a more efficient way, i.e. with a better relation between the costs and benefits than has been achieved in the Industrialised Countries - in a much shorter time-span.

There is sufficient empirical evidence to show that it was only a matter of time before the backward areas would be moving for-

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(1) It is interesting to mention here "Things to Come" by Herman Kahn and B. Bruce-Briggs, The Hudson Institute 1972. They state that high GNP growthrate is expected, specially in Japan and other 'Sinic Culture' areas, Eastern and Southern Europe, Mexico and Brazil - p.41, and that this will be caused by industrialisation, pp. 18-19 and 64-65.

(2) All new investments in a Developing Country need foreign exchange; the less industrialised the country is, the higher will be the cost - in foreign currency - for each venture. The lack of investment-capital is the basic factor impeding growth in the Developing Countries. See also "Development Ideas in Historic Perspective," International Economic Association, Tokyo Congress, 1977.

ward. Once the movement began, it would turn out to be not such a disadvantage to be a late starter, e.g. Japan.

The emphasis should therefore be on orderly and accelerated industrialisation to enable the Developing Countries to stay as close as possible to the countries which have just embarked on the path of rapid industrialisation (the LDCs).

4.4 THE HONG-KONG AND SINGAPORE CASE

In retrospect one can find to-day many reasons why Hong Kong or Singapore took off successfully and Burma and Sri Lanka still struggle with a negative growth figure; thirty years ago one would have given these last two countries more chance for rapid development and industrialisation for a set of other valid reasons.

In the view of T. Geiger,[1] the four essential economic requirements for Industrialisation are: "Investment capital, entrepreneurial and technical skills, trained labour and the ability to sell in domestic or foreign markets." According to the author these requirements have been met successfully in Hong Kong and Singapore.

Without necessarily endorsing all of this opinion, it appears that this study puts, correctly, a major emphasis on the qualities and skills of the individual.

4.5 THE PHILOSOPHY OF INDUSTRIALISATION

Change in society starts with the change of the individual. Industrial discipline, regular and fixed hours of work, as

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[1] T. Geiger: "Tales of two City-States," Hong-Kong & Singapore, National Planning Press, London 1960.

part of a complex system of machines, moving materials and essential cooperation with fellow-workers, are an experience which may be a main contributor to the development of the individual who joins this process. This experience of regular industrial employment will be effective, mainly, for the benefit of the new generation.

The children of parents who go to work in an orderly manner, may have a better chance to become a productive element in the developing society.

Moreover, the vast majority of the Developing Countries cannot afford free elementary education. Therefore, regular employment of one parent in industry (contrary to seasonal agricultural employment) may help to assure such education.

Industry produces and sells to consumers with rising incomes. While meeting this growing demand for more (and diversified) products, industry expands and creates additional consumers with rising demands.

At the same time, industrialisation allows for more efficient exploitation of agricultural (and mining) resources and therefore creates additional income.

Furthermore, industry alone could absorb the rapidly growing urban labour force. And, most important, industrialisation is by itself a development system which perpetuates its own progress.

4.6 THE PHILOSOPHY OF INDUSTRIAL PLANNING

To attain these desiderata and to try to avoid the inability to set and achieve industrialisation goals because inadequacy of basic political, social and economic choices as discussed in Part I, a systematic design should be initiated and maintained. This design is in fact planning.

Russell L. Ackoff writes in his "A Concept of Corporate Planning, 1970": "Planning is the design of a desired future and of effective ways of bringing it about." Indeed, the effective ways of bringing it about are in fact choosing, deciding and following-up the decisions.

This simulation of the future on paper (which is a relatively inexpensive practice) may consolidate into an Industrial Development Plan if the following three integrated parts are identified and adopted:

- Long-Term Development Strategy
- Medium and Short-Term Policies
- Planning and Implementation-Organisation.

SECTION 5. LONG-TERM STRATEGY

SECTION 5. LONG-TERM STRATEGY

The crucial dilemma facing all Developing Countries is the allocation of scarce resources as between the short-term satisfaction of pressing individual needs, and the long-term social goal of industrialisation as the only means of escape from the vicious circle of self-perpetuating poverty.

The decisions which determine long-term strategy may be influenced by all manner of political, economic and philosophical considerations, but fundamentally they tend to fall into two main categories.

5.1 THE TWO SCHOOLS OF THOUGHT

The extensive literature tends to confirm the assumption that in fact there are two main schools of thought in respect of development strategies.

The conventional one is the 'Growth and Industrialisation Approach', the second one is the 'Basic Needs Approach'.

It may be considered that strategy based on the Marxist or Soviet model deserves to be characterised as a third school of thought. However, on examination of the current attempts at practical application and a study of its theoretical assumptions and long-term goals, fundamental similarities with the Growth and Industrialisation Approach are readily perceived. Nevertheless, the means by which this method attempts to achieve its goals, deserves careful study. The weaknesses of the Soviet model in its applicability to Developing Countries are:

- The system and its philosophy have to be applied in their entirety, and many features cannot be considered desirable to the circumstances in most Developing Countries.
- The Soviet model is inward looking in nature, thus requiring a degree of isolation and self-sufficiency from the outside world. Except possibly for India (other considerations apart) no other Developing Country has either the scale or range of resources to make this feasible.
- Since the system is based on total nationalisation of the means of production, the lack of any industrial base would appear to make this procedure impractical.
- The application of comprehensive planning implies divorcing the system from the normal market economy with its self regulating forces, and the imposition of planned quotas, with a consequent setback to whatever little activity already exists.
- To make this sophisticated system work would require highly trained cadres of planners and administrators, who are not available. Import of such experts from abroad might make the system work, but at the cost of loss of independence.[1]

5.11 Growth and Industrialisation Approach

GDP growth through capital accumulation has been considered for a long time as the only objective of the development strategy. Maximising of GDP implies industrialisation and integration of the national economy into the world market.

The starting point of this strategy is that the problems of the Developing Countries are basically the same as the Developed

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[1] In J. Thornton's "Economic Analysis of the Soviet Type System," Cambridge University Press 1976, one can observe the extreme complexity and comprehensiveness of the Soviet system - c.f. pp. 100, 102, 106, 107.

Countries had to overcome in the past; the gap between them is a matter of difference in time as to the starting dates of their respective development process.[1]

5.12 Basic Needs Approach

Although GDP per capita has roughly doubled in the Developing Countries in the past 25 years, development in most countries has not benefitted the majority of the population, while the standard of living of the lowest 20 per cent has been reduced in real terms. This fact, together with the limitations reviewed in the Part I, created at the ILO[2] and World Bank[3] different and sometimes extreme ideas of how to improve the present unsatisfactory situation.

The Basic Needs Approach may be defined as:

- Directing all available resources to the satisfaction of the basic needs of the population starting with the poorest strata.
- Bringing about changes in consumption patterns mainly by adapting the Gandhian limitation of wants.
- A bias against capital intensive activity with preference for concentration on small scale activity.

The main contribution of these new ideas is that they challenged the conventional Growth and Industrialisation Strategy. The constraints of the Basic Needs Approach are as following:

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(1) See e.g. W.W. Rostow: "The Stages of Economic Growth," Cambridge University Press, London 1960.

(2) I.L.O., Employment Growth and Basic Needs, A One-World Problem, Tripartite World Conference on Employment, Income Distribution and Social Progress and the International Division of Labour, Report of the Director General of the International Labour Office, Geneva, 1976.

(3) World Bank, Basic Needs: an Issue Paper, Policy Planning and Program Review Department, March 21, 1977 (internal document).

- Identification of these needs may vary widely in the same country, the more so in a number of countries or regions. Thus, they are not generally quantifiable and therefore no targets can be set.
- Average growth rates of some of the poorest countries will be dramatically further reduced.
- The efforts expended on the poorest strata of the population will yield low monetary results and prevent a self-sustained economic solution; consequently the need for outside assistance will grow and the fragile political structure of almost all Developing Countries will collapse under this foreign strain.

Nonetheless, the Basic Needs Approach with its various slogans such as "Self-Reliance"[1] and "Rural Development Strategy"[2] have shaken the conventional Rostowian[3] "trickle-down" approach and by this made a valuable contribution.

5.2 THE PRIME STRATEGY[4]

In my attempt to identify the suitable long-term strategy it is imperative to make two basic observations:

(a) A relatively newly independent Developing Country as such has no development strategy - it is the ruling elite of the day who usually adopts a development strategy.

(b) All the Developing Countries acquired, through "blood, tears, toil and sweat" their "finest hour" - their political independence.

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(1) "The Arusha Declaration" (by J. Nyerere), Dar Es Salaam, 1967.

(2) See also Hauqe, Wahidul; Mehta, Niranjan; Rahman, Anisur; Wignaraja, Ponna: "Towards a Theory of Rural Development," United Nations Asian Development Institute, December 1975.

(3) Mainly based on works mentioned in previous footnotes under 3.5 & 5.1.

(4) The Prime 'Consensus' and Ownership Strategies discussed under 5.3, 5.4 & 5.5 ahead, appear on the lefthandside of Diagram No. 1 (related to 10.3) to illustrate their integration in the planning process.

5.21 The Prime Strategy and Political Independence

Only a relatively small number of hamlets in Africa south of the Sahara have access to suitable drinking water, but all of them quite certainly possess a national flag to be hoisted on Independence Day. A hunger-stricken paddy-grower in Bangladesh may have consumed his seeds for next year's crop, but he certainly possesses a colour print of the Officer (Ruler) of the day.

Political independence is a national asset guarded by the ruling elite. The mere fact that they fulfil this task, with various degrees of success, gives them the justification for their hegemony. To preserve political independence and to maintain a certain degree of internal stability, it is necessary to pay for arms, trucks and fuel. This payment is usually made in foreign exchange. Hence, to preserve their country's independence (and to keep the ruling elite in the driving-seat) a steady flow of foreign exchange is needed.

As a result of the above, the prime strategy of any regime is divided into two main objectives:

(a) to earn enough foreign exchange to maintain its supply of oil and to purchase the necessary hardware to preserve the country's external and internal security.

(b) to adopt a Development Strategy which may help them to remain in power.

5.22 The Prime Strategy and the Ruling Party

One should not regard the above motivation as sheer Machiavellism or Nihilism. If a political group wishes to have a Development Plan, it needs firstly a Development Strategy, secondly a set of Medium- and Short-Term Policies and thirdly a Planning and Implementation Organisation.

As long ago as 1961, J.K. Galbraith wrote in "Economic Development Perspective," U.S. Information Service, that "a Developing Country without a plan was going nowhere." True enough, a regime without a Development Plan will go nowhere and will be toppled.

Hence, a reasonable Development Plan and, within it, an adequate Industrialisation Plan, is beneficial to the country and, at the same time, serves the regime as well.[1]

5.3 'CONSENSUS' STRATEGIES

Before discussing various Development Strategies which are founded on different political and social aspirations, it is possible to indicate several longer-term strategies which are surprisingly similar in the vast majority of Developing Countries, although totally different in their political and social philosophies. These five 'Consensus' Strategies are:

(a) Development of new industries, which are based on processing of the farmer's output, forestry, fishing and mining.

(b) Stimulation of indigenous industrial activity in the form of Industrial Cooperatives and/or Small Scale Industries (depending on the social philosophy of the regime).

(c) Import substitution of consumer goods and export expansion of industrial products if both sets of strategies save and earn foreign exchange.

(d) Manufacture of building materials in order to try to be self-sufficient in low-cost housing activities.

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(1) A National Plan, as a PR exercise, is even more common in Developed Countries, see e.g. B.R. Scott: "How practical is National Economic Planning," HBR March-April 1978.

(e) The laying of the foundations for the long-term development of basic integrated industries.

5.31 Different Priorities and Planners' Task

Some Developing Countries differ slightly on the priorities they set to above 'Consensus' Strategies.[1] It is, however, extremely difficult to identify these differences from the official industrial development statements.

Only a few regimes stated their long-term aspirations and goals (such as the Tanzanian "Arusha Declaration" or the Zambian "Humanism") although, having done so, it is still very difficult to distil from these statements guidelines on the general development strategies, even more so on the Industrial Development strategies.

However, the planner has to understand the view of the ruling party on this complex subject, which is neatly phrased in the West "redistribution of income and wealth."

In fact, the planner has to identify the regime's approach to the subject of Sectoral Development, i.e. to what degree is the Government involved in the process of industrialisation? Which other sectors should play a part in the industrialisation efforts and to what extent? Is there a role to play for the local private and foreign sector?

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[1] Please see e.g. Industry, Development Plan 1970-1974 Republic of Kenya; "Programme for Israel's Industrial Development - Second Outlook 1965-1970," Ministry of Commerce and Industry, Jerusalem; Nigeria North-Western Development Plan 1970-74; Government of Thailand, The Second National Economic and Social Development Plan 1967-1971, Bangkok; Uganda, Second Five-Year Plan 1966-71 Work for Progress and many others.

5.4 GOVERNMENT'S ROLE AND OWNERSHIP - A PRAGMATIC APPROACH

The role of the Government in the Developing Countries has been emphasized a great deal during the 1960s and the 1970s. It inevitably means the Government is taking responsibility for the creation of an economic infrastructure, such as water and power supply, port installations etc. The Government has also taken responsibility for the social infrastructure, especially when industrialisation has meant rapid urbanisation.

These new tasks, in addition to the traditional (colonial) ones of keeping law and order, have increased the importance of the fact that within the public administration sufficient competence should be available. Good administration is essential to bring about the smooth acceptance of structural and sectoral changes which the industrialisation process demands and brings in its train.[1]

A major handicap for any development is of course political instability. With the exception of India's elections of March 1977, the common plague of all Developing Countries is the fact that an orderly change of the Chief Executive, according a pre-arranged system, is non-existent. Thus periodical break-down of law and order is one of the disasters which hit hardest the countries that can least afford this "luxury".

Who is to carry out the Industrialisation Programme? Naturally, the "have-nots" are very much pre-occupied with the problem of industrial ownership.[2] The emphasis can be on promoting indigenous private ownership (Nigeria, Kenya) or parastatal ownership

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[1] The lament of Rene Dumont in "L'Afrique Noire est Mal Partie," Edition du Seuil, Paris, 1962, makes interesting reading on this subject.

[2] The background of many of the Chief Executives of the Developing Countries was often simple as they were usually not part of the Colonial plutocracy. Sometimes however, in the process of ruling and organising accelerated economic activity, considerable private financial benefits came their way.

(Tanzania, Burma) or a combination of both (Zambia, Swaziland). The establishment of Cooperatives and Small Scale Industries is also a pre-occupation of many politicians.

The sectors that may play a part in the industrialisation process are governmental, parastatal, public including cooperatives, trade union enterprises, the governing party, local government etc., and the private sector to include local and foreign interests.

Thus, accordingly, industries can be roughly divided into four categories of ownership and control. The balance of ownership between the different sectors will provide a reliable "spectrogram" of the socio-political aspirations of the governing elite.

5.41 'Wholly' Government Controlled Industries

A number of strategic industries in which the Government (or its fully-owned parastatal organisation) may own 100 per cent of the equity, e.g. armaments, electricity and water supply, civil aviation etc. If, however, Government wholly controls also banking, insurance, petroleum exploitation and the like, then, of course, the regime is more orientated to the "left".

5.42 Government Controlled Industries

Various important industries in which the Government (or its appointed agent - a parastatal) may own (or acquires) more than 50 per cent of the voting and participating shares. This parastatal may acquire a majority in a number of ventures to account for the major share of that industrial branch in order to exercise effective policy control over that industrial branch.

In a great number of 'moderate' Developing Countries industrial activities such as the production of cigarettes, cement, matches, beer etc., fall under ownership of the Central Government, mainly for fiscal reasons, although minority interest may be held by local private or foreign interests.

5.43 Partnerships - Joint Ventures

Under this group industries may be listed upon which a large section of the population depends for its living, or which provide essential components or materials for other industries.

In such industries Central or Local Government or the co-op movement etc., may play an important role, although not necessarily holding a controlling interest.

5.44 'Open' Industries

All other industries could be listed under this group. These industries are open to all sectors including Government, as well as local and foreign private investors.

The trend in many Developing Countries is to restrict foreign ownership to larger ventures or to specific high-technology enterprises. Smaller scale industrial activity is usually and rightly reserved for the indigenous population (see 5.5 below).

If foreign activity is nevertheless exercised on a small scale, foreign investors may be forced to engage local partners. The majority of Developing Countries introduced decrees, regulations or guidelines to restrict foreign ownership on the one hand and encourage foreign investment on the other.

As a result of these conflicting and improvised policies, the first half of the 1970s has seen the gradual disappearance of the private foreign investor-entrepreneur and the increasing activity of institutional and multinational investors often

backed and fully guaranteed by the Governments of the Industrialised and Developed Countries.

In the context of ownership and before one discusses the development of industrial cooperatives and small scale industries, it is important to consider the size of plant suitable for a developing economy.

5.5 SIZE OF PLANTS

Is a small plant preferable to a large one, or vice versa, in a Developing Country? There is no simple answer to this question. The advantages of a small plant lie in its flexibility and simple organisational pattern.

A small plant can adapt itself with relative ease to changing production conditions and different marketing and capitalisation procedures. On the other hand, larger plants have advantages due to automated technological processes and to various savings, per unit produced; in marketing, R&D overhead, quality control etc.

The disadvantage of small enterprises lies in the fact that they are not suited to, and incapable of, production in large series and generate large investments in development of new products.

Basic and capital goods industries generally require plants of a minimum order of magnitude. Rational production sometimes demands a certain minimum of equipment and size. In a relatively small market with a limited purchasing power, smaller plants are preferable. But, if a new plant is established for serving mainly overseas markets, then a larger size should be considered.

5.51 Foreign Involvement and Indigenous Management

Two main considerations are often ignored when a decision is taken on the size of a plant. The first one: is foreign expertise and/or ownership involved? If indeed then one should take into consideration the simple fact that a small unit cannot support foreign expertise, high salaries, royalties and other expected benefits, which accompany foreign involvement.

The second consideration is the severe scarcity of indigenous managerial talent and know-how. It may be extremely difficult to find and train a captain of industry and one may have to be satisfied with a "lieutenant" to take command over a smaller industrial unit.

5.6 INDUSTRIAL COOPERATIVES

It is common belief among many politicians and leaders of the Developing Countries[1] that the establishing of cooperatives is the ultimate and instant reply to poverty and backwardness.

Unfortunately, the development of a cooperative is a continuous effort of about 10 to 20 years. In the course of time cooperatives in every stage of development will be present. Every such stage has its specific difficulties: social, technical and financial. Some indications are given as to these difficulties and the measures needed to assist in their solution.

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[1] The setting-up of Cooperatives in Developing Countries is often assisted by aid and cooperation programmes from 'Western' countries like Israel, Sweden and Denmark. Paradoxically, the Socialist Countries do not regard the cooperative ideas as a suitable 'article for export'.

5.61 Social Development

The first requirement for the viability of a cooperative is that members come to know and to trust one another. Therefore, an industrial cooperative should start on a small scale (10-15 members).

The technology and organisational requirements should be uncomplicated so that each member can fully understand what his colleagues are doing and, as need may be, each member can accomplish the task of each other member when it is so decided. This might even lead to a more or less planned job-rotation, which in the first years of the cooperative is even desirable because it fosters mutual confidence.

It is clear that in the course of time some of the members, by their personality, their ability and understanding will gain an informal leadership position.

Once this informal leadership is tacitly established and the enterprise has proved to be successful, there will be a tendency to increase production at the same level of technology, by accepting more members.

The larger number of members will require automatically a higher degree of specialisation and the amorphous conglomerate will crystalise into a simple hierarchy, where some members will accomplish special tasks, which cannot be done by others.

Although the "specialists" have to be chosen by the members, it is understood that practically the same persons have to be re-elected, time and again, for specialised jobs.

When there is a large number of members with real (or imaginary) leadership qualifications, clashes will arise, which might induce some to leave the cooperative, to the splitting-up of the cooperative or, in the worst case, to its liquidation.

In order to avoid this situation, the cooperative should have a "social consultant" who visits the cooperative frequently, will be present at "general assemblies" and, as soon as he sees that a critical situation arises by a "surplus of leadership", will try to find alternative productive jobs, when possible as initiators of new cooperatives or as re-enforcement of existing ones which are lacking leadership.

When the "potential leader" is either imaginary or too forceful for democratic subordination, a place will have to be found for him in the non-cooperative sector. Once this crisis successfully overcome and provided there are further outlets and enough initiative, a tendency to up-grade the technology will develop.

5.62 Technological Development

In many cases sufficient know-how will not be available within the cooperative: this can be supplied by a know-how centre (5.7) for the sub-branch of industry and/or by sending out one or more members for specialisation. This development will further polarise leadership and the members will have to adept themselves to "non-egalitarian" democracy.

If this stage is successful, it will lead to a standard of living of the members higher than the average in the economy and foster a tendency to "close" the cooperative and to start to engage hired labour.

Savings will have to be generated, in order to establish a basis for outside credit, leading to further expansion and to a higher level of technology.

5.63 Managerial Development

Higher technology and more complex activity will lead to a stage where the necessary professional manpower can no longer be found among the limited number of members of the cooperative and pro-

fessional manpower may have to be engaged from the outside, usually at a much higher wage level.

This will again lead to a crisis: on the one hand, members will want to increase income by the extension of the enterprise in width and depth; on the other hand, they will be reluctant to hire outsiders at higher wages and be "bossed" by them.

This crisis overcome, the cooperative will start on its final development stage: the cooperative will remain in name, but in reality it will be an ordinary enterprise where some of the workers happen to be 'shareholders'.

At this stage the State will have to decide whether to intervene. If the venture does not have a monopolistic character, it will be in the same position as any other enterprise. If the venture has a monopolistic character, the State would have to nationalise it or keep it under strict control.

Not all cooperatives will reach this final stage. Many of them will remain stagnant in one of the development stages, depending on the character and ambition of the members and general economic and industrial conditions in the country. The more sophisticated these conditions become, the more the development of a cooperative to a higher stage will be a question of survival.

5.64 The Cooperative Centre

From the above it will be clear that many acute or semi-chronic crises will crop up during the development of a cooperative. Therefore, a "Cooperative Centre" should be set up, which, in order to gain influence, will not only have to supply "social services" but also technical, administrative, commercial and financial services.

- Technical service should, in many cases, be supplied by an "Industry Centre" (discussed in 5.13 (c)), in other cases by the "Cooperative Centre" itself or by engineers associated with the centre.

- Administrative services should include accountancy and audit.
- Commercial services should include collective buying and selling.
- Financial services should include the procurement of finance, sometimes to be guaranteed by the Cooperative Centre.

The "Cooperative Centre" would also have to organise courses for the education of the "specialists" in the cooperatives.

The "Cooperative Centre" would have the right to levy contributions from the Cooperatives and by these contributions constitute a fund; this fund would serve as a guarantor or provide collateral for funds provided by financial institutions or the Government to finance specific projects of the individual Cooperatives.

The "Cooperative Centre" (as well as the first industrial cooperatives) would have to be started by the Government on subeconomical conditions. If, in the course of time, it could be run cooperatively by its member-cooperatives, is of course a political question and depends on the general attitude of the regime towards the cooperative movement.

5.7 SMALL SCALE INDUSTRIES

This type of industrial activity faces, in fact, many of the same problems as Industrial Cooperatives. For the purpose of this study, small Industry is defined by direct employment of 10-70 people per project.

5.71 Advantages

- No complicated organisational experience for management is needed.
- Training ground for the development of managers for medium-scale industrial units.

- Social assets - greater workers satisfaction.
- Location possibility in smaller population centres and thus better potential for regionalisation and use of redundant resources.

5.72 Disadvantages

- It is difficult to supply technical know-how - e.g. the projects are too small to justify employment of fully qualified professionals.
- It is often difficult to achieve and maintain a high standard of design and quality.
- The supply of materials is difficult to handle efficiently on a small scale.
- Small firms are at a disadvantage in marketing, particularly in export markets.
- Initial financing is difficult because of lack of capital and suitable collateral.

5.73 Industry Centres

The solution to be sought to these problems, particularly for the first four points mentioned in 5.72 above, will be the creation of Industry Centres. One should work towards a situation where specialised centres are in operation to support various industrial branches, such as: food processing, textiles and clothing, furniture and wood products, leather goods, plastic goods, applied ceramics, metal products, electric products, bicycle and bicycle parts and transport equipment.

These centres should be started with a very small team: a manager responsible for implementation and a technical specialist, initially concentrating on one pilot plant, using that one as a training-ground for those who will participate in additional projects in the same branch.

After the first plant is running smoothly, the team should implement the second project and the procedure can be repeated for subsequent projects. At the same time the Centre may start to fulfil further functions and to provide the services needed. At this stage the manager and the technical specialist may be assigned to set up the next Centre.

At the start, the expenses of such Centres should be paid for out of public funds, but gradually they should be supported by the members of the different industrial branches in a way similar to that by which the cooperatives contribute to their centre.

Before we pass on to reviewing the main Medium- and Short-Term Policies, it is necessary to establish a considered opinion on the scope and pace of the development of basic and intermediate industries and the role of the smaller scale industry in this context.

5.8 THE DEVELOPMENT OF BASIC AND INTERMEDIATE INDUSTRIES

When the process of import substitution for simple manufactured consumer goods is completed, the domestic growth in demand for these goods is limited by the rate of growth of the overall economy.

Many of the consumer goods industries, created at the first stage, will produce only a small part of the final product with domestic materials, using a high proportion of imported materials thus creating a domestic market for new types of imports.

Export possibilities are limited because other developing countries have established similar industries; also, it is these industries which are most highly protected in the Industrialised Countries. Therefore, when the process of import substitution of simple consumer and construction goods has been completed,

capital and intermediate goods, used as inputs by the new industries, will be limited in supply because they must be purchased abroad and their availability will depend upon export potential.

If a high growth rate is to be sustained, the strategy of industrial planning should be gradually changed.

5.81 The Pros and Cons

The development of basic, intermediate and capital goods industries should receive higher priorities. Against this, certain counter-arguments are sometimes offered:

(a) the size of the national market is too small.

(b) the level of technology required is high and not yet available in the country.

(c) capital intensity - especially in foreign exchange - of these industries is high, which is a drawback in a country where capital is scarce.

Regarding (a); while there is some merit in the argument of the size of the market, it must also be recognised that over the long-term the available market will grow in two directions:

- internally and
- externally because of trade and other regional agreements.

Regarding (b); limits placed on industrial development by the scarcity of technical know-how existed in most industrialised countries when they began the process of industrialisation.

The reason industrial countries now have the techniques, is that they acquired them in the process of industrialisation. The early stages of industrialisation must aim to narrow the technical gap. This task is not an easy one and will require systematic effort, especially in technical- and science education, over a good number of years.

Regarding (c); although the production of capital goods is itself capital intensive, the expansion of such activities will increase the possibility of new investments in subsequent years, thus contributing in the future to a solution to the problem of capital scarcity.

5.82 Accelerated Industrialisation - Constraints and Remedies

The creation of more complex and larger industries will require greater attention to the nature of inter-industry connections which will in turn require more systematic long-term planning than has so far been necessary in most Developing Countries. It will also be necessary to sell a greater proportion of industrial output in markets outside the country, to augment the foreign exchange which will be increasingly allocated to the import of capital goods and raw materials.

Accelerated industrialisation will usually necessitate the adoption of increasingly austere policies towards the import of consumer goods, particularly of the more expensive kind. But, these austere policies should avoid curbing growth and economic activity.

It is therefore of great importance to continue the development of medium and smaller scale industries simultaneously with basic- and capital goods industries.

Industrial cooperatives could join forces with the small scale industries to expand the clothing industry, furniture manufacture, manufacture and repair of household ustensils and small-scale production of raw materials for other industries.

Small-scale ventures should play an important role in meeting crucial needs with the minimum use of scarce managerial and capital resources.

This type of small-scale industries, usually very labour-intensive, should continuously be developed to narrow the gap between the desired standard of consumption and the limited range of consumption goods available.

5.9 CONCLUSION NOTE - LONG-TERM STRATEGY

Almost all Developing Countries - because of poverty, instability and limited political tradition - need to adopt the 'Prime' and 'Consensus' Strategies.

However, these countries differ a great deal in their long-term objectives regarding Governments' role and ownership.

The Developing Countries' approach to the Ownership complexity naturally reflects the political philosophy and allegiance of the regime towards Communism, Marxism, Fascism or liberalism (or any other political system).

Usually it is more meaningful for the planner to reach a consensus concerning the ownership of a proposed new cement mill, or on whether a central bakery should be reorganised as a cooperative, than to try to open a discussion on whether the road to development is paved with the concepts of Karl Marx or the ideas of Mao Tse-Tung.

It is of paramount significance that it will be as clear as possible, to all concerned with the industrialisation efforts, who is doing what; i.e. what are the Sectoral allocations of the new industries and what are the ownership intentions in respect of the existing industries.

A pragmatic attempt to translate the long-term political aspirations of the present leadership of an African Developing Country into a guideline for Sectoral Ownership, was carried out by me (see Annex B).

Finally, when formulating the long-term industrial strategy, it is imperative not to lose sight of the two major constraints faced by every new nation embarking on its stormy voyage of industrialisation: the critical foreign exchange shortage and the acute scarcity of competent and qualified human resources.

SECTION 6. MEDIUM AND SHORT TERM POLICIES

SECTION 6. MEDIUM AND SHORT TERM POLICIES

The longer-term objectives should assist in formulating the shorter-term Development Policies and, even more important, the stating of clear Investment Criteria.

6.1 INDUSTRIAL DEVELOPMENT POLICIES[1]

These policies are an attempt to translate the 'Prime' and 'Consensus' Strategies, as well as the Ownership objectives, into various considerations and measures such as:

- Integration into the market economy of the West, barter with the East, cooperation with China or avoidance of all or some of these measures.
- Nationalisation and expropriation.
- Taxation consideration for industrial ventures.
- Taxation of the finished industrial products.
- Government supervision and control over all or some industrial activities.
- Application of industrial activity to combat shanty-towns or poverty in the rural areas.
- Licensing of foreign investors.
- Acceptance of foreign management and know-how.
- Attitude to Multinationals.

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[1] Industrial Development Policies and Investment Criteria (6.2 ahead) appear on the left hand side of Diagram No. 1.

- Labour or capital intensiveness of new ventures.
- Small or large plants.
- Attitude towards small-scale industry and cooperatives.
- Credit facilities to various sectors and individuals.

6.2 INVESTMENT CRITERIA

These criteria are less subjective than the previously described Development Policies and therefore less vulnerable to changes of strategy. Investment criteria are formulated on more objective data and quantifiable assumptions and therefore have a greater impact on the industrialisation effort.

Finally, investment criteria deal more with projects than with ideas.

The desirability of a project for the country has a number of aspects:

- The impact on the foreign currency position.
- The impact on the national economy.
- Social considerations.

The profitability of a project to an entrepreneur does not imply necessarily that it is desirable from the point of view of the country.

Therefore, when a feasibility study has been completed, independently of the results, further calculations should be made in order to evaluate the project according to the following criteria before deciding on its implementation.

6.21 Foreign Currency Position

Nearly all projects need an investment of foreign currency. Part of their running cost may also include foreign currency elements, such as materials (imported or exportable), electricity, fuel, transport, know-how, interest on foreign loans and so on. All this has a negative influence on the balance of payments.

On the other hand, the project may reduce the import of desirable products, or increase exports - these have of course a positive impact. The project is only justified when the balance in foreign exchange earning is positive, at least in the long run.

Another criterion is the "pay back period" of the original amount of foreign currency provided directly by the State or with its guarantee.

The positive balance, earned by the difference between annual income and expenditure in foreign currency, must cover the original outlay within a certain period - the shorter the better. In case of a shortage of foreign currency, this criterion will be overriding.

6.22 National Economy Consideration

The values of some outputs are not the same for the enterprise and for the national economy. Raw materials used, which are paid for at market prices by the enterprise, may be produced on idle land or by idle manpower - the cost of these raw materials to the national economy is much less.

The cost to the national economy of semi- or unskilled labour, which lived before on subsistence level, is only the value of goods consumed by them on their low level; wages earned over this level are a net contribution to the economy.

The result can be expressed as a "pay back period" for the capital invested by the national economy.

Factories with high investments and using imported or exportable raw materials, will mostly have a long "pay back period"; those with low investments and using un-exportable raw materials, will have a short "pay back period" and are therefore more desirable for the national economy.

6.23 Social Considerations

Any government of a Developing Country attributes importance, in various degrees of preference, to the raising of the per capita income of the most underdeveloped and the poorest regions. Since these regions are mainly dominated by the traditional subsistence economy, therefore, by introducing industrial activity, they will not only narrow the gap between these poor regions and the more prosperous ones, but also introduce a money-based economic activity (which does not necessarily imply a capitalistic market economy).

The contribution of a new enterprise towards these dual objectives is by the wages it pays, the regional materials and services it buys and, in case of local ownership, the profit it earns.

This important activity, of developing the poorest regions of a Developing Country, deserves special attention before one examines the application of investment criteria to new projects.

SECTION 7. REGIONAL ALLOCATION OF INDUSTRIAL PROJECTS

SECTION 7. REGIONAL ALLOCATION OF INDUSTRIAL PROJECTS

It is, of course, any government's policy to avoid over-concentration of industrial activity in one area. The need to create additional 'centres', is often discussed in various statements of development by many governments. The Second Five Year Plan of Tanzania is no exception. In this section the translation of the egalitarian concepts formulated in the Tanzanian Arusha Declaration of February 1967 into a workable method is described by the writer in the following pages. The object was to identify new locations for industrial development.[1]

7.1 INCOME PER INHABITANT (IPI) AS MAIN CONSIDERATION FOR REGIONAL ALLOCATION OF PROJECTS

The following Table No. 6 provides the data for 1967; showing inter alia:

- The Income Per Inhabitant (IPI) of various districts of the country.
- The population of Town (column 3) and District (col. 4).
- The gap between IPI of the district and average IPI of Tanzania, which was Shs. 478 per inhabitant (col. 6)
- The extra income needed in order to equalise the IPI of Tanzania with the IPI of the district (col. 7).

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[1] The United Republic of Tanzania - Second Five Year Plan 1969-1974 - Programme for Industrial Development Part II, pp. 130-137, by M. Peled.

TABLE 6: List of Towns and Districts in Tanzania Arranged According to Its IPI.

(1)	(2)	(3)	(4)*	(5)*	(6)	(7)
			District Data			
Town	District	Town Population '000	Population '000	Income per Inhabitant (IPI) Shs.	IPI Gap Shs. (5)-478	Increase in District Income in order to close gap (6)×(4) Mn. Shs.
1. Dar Es Salaam	Dar	272.5	273	4,152	+ 3,674	-
2. Tanga	Tanga	60.9	258	1,186	+ 708	-
3. Arusha	Arusha	32.3	208	934	+ 456	-
4. Pangani	Pangani	3.0	28	767	+ 289	-
5. Moshi	Kilimanjaro	27.0	501	746	+ 268	-
6. Shinyanga	Shinyanga	4.7	321	680	+ 202	-
7. Mwanza	Mwanza	34.9	271	673	+ 195	-
8. Korogwe	Korogwe	6.8	140	630	+ 152	-
9. Tabora	Tabora	21.0	193	613	+ 135	-
10. Mtwara	Mtwara	20.4	135	512	+ 34	-
11. Kigoma	Kigoma	21.4	130	495	+ 17	-
12. Morogoro	Morogoro	25.3	316	482	+ 4	-
13. Kilosa	Kilosa	4.5	193	428	- 50	9.7
14. Kimamba		1.9				
15. Iringa	Iringa	21.9	254	404	- 74	18.8
16. Bukoba	Bukoba	8.2	383	403	- 75	28.7
17. Mbeya	Mbeya	12.5	191	397	- 81	15.5
18. Musoma	Musoma	15.4	351	395	- 83	29.1
19. Dodoma	Dodoma	23.6	321	350	- 128	41.1
20. Nansio	Ukerewe	3.6	109	349	- 129	14.1
21. Bagamoyo	Bagamoyo	5.1	116	338	- 140	16.2
22. Lindi	Lindi	13.4	237	332	- 146	34.6
23. Chunya	Chunya	2.4	54	317	- 161	8.7
24. Lushoto	Lushoto	1.8	220	300	- 178	39.2
25. Songea	Songea	5.4	152	294	- 184	30.0
26. Tukuyu	Rungwe	4.1	359	269	- 209	75.0
27. Singida	Singida	9.5	192	254	- 224	43.0
28. Nachingwea	Nachingwea	4.1	81	247	- 231	18.7
29. Mpwapwa	Mpwapwa	2.4	175	237	- 241	42.2
30. Kahama	Kahama	3.4	137	235	- 243	33.3
31. Kondoa	Kondoa	4.5	212	201	- 277	58.7
TOTAL		677.9	6,511			556.6

*Source: District Data 1967, Ministry of Economic Affairs and Development Planning, Dar Es Salaam, 11/68.

7.11 Kilosa District Example

Kilosa has a population of 193,000 (col. 4). The income in this District in 1967 was Shs. 82.6 Mn. The income per inhabitant (IPI) was therefore Shs. 428.- p.a., or Shs. 50.- below the average IPI of Tanzania, in that year Shs. 478.-.

The objective was to increase the IPI of Kilosa District in order to reach at least the average IPI of the country as a whole. This means, in fact, that an additional Shs. 50.- of income per inhabitant, multiplied by the number of people in the District was needed to bridge the gap. In Kilosa's case it was Shs. 9.7 Mn. (col. 7).

From the above Table 6 it can be seen that in 12 districts out of 30, covering Mn 2.8 population, the local IPI exceeds the national average, but in 18 others, the local IPI is lower than the national average.

Extra income needed to equalize the IPI in these districts sums up to Shs. 560 Mn. Since the contribution of industry to Gross Domestic Product is about Shs. 4,000 per job, and because every new industrial job creates in Tanzania 1.8 additional jobs, it means in fact that about 50,000 additional industrial jobs are needed to narrow the IPI gap in the country.

7.12 IPI and Town Population

The following graph gives the relation between the IPI in the district and the population of the major town of the district. It can be seen that the bigger the population of the major town - the bigger is the IPI in its district or vice versa: the bigger the IPI of the district, the bigger is the population of the major town.

The relation between IPI and town population.

It may also be true that there exists a mutual influence: the town contributes to the trade and economic development of the district and the district development encourages more urbanisation, resulting in an additional increase in the IPI of the whole district.

It further appears that towns of more than 10,000 inhabitants and low IPI as: Dodoma, Iringa, Musoma, Mbeya, Morogoro, Lindi, Bukoba, should receive priority when industrial investments are considered.

7.13 Industrial Centres

However, development has to be concentrated, because only by concentrating the necessary infrastructure: industrial estate, road transport, electricity, water supply, workers settlements, repair shops - will be successful. To the above one need to add the availability of professionals, such as doctors, engineers,

accountants, educational facilities and so on. Accordingly, in the Tanzanian Plan, preference was given to towns with over 10,000 inhabitants and with an under-average IPI.

Finally, the development to take place in the District Towns will also influence the outlying districts. In the second round, the out-lying districts should be tackled, assisted by the facilities already existing in the District Town. Additional reading on Tanzania's case can be found in Annex C.

7.2 ASSISTANCE TO RURAL INDUSTRY

To establish an industrial venture in a rural area is usually an expensive exercise which often requires a great deal of assistance. A "virtual subsidy" for the enterprise can be calculated as a percentage of the increase in regional income. The larger the gap in the IPI, the larger the subsidy should be.

The following is an attempt to translate the "virtual subsidy" into "real terms", fully or partially or not at all as the case may be (a normal feasibility study should reveal whether the regional location of a new plant gives a positive result, or not, from the enterprise point of view).

These real subsidies can be divided into two categories:

- General subsidies
- Ad hoc subsidies (special).

7.21 General Subsidies

The cost of many industrial inputs is higher in remote regions than in the central ones, owing to the high cost of transport. The most important of these inputs are:

- Fuel
- Cement
- Building iron
- Transport of machinery equipment for investment purposes.

For the first three items transport equalisation funds should be considered. These funds should get their income from a levy on these products, which should be used to equalise transport costs to the regions.

Equalisation of prices for fuel, cement and building-iron should be regarded only as a general subsidy to promote industrial investments. Relatively lower prices in the regions for the above inputs will provide assistance in building and other economic activities to a population which could not afford it before.

As far as the transport cost of machinery and equipment is concerned, a fixed subsidy should be worked out on a percentage basis of the value of the machinery, varying from region to region.

7.22 Ad hoc Subsidies

These special subsidies could be granted in different forms:

- A soft loan or grant, as a participation in investment or as a Training and Running-in loan. For a detailed example of how such an ad hoc subsidy was introduced by me in Tanzania, and its subsequent mode of operation, see Annex D.
- Loans for investment and (or) working capital at reduced interest, or repayable over extended periods.
- A subsidy on running expenses, calculated as a percentage of the factory's annual real contribution to the regional economy (wages, local materials, etc.) The annual basis of such subsidy can usually be determined from the audited annual report, used for income tax purposes.

The rules for regional subsidies, as well as for the effective rates, should be revised from time to time, mainly in accordance with the reduction in the Income Per Inhabitant (IPI) gap. The same Rules Committee referred to below could be in charge of this matter as well.

Finally, industrial development in the rural areas must be zoned, because only by concentrating the necessary infrastructure as roads, electricity, water supply, workers housing, repair shops etc., has industrial development a chance to be successful and competitive. Therefore, some new industrial centres will be given priority over others.

One of the prime tasks of the planners is to consider and decide upon the establishing of such centres, to select the suitable industries, create for them the necessary conditions and coordinate all the various activities that are related to such a new centre and follow-up its implementation.

SECTION 8. PROJECT EVALUATION

SECTION 8. PROJECT EVALUATION

It will be clear from the foregoing that the project evaluation will have to be based on a number of data. Naturally, the data themselves will change from time to time in accordance with economic changes in the country. The evaluations must therefore be made on the basis of the actual situation of the economy and its expected evolution.

8.1 TASKS OF RULES COMMITTEE

To review the situation regularly, a high-level Rule Committee should be appointed to establish the necessary data and to draft rules for the evaluation of projects. Such a Committee will have to consider e.g.:

8.11 Prices

Exportable raw materials have to be adapted from time to time to the real market prices or to prices foreseen in the future. For an unexportable raw material, the cost of production to the national economy should be fixed according to prevailing circumstances.

8.12 Subsistence Farmers

If an agricultural commodity produced by subsistence farmers is to be used as raw material, without supplementary labour and by use of idle land - the production cost to the national economy is very small. If, on the other hand, in order to produce the quantities needed, extensive land-reclamation and irrigation works are necessary, the cost of this commodity to the national economy will be much higher.

8.13 Exportables

Commodities, which are today on the "exportable" list, may in the future become "non-exportable" and vice-versa.

8.14 By-Products

By-products, being produced by another industry, unusable today and having thus a very low cost to the national economy, may, by increased consumption, become scarce and will have to be produced intentionally.

8.15 Interest Rates

Rates of interest in foreign currency, payable by the State, may change from time to time.

8.16 Transport and Utilities

Some rates for services (e.g. rail-transport) include a great deal of fixed costs. The cost to the national economy is the marginal cost only (in the case of rail-transport about 20-25% of the rate charged to the enterprise).

8.17 Manpower Costs

Labour cost should be based on the actual employment situation in the country, e.g. Tanzania (1970).[1]

The following Table 7 illustrates the percentage of wages "charged" to the National Economy and to the Foreign Currency position of the country.

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[1] Tanzania - Programme for Industrial Development 1969-1974, Part I, p.59.

TABLE 7: Manpower Costs of Different Categories (Tanzania).

Category of Labour	Percentage of Wage	
	Charged on National Economy	Charged on Foreign Currency
Unskilled & semi-skilled	25%	10%
Skilled	100%	20%
Managerial	100%	40%
Expatriate	65%	35%

* Unskilled and semi-skilled.
Under-employed unskilled and semi-skilled manpower, when not gainfully employed in industry, will work in "subsistence jobs" where their contribution to the national income will be about 25% of the wage they may earn in industry. However, when employed by industry, they will consume about 10% of their wages on goods and services wholly or partly paid for in foreign exchange.

* Skilled and Managerial.
There is usually an acute shortage of skilled and managerial personnel; accordingly, when not employed in one industry, they will find alternative employment in other industries or other branches of the economy.

* Expatriates.
They will contribute to the economy their consumption of local goods, services and taxes. The remainder will be spent on imported goods and on take-home pay in foreign currency.

8.2 APPLICATION OF INVESTMENT CRITERIA

The starting point is, of course, the feasibility study from the point of view of the enterprise. Investments, annual income and expenditure have to be specified according to normal practice.[1] From the feasibility study it will be possible to derive the necessary data from the point of view of the national economy and the foreign currency position.

The above data will enable the planner to calculate a number of ratios for the national economy such as: Investment to annual balance of income and expenditure and the same for the foreign exchange position, total investment per job and investment in foreign exchange per job.

Other ratios and criteria may be developed from additional social considerations and according the prevailing circumstances. However, one should note that ratios by themselves are no criteria; they become criteria when they are compared with a standard, an average of the industrial plan, the branch or sub-branch of industry or with other projects.

Accordingly, the importance attributed to a ratio at a certain moment (or in a future period) and their comparison will result in a ranking of the projects.

Having evaluated and ranked the projects, it will emerge that they will be concentrated in a selected number of branches (if, of course, the evaluation has been conducted according correct rules). These industrial branches will be the most promising for the country and those in which it has, or will have in the future, a relative advantage.

To illustrate the method by which the Investment Criteria are applied to a specific project, I provide a summary of the relevant chapter of a Feasibility Report on a Pharmaceut ical Industry at Ibadan, Nigeria, conducted by me in 1972.

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[1] Annex E, was prepared by me as a specific guideline for Feasibility Studies for Developing Countries.

TABLE 8: Projected Data. Pharmaceutical Industry - Nigeria

(Average Year 1976/77 in £N'000)

1.	Employment	Local: 70		Foreign: -		Total: 70	
2.	Investment	Foreign Currency		Local Currency		Total	
2.1	Assets:						
	Site	-		4.5		4.5	
	Building & Civil Engineering	18.9		48.6		67.5	
	Machinery & Equipment	136.8		24.2		161.0	
	Start Up Costs	8.0		12.0		20.0	
	Techno-Economic Management Services	13.0	176.7	3.0	92.3	16.0	269.0
2.2	Financed by:						
	Foreign Shareholders	54.0		-		54.0	
	Foreign loans	149.0	203.0	-		149.0	
	Local Shareholders	-	-	66.0	66.0	66.0	269.0
2.3	Working Capital	-	-	100.0	100.0		100.0
2.4	Total Capital Employed		203.0		166.0		369.0
3.	Turnover:						
3.1	Sales						500.0
3.2	Import Substitution		400.0				

Notes:

Site	-	100% local currency.
Building and Civil Engineering	-	Total amount less professional fees and 25% local currency.
Machinery & Equipment	-	Total amount less duties, clearing and part of transport plus local labour, equal to about 15% local currency.
Start-up costs and cash surplus	-	Half of the contingencies in foreign currency, plus 30% of training and trials.
Techno-Economic and Management Services	-	80% of above services are provided against foreign currency.
Import substitution	-	The average wholesale price for pharmaceutical products in Nigeria is about 25% higher than in the Netherlands. See App. 5: Market Sample Survey.

TABLE 9: Projected Income and Expenditure, Pharmaceutical Industry - Nigeria

(Average Year 1976/77 in £N'000)

	The Enterprise		Foreign Exchange	National Economy
1. Staff & Labour Costs				
Local	45.5			
Foreign		45.5	9.9	24.7
2. Factory Expenses & Utilities				
Local	127.0			
Foreign	207.0	334.0	207.0	272.0
3. Overheads				
Local	14.5			
Foreign	4.0	18.5	5.5	13.8
4. Interest Working Capital				
Local	7.5	7.5		6.5
5. Loan repayment & Interest				
Foreign	21.2	21.2	21.2	21.2
6. Dividend to Share-holders and other Expenditure				
Local	7.7			
Foreign (after tax)	2.7	10.4	2.7	2.7
7. Total Expenditure		437.1	246.3	340.9
8. Total Income		500.0	400.0	400.0
9. Net Cash Flow before tax		62.9	153.7	59.1

8.21 The Ratios and Criteria

(a) "Pay back periods":

$$\frac{\text{Investment (without working capital)}}{\text{Balance of income \& expenditure}} =$$

(1) for foreign exchange $\frac{176.7}{153.7} = 1.15$

(2) for national economy $\frac{269.0}{59.1} = 4.55$

(b) Cost per job, Nigerian Pounds:

$$\frac{\text{Capital Employed}}{\text{Jobs created}} =$$

(3) Cost per job in foreign exchange $\frac{203,000}{70} = £N\ 2900.-$

(4) Cost per job for the National Economy $\frac{369,000}{70} = £N\ 5270.-$

The annual saving of foreign exchange is impressive in the Pharmaceutical Industry and therefore the ratio (1) is very favourable. Although the project has a high degree of sophistication, its "pay back period" for the national economy (2) is relatively short. The cost per job in foreign exchange is low (3), however, the need to utilize premises of high standard increased the cost per job in relation to the total amount of capital employed (4).

(c) The Internal Rate of Return.

This criterion has been employed to evaluate the viability of the proposed plant.

The inflow and outflow have been discounted to present values at a rate of 16%.

At that rate the stream of inflow equals the stream of outflow (a small positive value remains of £N 3,000).

This internal rate of return of 16% has been achieved after taking into account the renewal of the equipment every 8 years (as per depreciation Table 3.71).

TABLE 10: Internal Rate of Return - Nigeria

(£N'000)

Year	1973/74	74/75	75/76	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93
Total Sales	250.0	350.0	425.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0
Investments:																				
Site	4.5																			
Building & Civil Eng.	67.5																			
Machinery & Equipment	161.0							161.0								161.0				
Start-up	20.0																			
Techno-Economic	16.0																			
Total Annual Expenditure[1]	323.0	326.0	371.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0
Balance[2]	(342.0)	24.0	54.0	84.0	84.0	84.0	84.0	(77.0)	84.0	84.0	84.0	84.0	84.0	84.0	84.0	(77.0)	84.0	84.0	84.0	84.0
Discounted Cash flow at 16%	(294.8)	19.3	34.6	46.4	39.0	34.5	29.7	(23.5)	22.1	19.0	16.4	14.1	12.0	10.5	9.1	(7.2)	6.7	5.8	5.0	4.3
Nett Worth[3]	3.0																			

(1) Including interest, excluding depreciation, para. 6.2. plus £N 30,820.-

(2) Before taxes.

(3) Positive value of the balance of the DCF at 16%.

SECTION 9. PROTECTION POLICY

SECTION 9. PROTECTION POLICY

After the project has been evaluated from the point of enterprise, the national economy and the foreign exchange position, it happens often that it cannot be implemented because the country has adopted, or inherited, an unsatisfactory protection policy.

Moreover, it is a well recognised fact that industrial planning can only be truly effective under two conditions:[1]

- Growing demand for manufactured goods
- Effective protection policies.

A larger scale implementation of industrial projects cannot start before a coherent protection policy has been established. Protection and its various implications, as reviewed below, have always an immediate bearing on the degree and effectiveness of the industrialisation process.

Protection policy is exercised in three ways:

- Protection by import duties.
- Protection by administrative measures.
- A combination of both.

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[1] J.A. MacArthur & B.R. Scott: "Industrial Planning in France," Boston 1969, state that these two conditions were the most important ones for organising the industrial planning in France immediately after World War II.

9.1 PROTECTION BY IMPORT DUTIES

9.11 Infant Industries

Developing Countries started late with their industrialisation. Protection is therefore necessary to give local producers time to root and establish themselves against foreign competition. The assumption is that the factories will become progressively more viable as time goes on and will gradually improve the cost, quality and reputation of their products.

As efficiency improves, the burden placed on the consumer through protection should be reduced as a further stimulus to improve efficiency by both public and private industries. Of course, the industrialist will himself always favour the highest possible level of protection, but the government has a responsibility towards the consumers to ensure that an ever-increasing level of industrial efficiency will benefit them in the form of declining consumer prices.

9.12 Home Base for Export Industries

Where tariffs on imports of manufactured goods are the rule throughout the world, the viability of export may depend on achieving higher than normal returns in the home market in order to be able to price exports at a level where they can slip under other countries' tariff barriers.

Moreover, export markets are often uncertain and may fluctuate markedly in line with world economic conditions. The need for a protected home base, in these circumstances, is especially important for the more capital-intensive industries. Thus, there is a limit to how far tariffs and other protective measures can be reduced from the initial level.

9.13 Strategic Industries

To create and maintain capacity to produce essential goods of strategic importance is, in many countries, an important reason for protection. The level of protection given depends on the balance struck between strategic safeguards and the cost to consumers (e.g. the food industry, farm produce).

9.14 Optimizing of Local Content

In some cases it may be possible to establish industries without protection, only on condition that they obtain virtually all their inputs from abroad. Local substitutes for these inputs may be available, but they may be more expensive, or in other respects uncompetitive.

Protection may therefore be given to the firm concerned in order to enable it to purchase local goods which it would not otherwise have been able to afford. In such cases steps have to be taken to ensure that the firm in question, in fact, utilises local sources of supply.

9.15 Raising Revenue

Import duties are not solely protective; they may be imposed in order to raise revenue. The less developed the country is, the greater role import duties play in contributing to the government budget.

Sometimes it may occur that the loss to the treasury of high import duties on goods to be substituted by local production (or export duties on raw materials being consumed locally), is not compensated for by the taxes levied on the wages earned in the factory or other direct and indirect taxes. This situation is not common.

9.16 Other Issues

- Fixing the rate. This involves both technical problems and issues of principle. As far as the latter are concerned, the question is how far is one prepared to go in putting up the costs to the consumers for the sake of additional output.

  The actual rate of duty on the gross value of imports is merely an indication of the costs of protection to the customers. To get the real benefit to the economy, it is necessary to weigh this rate against the resulting local value added. The Government's increasing concern is always to ensure that the protected goods contain a high proportion of genuine local production.

- Flexibility. Where industrialisation is just starting, as is the case in the vast majority of the Developing Countries, tariffs, inherited from the colonial powers, quickly become anomalous as far as protection is concerned. Priority must be given to the creation of the efficient mechanism, through customs refunds and tariff changes, to correct such anomalies.

- Transfer-tax system. This is another protective tool used by many Developing Countries. The taxes are usually imposed in two instances: (a) on sectors of foreign ownership and/or (b) when other international agreements prohibit the levy of normal duties.

- Government Purchasing Policy. Many government imports are exempted from customs duties and transfer taxes. Thus, as things stand in many Developing Countries, local producers get no protection in the government market, unless special ad hoc preference is given.

- Customs Refunds. These may apply to specific raw materials used by particular firms, e.g. raw materials used to make goods for export and/or local industrial products which are being used as materials in export-industries. A simplified method of obtaining such refunds is a prerequisite to stimulating exports.

9.2 PROTECTION BY ADMINISTRATIVE MEASURES

These measures are a result of shortage of foreign exchange. The import licensing system provides manufacturers with a virtually impregnable defence against competing imports and also leaves it to them to decide how much of the market they want to serve.

This is not a situation likely to encourage the fastest possible growth of industry. Nor is it likely to ensure that industrialisation is as consistent as possible with the interest of the consumers. This form of protection should be phased out as soon as possible.

There are of course good grounds for the use of import restrictions in order to give protection policy a greater degree of flexibility. One can e.g. impose them without consulting GATT.

The role of these administrative measures will be as follows:

(a) To give protection over and above the tariff to industries in their infant stage, e.g. to help overcome brand preference.

(b) To protect local industry where tariff is quite clearly inadequate and it is difficult to get agreement to raise it.

(c) To combat dumping.

(d) To provide temporary protection while bargaining on tariffs is going on.

Wherever import licensing is imposed, it should be done in terms of an annual quota rather than by a total ban.

Quota restrictions should therefore be envisaged as a temporary measure. For many items it should be possible to establish a definite time-table to bring the quota-protected firms to the point where they can rely on the tariff alone.

Once a target date for a certain degree of liberalisation of import is established, one can be flexible in determining, in consultation with the firm concerned, whether liberalisation should be gradual or total at the end of the agreed period.

The object of liberalisation of imports is not to bring about substantial and sustained imports at the expense of local producers. It is to throw more of the onus on the local industry to maintain and improve its market share and force it to defend its position by increasing its efficiency.

SECTION 10. THE PLANNING PROCESS

SECTION 10. THE PLANNING PROCESS

In the process of planning, the long-term strategies and the medium and short-term policies are broken down into their relevant development policies and investment criteria.

Naturally, the two questions to be asked are: Could the above policies and criteria guide the planner in formulating an industrial development plan which is synchronized with the basic desires and aspirations of a specific Developing Country? What are the main characteristics of such an industrial development plan?

10.1 THE PLAN OF ACTION

A National Industrial Plan is a plan of action for accelerated and orderly industrialisation with defined and visible targets. Such plan of action should answer four basic questions (the same questions which are answered by a well-prepared project): what, where, by whom (how) and when to produce.

10.11 What?

The first requirement of the plan is to have an adequate number of projects studied in sufficient detail. It is very likely that the projects will represent products related to the five 'consensus' strategies mentioned in 5.3. Furthermore, if the scope of operation is not determined by physical or ownership constraints, it may well be that the protection considerations indicated in Section 9 will play a decisive role.

10.12 Where?

The location for each project in the plan must be selected. A properly conducted feasibility study will provide enough information to determine the suitable location(s). Since this issue has always an internal political implication, it is important that the social considerations (6.23) and the true costs of allocation of projects are adequately discussed (Section 7).

10.13 By Whom?

Each project in the plan should specify its ownership and implementation body. This important consideration, which has a direct bearing on various Development Policies with profound national and international implications, should be handled in the pragmatic manner discussed in 5.4.

10.14 When?

The individual projects of the plan, as well as the plan as a whole, should be scheduled within time limits. "Planning" without the element of time is meaningless. The ranking of projects, from the country's viewpoint, as discussed in 8.2 will provide the degree of implementation priority for each of them.

10.2 THE INDUSTRIAL PROGRAMME

A national industrial plan - as part of an overall national development plan - is always based on some general assumptions concerning consumption forecasts, financial resources, availability of skilled manpower and technological and economic possibilities and opportunities. These assumptions are never

accurate and will change in the course of time. The industrial plan should, therefore, never be a precise and rigid one which calls for strict fulfilment. It must be a flexible plan which can cope with ever-changing situations.

The plan is, in fact, an extensive list of projects selected in accordance with the country's development policies and evaluated by a clear set of specific industrial investment criteria.

To arrive at such an extensive list, an Industrial Planning Department should be organised to research and study a considerable stock of investment opportunities and projects which is much larger than the country could possibly implement within the plan period (say, within 5 years). This extended stock will enable the planners to have a real choice and a continuous supply of readily available alternatives.

A list of projects, ranked according to their desirability to the country - whereby the most promising ones must be implemented first - is the Industrial Programme.

Finally, a word of caution. A very serious handicap for introducing an effective industrial plan, is the difficulty and cost of obtaining competent national data and reliable and objective information on various technical and economic aspects of the proposed industrial projects.[1] To overcome this handicap, a suitable project and plan implementation machinery is a pre-requisite.

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[1] "... the suppliers of equipment are providing all the above mentioned skills and often together with market surveys and sales forecasts as well as ... sources ... and prices of raw materials. They usually decide on the price at which the new enterprise will sell its products and consequently mobilize the local 'implementation body' ... to lobby for sky-rocketing tariff protection ..." (from Eco. Com.of the Cabinet, Paper no. 4 of 1970 - Tanzania.)

10.3 PROJECT AND PROGRAMME IMPLEMENTATION

Without repeating what is clearly demonstrated in Diagram No. 1, 'From Policy to Production', it is important to amplify the logical path of setting up a new factory and the integration of this process in the overall industrial planning. Therefore, not all aspects of project implementation are reviewed, but only those which are unique to a Developing Country and which have a direct bearing on the tasks and functions of the Industrial Planning Department.

The implementation of an industrial project is divided into five distinct stages:

- Pre-feasibility
- Feasibility
- Pre-implementation, detailed planning and design
- Erection of the plant and mobilisation of personnel
- Start-up and production.

10.31 Pre-feasibility

The Pre-feasibility study is the birth-stage of the individual project and an equally important task of the industrial planning organisation.

In 10.52 the pre-feasibility unit and its specific function of feeding the industrial programme with projects that will, primarily, comply with the country's investment criteria, are described.

However, in many Developing Countries where a large enterprising middle-class is active (e.g. Pakistan, Nigeria) many smaller projects are implemented without any significant investment in foreign exchange or central or local government assistance.

Such projects are realised because they are feasible from the entrepreneur's point of view (and will usually show very favourable results when evaluated according to the country's investment

criteria). Nonetheless, if a consistent planning procedure is adopted, a system of reporting (or licensing) should be introduced through which the Data-Unit (10.51) will be informed. Such projects could then be repeated or extended.

A Pre-feasibility study will usually include:

- Quantities, prices and value of import substitution
- Quantities, prices and value of export markets (to specify)
- Quantities, prices and value for local market.

The above should be based on existing statistics and reasonable forecasts to result in the production programme of the project.

- Quantities, prices of raw materials to be used, divided into non-exportable, exportable and imported.
- Estimates of capital investment in foreign and local currency, divided into machinery and equipment, transport and erection, building and civil engineering, running-in costs.
- Estimate of working capital (foreign and local currency).
- Estimates of manpower, divided into four categories: unskilled and semi-skilled, skilled, managerial local, managerial foreign.
- Estimates of other running-costs.
- Provisional location and alternatives.
- Suggested sectoral ownership and implementation body.
- Provisional scheduling: Feasibility report, detailed design, start of erection, training and acquisition of know-how, and start-up.

10.32 Feasibility

The feasibility stage starts when the pre-feasibility report has been completed and the evaluation has provided positive results.

In Annex E, specially designed guidelines for an industrial feasibility study in Developing Countries are shown. They do not describe, however, the following tasks:

When the project is in the feasibility study stage, one of the first matters to be dealt with by the planners is to find an appropriate 'implementor'. Even when the official 'implementor' is an existing organisation, such as a parastatal or a cooperative or a local or foreign group etc., an individual has to be designated who will be the "father" of the plant.

He should be responsible for leading the project through all the remaining stages and play an active part during this procedure. By his activities he will acquire an intimate knowledge about the project and thus will be prepared to become the General Manager or a key-man in the managerial team of the future plant.

Therefore, the 'implementor' should be chosen, not only on the basis of his technical and character potential, but also on the basis of his organisational and managerial ability. The ideal solution would be to choose the candidate from the managerial personnel of existing plants. In case appropriate local talent cannot be found and an expatriate has to be chosen, it is imperative to associate with him two or more local counterparts.

Every associate, even chosen with great care, may, in practice, show insufficient capabilities. It is therefore important to bring into the team at least two associates. If one of them is finally rejected, the time and effort spent on him are not wasted; he has acquired valuable experience and may be considered for another job, more compatible with his capabilities.

The activity involved in finding 'implementors' for projects is a continuous one and should therefore be concentrated in a special 'centre' supervised by the Central Planning, Evaluation and Coordination Unit (see 10.53 below).

This Recruitment Centre should have at least two officers: one has to be acquainted with the 'professional manpower-map' of the country, the other with the 'hidden talent manpower-map' for the smaller and simpler projects.

A likely constraint in implementing the industrial programme could be the fact that the Recruitment Centre is unable to find the 'initial personnel' for a number of projects. Therefore, a provisional time-table for implementation will have to be made. This time-table has to be based on the degree of urgency of the projects and the "production capacity" of the Industrial Planning Department. This time-table will have to be revised frequently in the light of changing circumstances.

For each project an assessment has to be made on the type of persons needed as implementors and associates, the result being a 'provisional recruitment programme'.

When candidates are not available, the following steps will have to be taken:

- For particularly difficult technical and organisational posts, asking for a long period of experience - recruitment abroad and association with the necessary counterparts.
- For all other jobs - recruitment of local manpower. Mainly for this purpose the above mentioned Recruitment Centre will be set up with the following tasks: recruitment, training on and off the job and personal follow-up.

This centre is not only necessary for the supply of 'initiators' but also for the supply of higher and middle level managerial and professional staff for Industry.

10.33 Pre-Implementation, Detailed Planning and Design

In Diagram no. 1 the main functions and sequences of this stage are shown. These include also the following specific requirements:

- A more detailed market study, defining quantities, marketing channels, stocks of finished products etc., in order to arrive at the production programme(s).
- The finding of sources of know-how and technical assistance.
- On the above basis: the specification of the production process and of all machinery and equipment (including spares), based on binding quotations of more than one supplier.
- Specific site selection and the design of detailed lay-out.
- An estimate of transport and erection cost of the machinery (including manpower needed).
- A specification of buildings and supplementary services including building cost quotations.
- The formulation and negotiation of draft contracts for know-how, machinery, transport and civil engineering.
- Raw and auxiliary materials and services, their specifications, quantities, suppliers, binding quotations and draft contracts.
- Design of the organisational set-up and the definition of manpower, wages and recruitment-situation.
- Estimate of running-in cost.
- Specification and cost of working capital.
- Definition of ownership, partners, specification of investment capital to include sources and conditions.
- Calculation of cost prices of the principal products and comparison with sales prices.
- Drawing-up of a detailed operation forecast, profitability, break-even, cash-flow and sensitivity calculations.

When necessary, pilot plants, development in stages, future extensions possibilities and alternative solutions have to be considered.

After the above pre-implementation study is finished, the project has to be tested finally by the Central Planning Unit on its economic merits for the country.

To comply with the above requirements properly, the 'implementor' will have to be assisted by a number of experts. These can be concentrated in the Feasibility Studies Unit (10.52).

The Experts have to be specialists in:

- Marketing
- Engineering (Mechanical, Electrical, Chemical, Industrial)
- Lay-out
- Purchasing
- Organisation and manpower
- Business administration and finance
- Commercial law.

There are several advantages in combining this unit with the Feasibility Study Unit, where similar or identical professionals are required. In many cases the services of experienced independent consultants have to be used; even when know-how will be supplied from outside, or the factory is erected on a turn-key basis.

10.34 Erection of the Plant and Mobilisation of Personnel

This has to be done under the responsibility of the 'implementor' assisted by future personnel of the plant, or by the permanent staff of experts and, if necessary, by foreign experts.

The work will be done in two stages:

- Ordering of the equipment and building, engaging key-personnel and finalising delivery and other contracts.
- Delivery of the equipment and erection.

Between these two stages there is generally a time-lag of about one year. During this period key-personnel can be trained, preferably in identical or similar factories in the country and abroad. Usually the key-personnel can inspect the machinery bought at the manufacturer's premises - this will also be part of their training.

Most of the key-personnel will return when erection starts and take an active part in these operations and then further personnel will be engaged. At this time a stringent control has to be established in order to ensure that the execution of contracts by suppliers and (sub)contractors is carried out according to the approved specifications.

A system of strict budgetary control has to be applied. During this period organisational and administrative systems will have to be evolved.

10.35 Start-up and Production

When equipment is being installed, training of personnel is under way and materials are being used, the money-management will ask a lot of effort and time from the 'implementor' and his staff.

The sources of supply of money both for initial and supplementary purposes are:

- The Government direct.
- The Government through its parastatals.
- Commercial banks.
- Foreign sources.

The parastatals will have their own staff to judge the credit potential of their affiliated enterprises. In many cases the smaller enterprises will not have the capacity to forecast and formulate properly their financial needs and the modalities for loans and capital. Therefore, financial expertise is required which will assist the smaller enterprises in determining their needs and to guide the credit institutions in judging them.

This is again the task of the Central Planning, Evaluation and Coordination Unit (see 10.53 below). In this the Unit must be assisted by a team of financial experts, who will initiate appropriate reports from the enterprises.

This frequent reporting system by the smaller enterprises is extremely important to their managements. The analysis of these reports may generate suggestions for improvements, changes and extensions of the enterprise. From these reports valuable data can be distilled by the Data Unit (see 10.51 below).

10.4 INDUSTRIAL DEVELOPMENT BANK

The funds provided by governments to industry are usually given either direct through existing development institutions, or through the Commercial Banks. When a Developing Country decides to adopt an effective degree of industrial planning, the time has come to create an institution to manage investment funds in a professional way - an Industrial Development Bank - and government funds could then be channelled through this bank.

The industries need investment capital, as well as working capital. Usually, a developing industry will be unable to provide sufficient collateral for a commercial loan. In this case the development bank may guarantee specific finance by the Commercial Bank or put special funds at the disposal of the commercial bank.

The handling of long-term credit and short-term commercial credit needs different approaches and different methods; this is the reason why a sharp distinction is maintained, by the Developed Countries, between investment and commercial banking.

The Industrial Development Bank will have the opportunity to mobilise funds other than from Government resources. It will be able to attract finance, by issuing shares and bonds, from local public institutions. Once a basis of local funds is available, it is likely that foreign governments' funds can also be attracted, as well as funds from the World Bank and other international or Super-National sources.

The international credit standing of the Industrial Development Bank, when properly managed, will be higher than of each parastatal separately and this may help to attract foreign capital on better terms. Even when foreign interests will be ready to supply finance to specific enterprises, better terms can often be achieved by channelling it through the National Industrial Development Bank.

It will be advantageous to transfer to this bank, once it is operative, the financial expertise build-up at the Central Planning, Evaluation and Coordination Unit in order to avoid duplication and to make better use of, as yet, scarce talent.

10.5 INDUSTRIAL-PLANNING ORGANISATION

The ultimate responsibility of any national plan is carried by the chief executive, who in turn appoints a 'standing committee' or a 'Board' to formulate the basic development policies. Such a board (chaired by the chief executive or by a senior minister) can only operate successfully through an executive body which accumulates data, presents reports and follows-up the implementation of the Board's decisions.

Such an executive body is, in fact, the Planning Authority. A department of this planning authority should be in charge of the industrial planning (the importance attributed to this department is also a matter of policy and will indicate the degree of the regime's commitment to industrialisation).

In order to enable this Industrial Planning Department to exercise its following four tasks in an appropriate manner, it must be provided with clearly defined and sufficient authority in relation to ministries, parastatals, local Government, financial institutions and any other public or private body which is to play a part in the industrialisation process.

The four tasks of the Industrial Planning Department are:

- Data gathering and data supply
- Pre-feasibility and feasibility studies
- Central planning, evaluation and coordination
- Plan implementation and control.

These tasks are best vested in four distinct units under one roof, e.g. at the Ministry of Industry, the Planning Ministry, under the Prime Minister's or President's office.

10.51 Data-Unit

Industrial planning cannot be carried out in isolation and without close coordination with the development plans of other branches of the economy.

The planner should have advance knowledge of agricultural and other local raw materials' availability and supply; transport and communications extensions; power and water supply development plans; town and resettlement planning; vocational training and university programmes etc.

This Data-Unit should therefore carry out continuously three main activities:

- Industrial surveys (by short questionnaires and interviews) on the present situation (i.e. capacity, production, prices and employment) and on the industry's expansion plans.
- Gathering national data on imports, exports, consumption, prices, education and vocational training. Some international data in respect of the country's major trade partners will also be necessary (collated from the country's diplomatic representatives abroad).
- To supply sufficient information to the different institutions, parastatals, organisations, centres and individuals which are involved in industrial investments, and, of course, to feed the following unit to enable it to cope co rectly with pre-feasibility and feasibility studies.

10.52 Pre-Feasibility and Feasibility Studies-Unit

Industrial ideas, opportunities and projects will be initiated by the planning authority, financial institutions or by other organisations within or outside the country. It becomes the task of the Pre-Feasibility Unit:

- To react to these industrial ideas and projects and investigate their relevant facts; arrive at preliminary and tentative conclusions as to the effectiveness of such projects to the country in accordance with its investment criteria and development policies; to check each project from other substantive aspects, e.g. its inter-industrial supply relations with other local industries.
- To select the right location in accordance with the merits of the project. If, however, alternative locations are suggested, then the pros and cons should be given objectively; the anticipated benefits in relation to the costs involved should be clearly presented.
- To identify the right sector and within it the organisation that should carry out the project. This task is a more responsible one because it establishes a framework and a foothold for the project.
- To schedule the investigated project for further studies and tentative implementation within suitable time limits. At this stage the project becomes a part of the Industrial Development Programme.

The object of preparing a great number of pre-feasibility studies in a short period, is to build up a base for an industrial programme. Thus, especially in the first years, a compromise has to be struck between accuracy and expediency.

One should also remember that in the course of time almost all the projects that have passed the above pre-feasibility stage successfully, will eventually be implemented, although after many more years than previously anticipated and probably in different circumstances. Therefore, studies made and properly recorded, are not wasted and can be updated.

Feasibility Unit:

The preliminary conclusions, arrived at in the pre-feasibility study, will enable the department to rank the projects and prepare a fully-fledged feasibility report for the most effective ones.

Feasibility studies may well be carried out by other organisations, in or outside the country, or by independent consultants, machine-suppliers and international aid and finance agencies. Even if these studies are conducted according to correct rules, the Feasibility Study-Unit should check them and apply the country's investment criteria for proper evaluation.

10.53 Central Planning, Evaluation and Coordination - Unit

The following functions are to be performed by this central unit, as well as the supervision of the different centres discussed previously (5.64, 5.73 & 10.32):

- Completion of feasibility study from the point of view of the foreign exchange position, the national economy and various social considerations.
- Co-ordination of the project with other branches of the economy. To check the usual constraints: availability of sufficient investment funds (in foreign exchange and local currency) and of competent manpower and management.
- As a result of the above analysis and specific checks to decide whether the project is still desirable and what will be the implications in terms of import protection and/or subsidies. The project is now scheduled for final implementation.
- If, however, the project is not satisfactory: to propose alterations or variations of the project. In this case the project will undergo a new cycle of study starting at the feasibility study stage.

10.54 Plan Implementation and Control - Unit

The development process is complicated and fraught with uncertainties. Therefore, one should never be surprised if things do not turn out as expected.

John H. Adler,[1] Director of the Economic Development Institute of the World Bank, once commented that the planner "looks at development not as a take-off into self-sustained growth - as Professor Rostow's elegant phrase puts it - but as a self-sustaining sequence of threats of major and minor failures which by constant efforts have to be averted."

The task of this Unit is to ensure the optimal implementation of the industrial programme by regular and systematic evaluation of progress, thus enabling prompt reporting on deviations and immediate corrective action.

Control will improve the process of planning whereby the programme is converted from a static model to a dynamic one, which continually assesses the effect of changes of available resources and of delays in implementation of the industrial programme and considers alternative measures.[2]

Various vicious circles of backwardness and poverty are perpetuated in the Developing Countries. Three of these circles have a direct effect on the industrialisation process:

- Low income results in no, or low, savings thus low investment level which again results in low productivity and low income.
- Low income will also result in low purchasing power, small market, low inducement to start a new investment (or to expand). Thus, low investments, low productivity, low income.

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(1) In an address in New York on the occasion of the Tenth Anniversary of the formation of the World Bank's Economic Institute as a teaching organisation.

(2) See Annex F and its relevant appendices for detailed example on the introduction of a "Planning and Implementation System for the Control of a National Industrial Plan in Tanzania." This system has been designed by me based on accumulated experience in East Africa, Malaysia, Nigeria and Singapore.

- Low income is more often than not combined with low income in foreign currency, insufficient supply of basic and strategic goods, low level of political stability and internal security, low incentive to invest, low productivity, low income.

The above various circles have the "low investment" in common. It is obvious that this link in the circles should be broken.

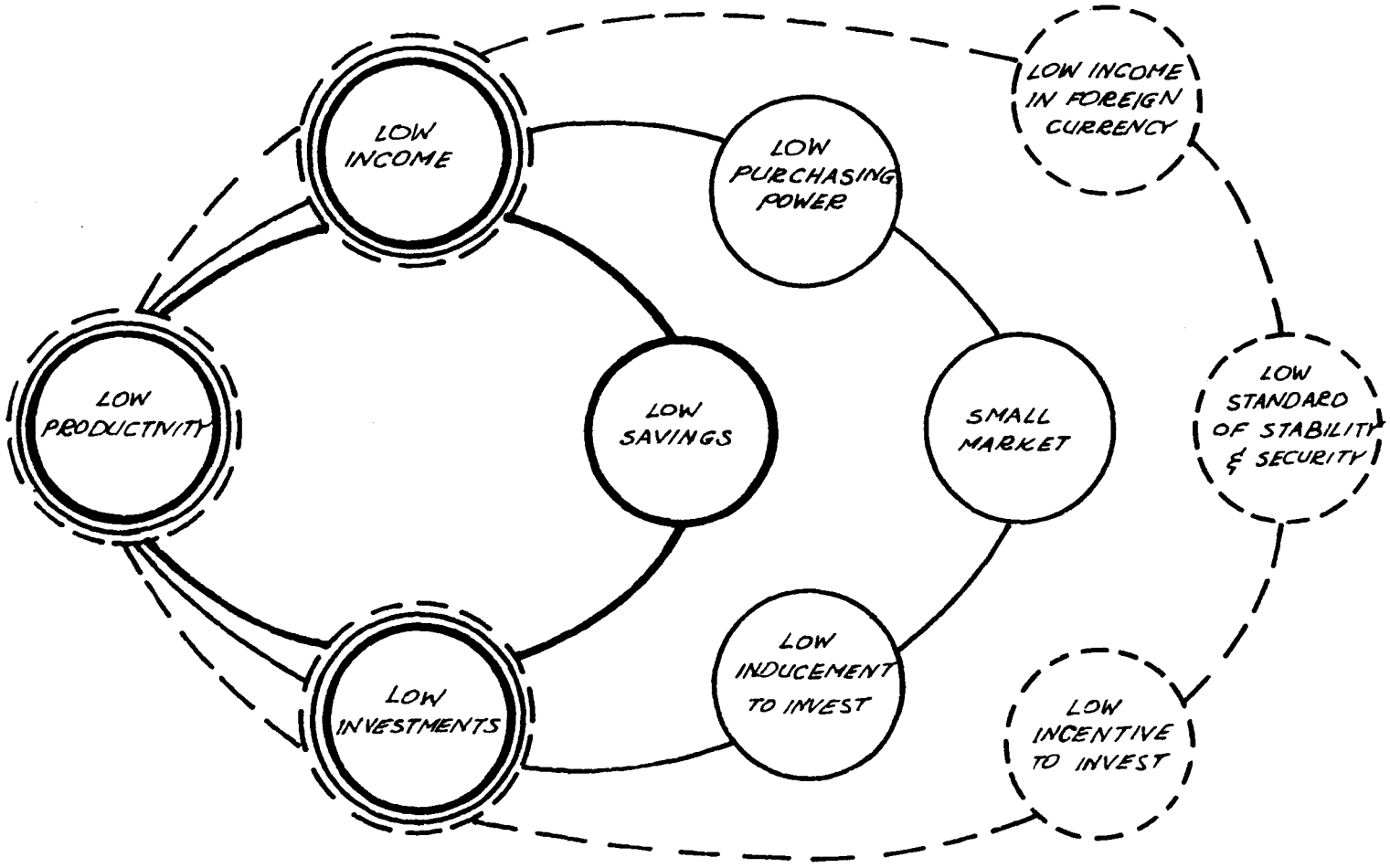
The breaking through this link is to be carried out by the government of the Developing Country. It is the internal push rather than the external pull that will bring about the necessary change. The means are in the first place, through careful planning, to result in an effective Industrial Development Programme (e.g. five-year plans) which should incorporate practical tools and systems, to become the moving force in directing the advancement of the development process.

If the Industrial Planning Department is operating as intended, it will become the pivot of the industrialisation process and a focal point of new investment opportunities. The attack on the vicious circle of poverty should "take-off" there.

* * * * * * *

DIAGRAM No. 2

THE THREE VICIOUS CIRCLES OF POVERTY IN DEVELOPING COUNTRIES.



Meir Peled - School of Industrial and Business Studies, Warwick University, 1978.

ANNEX A

ANNEX A

POPULATION, PER CAPITA GNP & THEIR RESPECTIVE GROWTH RATE*

NOTES:

Per Capita GNP

This measure does not indicate sufficiently:

- equal income distribution
- eradication of poverty
- meeting basic human needs
- employment generation
- conservation of human resources
- social justice
- degree of economic & political independence

(See also Paul Streeten: "Development Ideas in Historical Perspective," International Economic Association, Tokyo Aug./Sept. 1977).

Measuring GNP: Factor cost versus market price

The GNP is often valued at factor cost, that is to say, net of all indirect taxes and subsidies. In Annex A3 & A4 GNP is recorded at market prices.

Market price figures are generally higher than those at factor cost, so that the per capita GNP figures for individual countries tend to be somewhat higher than those in preceding editions published by the U.N. and other International Agencies.

Conversion at official exchange rate

The GNP figures are converted into U.S. dollars by using the average exchange rates for 1960-1970, thus minimizing the effects of over- or undervaluation of particular exchange rates in particular years.

Since many traditional goods tend to be cheap in relation to traded goods, the equivalent of a dollar tends to go further in meeting people's day-to-day requirements in the developing countries than in developed countries. Thus the figures tend to exaggerate the differences in the standard of living between the poorer and the richer countries.

Centrally planned economies

In centrally planned economies the prices of most goods are set by the authorities. In other countries prices are determined by the more or less free play of the market.

The two methods may produce quite different price patterns. For this and for other reasons, caution must be used in comparing the figures for centrally planned economies with those for other countries.

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* Annex A1 & A3 Source: IBRD 1974. Annex A2 & A4 prepared for this dissertation.

ANNEX A 1

POPULATION (MID-1970) AND AVERAGE ANNUAL GROWTH RATES (1960 - 1970)[1]

Country	Population (thousands)	Growth Rate (per cent)
China (Mainland)	836,000	2.0
India	538,129	2.3
U.S.S.R.	242,768	1.2
United States	204,800	1.2
Pakistan and Bangladesh	130,166	2.7
Indonesia	115,567	2.0
Japan	103,390	1.0
Brazil	92,764	2.9
Germany, Federal Rep. of	61,560	1.0
United Kingdom	55,730	0.6
Nigeria	55,070	2.9
Italy	53,667	0.8
France	50,775	1.0
Mexico	50,670	3.5
Phillippines	36,850	3.0
Thailand	36,218	3.1
Turkey	35,230	2.5
Spain	33,645	1.1
Egypt, Arab Rep. of	33,329	2.5
Poland	32,807	1.0
Korea, Rep. of	31,793	2.6
Iran	28,662	2.9
Burma	27,584	2.1
Ethiopia	24,625	2.2
Argentina	23,212	1.5
South Africa *	22,160	3.0
Colombia	21,632	3.2
Canada	21,406	1.8
Viet-nam (North)	21,150	2.8
Yugoslavia	20,540	1.1
Romania	20,253	0.9
Zaire	18,800	2.8
Viet-nam, Rep. of	18,332	2.6
Germany (East)	17,250	0.0
Sudan	15,695	2.9
Morocco	15,495	2.9
Czechoslavakia	14,467	0.6
Algeria	14,330	3.1
Afghanistan	14,300	2.0
China, Rep. of (Taiwan)	14,035	2.9

* Including Namibia

Country	Population (thousands)	Growth Rate (per cent)
Korea (North)	13,890	2.7
Peru	13,586	3.1
Tanzania	13,270	2.5
Netherlands	13,019	1.3
Australia	12,552	2.0
Sri Lanka	12,514	2.4
Kenya	11,250	3.1
Nepal	11,060	1.8
Malaysia	10,945	3.1
Venezuela	10,399	3.5
Hungary	10,331	0.3
Uganda	9,814	2.7
Chile	9,780	2.3
Belgium	9,683	0.6
Iraq	9,678	3.5
Portugal	9,635	0.9
Greece	8,892	0.7
Ghana	8,640	2.6
Bulgaria	8,490	0.8
Cuba	8,390	2.1
Sweden	8,040	0.7
Mozambique	7,729	1.9
Khmer Rep.	7,485	3.2
Austria	7,390	0.5
Saudi Arabia	7,360	1.7
Malagasy Republic	7,310	2.6
Switzerland	6,281	1.5
Syria, Arab Rep. of	6,098	2.9
Ecuador	6,093	3.4
Cameroon	5,836	2.1
Yemen, Arab Rep. of	5,730	2.2
Angola	5,501	1.3
Upper Volta	5,384	2.1
Rhodesia	5,310	3.3
Guatemala	5,190	3.1
Tunisia	5,075	3.0
Mali	5,018	2.1
Ivory Coast	4,941	3.0
Bolivia	4,931	2.6
Denmark	4,921	0.7
Haiti	4,867	2.0
Finland	4,695	0.6
Malawi	4,440	2.6
Zambia	4,136	2.5
Dominican Republic	4,068	3.0

Country	Population (thousands)	Growth Rate (per cent)
Niger	4,020	2.9
Guinea	3,980	2.6
Hong Kong	3,960	2.5
Norway	3,879	0.8
Senegal	3,870	2.1
Chad	3,640	1.8
Rwanda	3,596	3.0
Burundi	3,544	2.0
El Salvador	3,534	3.7
Laos	2,962	2.4
Ireland	2,944	0.4
Israel	2,910	3.2
Uruguay	2,886	1.3
Puerto Rico	2,842	1.8
Somalia	2,828	2.4
New Zealand	2,816	1.7
Labanon	2,726	2.5
Dahomey	2,708	2.9
Sierra Leone	2,555	1.4
Honduras	2,520	3.3
Papua New Guinea	2,420	2.3
Paraguay	2,379	3.1
Jordan	2,317	3.5
Albania	2.170	2.9
Singapore	2,075	2.4
Nicaragua	1,984	3.5
Togo	1,956	2.7
Libya, Arab Rep. of	1,940	3.7
Jamaica	1,888	1.6
Costa Rica	1,727	3.3
Central African Republic	1,552	2.6
Liberia	1,520	3.0
Panama	1,464	3.3
Mongolia	1,280	3.0
Yemen, People's Dem. Rep. of	1,255	2.3
Mauritania	1,170	1.9
Trinidad and Tobago	1,027	2.1

Note 1. Population Growth.

At the second World Population Conference (1968) a particular issue was unanimously agreed upon :
A much slower rate of population growth is a prerequisite, not only because of fear of famine, but because of the need to devote a larger proportion of investible resources to consumption when population is rising rapidly.

M.P.

ANNEX A 2

POPULATION AVERAGE ANNUAL GROWTH (1960 - 1970)
ARRANGED ACCORDING GROWTH RATE

Country	Population (thousands)	Growth Rate (per cent)
El Salvador	3,534	3.7
Libya, Arab Rep. of	1,940	3.7
Mexico	50,670	3.5
Venezuela	10,399	3.5
Iraq	9,678	3.5
Jordan	2,317	3.5
Nicaragua	1,984	3.5
Ecuador	6,093	3.4
Rhodesia	5,310	3.3
Honduras	2,520	3.3
Costa Rica	1,727	3.3
Panama	1,464	3.3
Colombia	21,632	3.2
Khmer Rep.	7,485	3.2
Israel	2,910	3.2
Thailand	36,218	3.1
Algeria	14,330	3.1
Peru	13,586	3.1
Kenya	11,250	3.1
Malaysia	10,945	3.1
Guatemala	5,190	3.1
Paraguay	2,379	3.1
Philippines	36,850	3.0
South Africa *	22,160	3.0
Tunisia	5,075	3.0
Ivory Coast	4,941	3.0
Dominican Republic	4,068	3.0
Rwanda	3,596	3.0
Liberia	1,520	3.0
Mongolia	1,280	3.0
Brazil	92,764	2.9
Nigeria	55,070	2.9
Iran	28,662	2.9
Sudan	15,695	2.9
Morocco	15,495	2.9
China, Rep. of (Taiwan)	14,035	2.9
Syria, Arab Rep. of	6,098	2.9
Niger	4,020	2.9
Dahomey	2,708	2.9
Albania	2,170	2.9

* Including Namibia.

Country	Population (thousands)	Growth Rate (per cent)
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Uganda	9,814	2.7
Togo	1,956	2.7
Korea, Rep. of	31,793	2.6
Vietnam, Rep. of	18,332,	2.6
Ghana	8,640	2.6
Malagasy Republic	7,310	2.6
Bolivia	4,931	2.6
Malawi	4,440	2.6
Guinea	3,980	2.6
Central African Republic	1,552	2.6
Turkey	35,230	2.5
Egypt, Arab Rep. of	33,329	2.5
Tanzania	13,270	2.5
Zambia	4,136	2.5
Hong Kong	3,960	2.5
Lebanon	2,726	2.5
Sri Lanka	12,514	2.4
Laos	2,962	2.4
Somalia	2,828	2.4
Singapore	2,075	2.4
India	538,129	2.3
Chile	9,780	2.3
Papua New Guinea	2,420	2.3
Yemen, People's Dem. Rep. of	1,255	2.3
Ethiopia	24,625	2.2
Yemen, Arab Rep. of	5,730	2.2
Burma	27,584	2.1
Cuba	8,390	2.1
Cameroon	5,836	2.1
Upper Volta	5,384	2.1
Mali	5,018	2.1
Senegal	3,870	2.1
Trinidad and Tobago	1,027	2.1
China (Mainland)	836,000	2.0
Indonesia	115,567	2.0
Afghanistan	14,300	2.0
Australia	12,552	2.0
Haiti	4,867	2.0
Burundi	3,544	2.0
Mozambique	7,729	1.9
Mauritania	1,170	1.9

Country	Population (thousands)	Growth Rate (per cent)
Canada	21,406	1.8
Nepal	11,060	1.8
Chad	3,640	1.8
Puerto Rico	2,842	1.8
Saudi Arabia	7,360	1.7
New Zealand	2,816	1.7
Jamaica	1,888	1.6
Argentina	23,212	1.5
Switzerland	6,281	1.5
Sierra Leone	2,555	1.4
Netherlands	13,019	1.3
Angola	5,501	1.3
Uruguay	2,886	1.3
United States	204,800	1.2
U.S.S.R.	242,768	1.2
Spain	33,645	1.1
Yugoslavia	20,540	1.1
Japan	103,390	1.0
Germany, Federal Rep. of	61,560	1.0
France	50,775	1.0
Poland	32,807	1.0
Romania	20,253	0.9
Portugal	9,635	0.9
Italy	53,667	0.8
Bulgaria	8,490	0.8
Norway	3,879	0.8
Greece	8,892	0.7
Sweden	8,040	0.7
Denmark	4,921	0.7
United Kingdom	55,730	0.6
Czechoslovakia	14,467	0.6
Belgium	9,683	0.6
Finland	4,695	0.6
Austria	7,390	0.5
Ireland	2,944	0.4
Hungary	10,331	0.3
Germany (East)	17,250	0.0

ANNEX A 3

GROSS NATIONAL PRODUCT PER CAPITA AT MARKET PRICES (1970) AND AVERAGE ANNUAL GROWTH RATE (1960 - 1970)

Country	GNP per Capita (US dollars)	Growth Rate (per cent)
United States	4,760	3.2
Sweden	4,040	3.8
Canada	3,700	3.6
Switzerland	3,320	2.5
Denmark	3,190	3.7
France	3,100	4.6
Germany, Fed. Rep. of	2,930	3.5
Norway	2,860	4.1
Australia	2,820	3.1
Belgium	2,720	4.0
New Zealand	2,700	2.1
Germany (East) *	2,490	4.2
Netherlands	2,430	3.9
Finland	2,390	3.9
United Kingdom	2.270	2.2
Czechoslavakia *	2,230	3.8
Austria	2,010	3.9
Israel	1,960	4.7
Japan	1,920	9.6
U.S.S.R. *	1,790	5.8
Libya, Arab Rep. of	1,770	20.4
Italy	1,760	4.6
Puerto Rico	1,650	5.8
Hungary *	1,600	5.4
Poland *	1,400	5.2
Ireland	1,360	3.6
Argentina	1,160	2.5
Greece	1,090	6.6
Spain	1,020	6.1
Venezuela	980	2.3
Hong Kong	970	8.4
Romania *	930	7.7
Singapore	920	5.2
Trinidad and Tobago	860	1.9
Uruguay	820	-0.4
Bulgaria *	760	7.4
South Africa (Including Namibia)	760	3.0
Panama	730	4.2
Chile	720	1.6
Jamaica	670	3.5
Mexico	670	3.7
Portugal	660	5.3
Yugoslavia	650	4.3
Albania *	600	4.8
Lebanon	590	0.5

Country	GNP per Capita (US dollars)	Growth Rate (per cent)
Costa Rica	560	3.2
Cuba *	530	-0.6
Mongolia *	460	0.0
Peru	450	1.4
Saudi Arabia	440	8.0
Nicaragua	430	2.8
Brazil	420	2.4
Zambia	400	7.1
China, Rep. of	390	7.1
Iran	380	5.4
Malaysia	380	3.1
Guatemala	360	2.0
Dominican Republic	350	0.5
Colombia	340	1.7
Korea (North) *	330	5.1
Iraq	320	2.5
Turkey	310	3.9
Ivory Coast	310	4.5
Ghana	310	-0.4
Angola	300	3.2
El Salvador	300	1.7
Algeria (1963 - 1970)	300	1.7
Papua New Guinea	300	4.5
Syria, Arab Rep. of	290	3.4
Ecuador	290	1.7
Honduras	280	1.8
Rhodesia	280	0.4
Paraguay	260	1.3
Tunisia	250	0.5
Korea, Rep. of	250	6.8
Jordan **	250	2.9
Liberia	240	0.9
Mozamique	240	3.4
Morocco	230	1.0
Senegal	230	0.0
Philippines	210	2.9
Egypt, Arab Rep. of	210	1.7
Viet-nam, Rep. of	200	1.0
Thailand	200	4.9
Sierra Leone	190	4.7

* Estimates of GNP per capita and its growth rate have a wide margin of error mainly because of the problems in deriving the GNP at market prices from net material product and in converting the GNP estimate into U.S. dollars.

** Estimates of GNP per capita and its growth rate are tentative. In some instances GNP per capita estimates of under 100 dollars are based on data that have a large margin of error, and are thus likely to be less reliable than estimates of over 100 dollars.

Country	GNP per Capita (US dollars)	Growth Rate (per cent)
Cameroon	180	3.8
Bolivia	180	2.5
China (Mainland) *	160	2.1
Kenya	150	3.6
Central African Rep.	140	0.2
Mauritania **	140	4.5
Togo	140	1.2
Malagasy Rep.	130	1.2
Khmer Rep.	130	0.1
Uganda	130	2.4
Nigeria	120	0.1
Laos **	120	1.9
Sudan	120	1.0
Guinea **	120	2.7
Yemen, People's Dem. Rep. of	120	-5.0
Sri Lanka	110	1.5
India	110	1.2
Haiti	110	-0.9
Tanzania	100	3.6
Viet-nam (North) *	100	3.2
Pakistan and Bangladesh	100	2.4
Niger **	90	-2.0
Dahomey **	90	0.1
Zaire **	90	2.7
Chad **	80	0.4
Nepal **	80	0.5
Burma **	80	0.6
Yemen, Arab Rep. of **	80	2.0
Indonesia **	80	1.0
Ethiopia **	80	2.8
Afghanistan **	80	0.5
Malawi **	80	2.1
Somalia **	70	-1.1
Mali **	70	4.4
Upper Volta **	60	-0.6
Burundi **	60	0.8
Rwanda **	60	-1.5

ANNEX A 4

GNP PER CAPITA ANNUAL GROWTH (1960 - 70)
ARRANGED ACCORDING GROWTH RATE

COUNTRY	GNP PER CAPITA (US DOLLARS)	GROWTH RATE (PER CENT)
Libya, Arab Rep. of	1,770	20.4
Japan	1,920	9.6
Hong Kong	970	8.4
Saudi Arabia	440	8.0
Romania *	930	7.7
Bulgaria *	760	7.4
Zambia	400	7.1
China, Rep. of	390	7.1
Korea, Rep. of	250	6.8
Greece	1,090	6.6
Spain	1,020	6.1
U.S.S.R. *	1,790	5.8
Puerto Rico	1,650	5.8
Hungary *	1,600	5.4
Iran	380	5.4
Portugal	660	5.3
Poland *	1,400	5.2
Singapore	920	5.2
Korea (North) *	330	5.1
Thailand	200	4.9
Albania *	600	4.8
Israel	1,960	4.7
Sierra Leone	190	4.7
France	3,100	4.6
Italy	1,760	4.6
Ivory Coast	310	4.5
Papua New Guinea	300	4.5
Mauritania **	140	4.5
Mali **	70	4.4
Yugoslavia	650	4.3
Germany (East) *	2,490	4.2
Panama	730	4.2
Norway	2,860	4.1
Belgium	2,720	4.0
Netherlands	2,430	3.9
Finland	2,390	3.9
Austria	2,010	3.9
Sweden	4,040	3.8
Czechoslovakia *	2,230	3.8
Cameroon	180	3.8
Turkey	310	3.9

COUNTRY	GNP PER CAPITA (US DOLLARS)	GROWTH RATE (PER CENT)
Denmark	3,190	3.7
Mexico	670	3.7
Canada	3,700	3.6
Ireland	1,360	3.6
Kenya	150	3.6
Tanzania 1	100	3.6
Germany, Fed. Rep. of	2,930	3.5
Jamaica	670	3.5
Syria, Arab Rep. of	290	3.4
Mozambique	240	3.4
United States	4,760	3.2
Costa Rica	560	3.2
Angola	300	3.2
Vietnam (North) *	100	3.2
Australia	2,820	3.1
Malaysia	380	3.1
South Africa 2	760	3.0
Jordan **	250	2.9
Philippines	210	2.9
Nicaragua	430	2.8
Ethiopia **	80	2.8
Guinea **	120	2.7
Zaire **	90	2.7
Switzerland	3,320	2.5
Argentina	1,160	2.5
Iraq	320	2.5
Bolivia	180	2.5
Brazil	420	2.4
Uganda	130	2.4
Pakistan and Bangladesh	100	2.4
Venezuela	980	2.3
United Kingdom	2,270	2.2
New Zealand	2,700	2.1
China (Mainland) *	160	2.1
Malawi **	80	2.1
Guatemala	360	2.0
Yemen, Arab Rep. of **	80	2.0
Trinidad and Tobago	860	1.9
Laos **	120	1.9
Honduras	280	1.8
Colombia	340	1.7
El Salvador	300	1.7
Algeria 3	300	1.7
Ecuador	290	1.7
Egypt, Arab Rep. of	210	1.7

1 Mainland Tanzania
2 Including Namibia
3 Growth rate relates to the period 1963-1970.

COUNTRY	GNP PER CAPITA (US DOLLARS)	GROWTH RATE (PER CENT)
Chile	720	1.6
Sri Lanka	110	1.5
Peru	450	1.4
Paraguay	260	1.3
Togo	140	1.2
Malagasy Rep.	130	1.2
India	110	1.2
Morocco	230	1.0
Vietnam, Rep. of	200	1.0
Sudan	120	1.0
Indonesia	80	1.0
Liberia	240	0.9
Burundi **	60	0.8
Burma **	80	0.6
Lebanon	590	0.5
Dominican Republic	350	0.5
Tunisia	250	0.5
Nepal **	80	0.5
Afghanistan **	80	0.5
Rhodesia	280	0.4
Chad **	80	0.4
Central African Rep.	140	0.2
Khmer Rep.	130	0.1
Nigeria	120	0.1
Dahomey **	90	0.1
Mongolia *	460	0.0
Senegal	230	0.0
Uruguay	830	-0.4
Ghana	310	-0.4
Cuba *	530	-0.6
Upper Volta **	60	-0.6
Haiti	110	-0.9
Somalia **	70	-1.1
Rwanda	60	-1.5
Niger **	90	-2.0
Yemen, People's Dem. Rep. of	120	-5.0

ANNEX B

A GUIDELINE FOR SECTORAL OWNERSHIP - INDUSTRIAL CLASSIFICATION *

Division	Major Group	Group		
31			Manufacture of Food, Beverages and Tobacco	
	311-312		Food manufacturing	
		3111	Slaughtering, preparing and preserving meat	PARTNERSHIP
		3112	Manufacture of dairy products	PARTNERSHIP
		3113	Canning and preserving of fruits and vegetables	PARTNERSHIP
		3114	Canning, preserving and processing of fish, crustacea and similar foods	PARTNERSHIP
		3115	Manufacture of vegetable and animal oils and fats	PARTNERSHIP
		3116	Grain mill products	CONTROLLED
		3117	Manufacture of bakery products	OPEN
		3118	Sugar factories and refineries	CONTROLLED
		3119	Manufacture of cocoa, chocolate and sugar confectionery	OPEN
		3121	Manufacture of food products not elsewhere classified	OPEN
		3122	Manufacture of prepared animal feeds	PARTNERSHIP
	313		Beverage industries	
		3131	Distilling, recifying and blending spirits	CONTROLLED

* Extract from PLAN OF ACTION No. 16/8/68, Part I, Industrial Classification and Planned Ownership by M. Peled, DEVPLAN - Tanzania.

Division	Major Group	Group		
		3132	Wine industries	CONTROLLED
		3133	Malt liquors and malt	CONTROLLED
		3134	Soft drinks and carbonated waters industries	OPEN
	314	3140	Tobacco Manufacture	CONTROLLED
32			Textile, Wearing Apparel and Leather Industries	
	321		Manufacture of textiles	
		3211	Spinning, weaving and fishing textiles	PARTNERSHIP
		3212	Manufacture of made-up textile goods except wearing apparel	OPEN
		3213	Knitting mills	OPEN
		3214	Manufacture of carpets and rugs	OPEN
		3215	Cordage, rope and twine industries	OPEN
		3219	Manufacture of textiles not elsewhere classified	OPEN
	322	3220	Manufacture of wearing apparel, except footwear	OPEN
	323		Manufacture of leather and products of leather, leather substitutes and fur, except footwear and wearing apparel	
		3231	Tanneries and leather finishing	CONTROLLED
		3232	Fur dressing and dyeing industries	OPEN
		3233	Manufactire of products of leathe r and leather substitutes except footwear and wearing apparel	OPEN
	324	3240	Manufacture of footwear, except vulcanised or moulded rubber or plastic footwear	PARTNERSHIP

Division	Major Group	Group		
33			Manufacture of Wood and Wood Products, including Furniture	
	331		Manufacture of wood and wood and cork products, except furniture	
		3311	Sawmills, planing and other wood mills	PARTNERSHIP
		3312	Manufacture of wooden and cane containers and small cane ware	OPEN
		3319	Manufacture of wood and cork products not elsewhere classified	OPEN
	332	3320	Manufacture of furniture and fixtures, except primarily of metal	PARTNERSHIP
34			Manufacture of Paper and Paper Products, Printing and Publishing	
	341		Manufacture of paper and paper products	
		3411	Manufacture of pulp, paper and paperboard	CONTROLLED
		3412	Manufacture of containers and boxes of paper and paperboard	PARTNERSHIP
		3419	Manufacture of pulp; paper and paperboard articles not elsewhere classified	OPEN
	342	3420	Printing, publishing and allied industries	PARTNERSHIP

Division	Major Group	Group		
35			Manufacture of Chemicals and of Chemicals, Petroleum, Coal, Rubber and Plastic Products	
	351		Manufacture of industrial chemicals	
		3511	Manufacture of basic industrial chemicals except fertilizers	PARTNERSHIP
		3512	Manufacture of fertilizers and pesticides	PARTNERSHIP
		3513	Manufacture of synthetic resins plastic materials and man-made fibres except glass	PARTNERSHIP
	352		Manufacture of other chemical products	
		3521	Manufacture of paints,varnishes and lacquers	OPEN
		3522	Manufacture of drugs and medicines	CONTROLLED
		3523	Manufacture of soap and cleaning preparations,perfumes,cosmetics & other toilet preparations	OPEN
		3529	Manufacture of chemical products not elsewhere classified	OPEN
	353	3530	Petroleum refineries	CONTROLLED
	354	3540	Manufacture of miscellaneous products of petroleum & coal	PARTNERSHIP
	355		Manufacture of rubber products	
		3551	Tyre and tube industries	CONTROLLED
		3559	Manufacture of rubber products not elsewhere classified (mainly very small scale)	OPEN
	356	3560	Manufacture of plastic products not elsewhere classified	PARTNERSHIP

Division	Major Group	Group		
36			Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	
	361	3610	Manufacture of pottery,china and earthenware	OPEN
	362	3620	Manufacture of glass and glass-products	PARTNERSHIP
	369		Manufacture of other non-metallic mineral products	
		3691	Manufacture of structural clay products	OPEN
		3692	Manufacture of cement,lime and plaster	CONTROLLED
		3699	Manufacture of non-metallic mineral products not elsewhere classified	OPEN
37			Basic Metal Industries	
	371	3710	Iron and steel basic industries	CONTROLLED
	372	3720	Non-ferrous basic industries	CONTROLLED
38			Manufacture of Fabricated Metal Products,Machinery & Equipment	
	381		Manufacture of fabricated metal products, except machinery & equipment	
		3811	Manufacture of cutlery,hand tools and general hardware (arms CONTROLLED)	PARTNERSHIP
		3812	Manufacture of furniture and fixtured primarily of metal	PARTNERSHIP
		3813	Manufacture of structural metal products	PARTNERSHIP
		3819	Manufacture of fabricated metal products,machinery and equipment not elsewhere classified	PARTNERSHIP

Division	Major Group	Group		
	382		Manufacture of machinery except electrical	
		3821	Manufacture of engines and turbines	PARTNERSHIP
		3822	Manufacture of agriculture machinery equipment	PARTNERSHIP
		3823	Manufacture of metal and wood working machinery	PARTNERSHIP
		3824	Manufacture of special industrial machinery and equipment except metal and wood working machinery	PARTNERSHIP
		3825	Manufacture of office-,computing-and accounting machinery	PARTNERSHIP
		3829	Machinery and equipment except electrical not elsewhere classified	PARTNERSHIP
	383		Manufacture of electrical machinery,apparatus,appliances and supplies	PARTNERSHIP
		3831	Manufacture of electrical industrial machinery and apparatus	PARTNERSHIP
		3832	Manufacture of radio,television and communication equipment and apparatus	OPEN
		3833	Manufacture of electrical appliances & house-wares	OPEN
		3839	Manufacture of electrical apparatus and supplies not elsewhere classified including lighting equipment	PARTNERSHIP
	384		Manufacture of transport equipment	
		3841	Ship building and repairing	PARTNERSHIP
		3842	Manufacture of railroad equipment	CONTROLLED

Division	Major Group	Group		
		3843	Manufacture of motor vehicles	CONTROLLED
		3844	Manufacture of motorcycles and bicycles	CONTROLLED
		3845	Manufacture of aircraft	CONTROLLED
		3849	Manufacture of transport equipment not elsewhere classified	OPEN
	385		Manufacture of professional-, scientific-,measuring & controlling equipment not elsewhere classified, and of photographic and optical goods.	
		3851	Manufacture of professional-, scientific,measuring & controlling equipment, not else classified	OPEN
		3852	Manufacture of photographic and optical goods	OPEN
		3853	Manufacture of watches and clocks	OPEN
39	390		Other Manufacturing Industries	
		3901	Manufacture of jewellery and related articles	OPEN
		3902	Manufacture of musical instruments	OPEN
		3903	Manufacture of sporting & athletic equipment (arms CONTROLLED)	OPEN
		3909	Manufacturing industries not elsewhere classified	OPEN

This list includes only the headings for the Industrial Groups. The details of the Groups are specified in U.N.Statistical Papers series M,No.4 Rev.2-1968.

ANNEX C

REGIONAL ALLOCATION PROJECTS - TANZANIA

ANNEX C

C.1 SECOND FIVE YEAR PLAN*

Out of 385 projects 78 are expansions of existing industries mainly in Dar Es Salaam and in other high IPI towns.

Thus, out of 307 new projects, it is planned to allocate a fair share, in the Second Five Year Plan, to larger towns (10,000) which are located in districts with an Income per Inhabitant (I.P.I.) below the national average.

It will not be possible to locate all new industrial projects in the above mentioned towns. Many must be located at higher IPI locations, for overriding economic and physical reasons.

Other projects for similar reasons have to be located in Dar Es Salaam or in another port. However, a number of projects whose location is relatively free, will remain. These should be used for equalizing the IPI.

TABLE C.1.1 INDUSTRIAL DEVELOPMENT PLAN FOR TOWNS OF MORE THAN 10,000 INHABITANTS WITH I.P.I. BELOW AVERAGE

Location	No. of Projects	Investment Mn. Shs.	Output Mn.Shs.	Employ-ment
1. Morogoro	14	164	131	3,845
2. Mbeya	29	126	120	2,020
3. Dodoma	18	61	60	1,375
4. Mtwara/Lindi	20	49	126	2,962
5. Bukoba/Kagera	1	40	15	900
6. Iringa/Kilombero/Mikumi	14	30	28	495
Total	96	470	480	11,597

* The United Republic of Tanzania - Second Five Year Plan 1969-1974 Programme for Industrial Development, Part II, pp. 130-137, by M. Peled.

The above locations will account for a third of the new projects of the Second Five Year Plan and for the same share of additional industrial employment.

As mentioned before, it will not be possible to allocate many more industries to low IPI locations during the Second Five Year Plan. Therefore, a lower priority is being given to additional towns which are located in districts well above average in respect of IPI, but much below Dar Es Salaam.

In the following table additional locations are identified in coordination with the targets of the general plan (Chapter XI of Second Five Year Development Plan).

TABLE C.1.2: INDUSTRIAL DEVELOPMENT PLAN FOR TOWNS OF MORE THAN 10,000 INHABITANTS WITH IPI ABOVE AVERAGE (Excluding DSM)

Location	No. of Projects	Investment Mn.Shs.	Output Mn.Shs.	Employment
1. Tanga	40	625	442	7,150
2. Arusha	36	160	189	3,435
3. Tabora	14	125	110	2,285
4. Mwanza	28	88	114	1,670
5. Moshi	22	47	51	1,750
Total	140	1,045	906	16,290

C.2 DEVELOPMENT TOWNS

The locations Tanga, Arusha, Tabora, Mwanza and Moshi together with Morogoro, Mbeya, Dodoma and Mtwara/Lindi are identified as Development Towns and will account for a major share of the Industrial Development Plan (76% of the total investments).

The following tables summarize the Regional Allocations of the proposed Industrial Projects.

TABLE C.2.1: REGIONAL ALLOCATION OF PROJECTS

(Second Five Year Industrial Development Plan)

Location	No. of Projects	Investment Mn.Shs.	Output Mn.Shs.	Employ-ment
Dar Es Salaam City	120	359	467	8,388
Kisarawe	5	24	22	520
Bagamoyo	6	3	5	110
Sub-total	131	386	494	9,018
Development Towns:				
Tanga	40	625	442	7,150
Arusha	36	160	189	3,435
Morogoro + Mtibwa (Sugar)	14	164	131	3,845
Mbeya + Tukuyu (Tea) + Tunduma (co-op)	29	126	120	2,020
Tabora	14	125	110	2,285
Mwanza	28	88	114	1,670
Dodoma	18	61	60	1,375
Moshi + Kilimanjaro	22	47	51	1,750
Mtwara + Lindi	20	49	126	2,962
Sub-total	221	1,445	1,343	26,492
Other Towns:				
Kagera	1	40	15	900
Kilombero + Mikumi	4	17	13	145
Iringa	10	13	15	350
Utegi (ranching)	1	12	1	180
Mafia	1	7	6	140
Lushoto + Mikombera	2	7	8	200
Njombe	4	2	3	70
Kigoma	3	1	2	70
Lake Rukwa	1	1	1	20
Bukene	2 exp.	1	2	-
Shinyanga	2 co-op	1	1	30
Korogwe	1 exp.	0.5	0.5	-
Musoma	1	0.5	0.5	10
Sub-total	33	103	68	2,115
GRAND TOTAL	385	1,934	1,905	37,625

See Table D.2.7 and Map.

TABLE C.4.2 PERCENTAGE OF GRAND TOTAL

Location	Projects	Investment	Output	Employment
Dar Es Salaam	34	19	26	24
Development Towns	57	76	70	71
Other Towns	9	5	4	5
	100	100	100	100

Above figures show that the main effort of the industrial programme is directed towards the Development Towns designated by the Government.

The projects directed to Dar Es Salaam are either expansion of existing factories or industries which have to be located there for economic reasons.

The projects directed to Tanga and Arusha Towns are either expansions or industries which have to be located there for economic reasons.

The projects directed to non-development districts are connected with local material supply.

ANNEX D

ANNEX D

ENCOURAGEMENT OF NON-AGRICULTURAL ACTIVITIES IN THE RURAL AREAS - TRAINING AND RUNNING-IN LOAN*

(A) GENERAL NOTE:

Planning in its proper sense, means taking decisions relating to the future, as when a man plans the layout of a building or the cropping programme for his land.
No doubt, decisions have sometimes to be revoked or altered; but "planning" without any element of real decision-taking, is meaningless.

(B) RECOMMENDATIONS

(1) The vicious circle of rural poverty should be broken by introducing non-agricultural activities into the rural areas. These include industrial and commercial activities.

(2) DEVPLAN requests the approval of the E.C.C. to initiate and implement the following encouragement scheme to bring industry and commerce into rural areas.

(3) To classify Tanzania's 63 Districts into 6 DEVELOPMENT ZONES (Table II). Financial assistance will be provided from Development Budget to new industrial and commercial ventures, as well as to expansions of existing enterprises, in accordance with the DEVELOPMENT ZONE in which they are to be established.

The financial assistance will be given in the form of a 25 year loan, interest free, repayable in 20 yearly installments starting after the 5th year. These loans will be given on the basis of 'a new job created' and will vary according to the kind of activity and the DEVELOPMENT ZONE from Shs. 450/- to Shs. 4800/- per new job.

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* DEVPLAN - Tanzania, Plan of Action 10/8/1968 by M. Peled.

TABLE No. 1.

LONG TERM "TRAINING AND RUNNING-IN LOAN" PER NEW JOB CREATED, RELATED TO 'DEVELOPMENT ZONES' AND ECONOMIC ACTIVITY

DEVELOPMENT ZONE	NEW COMMERCIAL ACTIVITY Employing not less than 15 people	NEW PROCESSING ACTIVITY Employing not less than 10 people	NEW INDUSTRIAL ACTIVITY Employing not less than 10 people
I	1200/-	2400/-	4800/-
II	1100/-	2200/-	4400/-
III	900/-	1800/-	3600/-
IV	700/-	1400/-	2800/-
V	450/-	900/-	1800/-
VI	-	-	-

(5) Applications for the TRAINING AND RUNNING-IN LOAN (TRIN LOAN) will be made to the Rural Development section of DEVPLAN.

N.B.C. will be requested to administer the loan through its branches in the rural areas. To cover N.B.C.'s direct costs, up to a 3% commission on all transactions will be charged. This to make the whole scheme more attractive for N.B.C.

The risks related with the loan provided should be borne by Central Government.

(C) BACKGROUND CONSIDERATIONS

Economic:

- To obtain a more equal income distribution between people living in the towns and in the rural areas.

- To limit industrial growth in the relatively highly industrialised urban centres (especially the capital city).
- To diversify the economic structure of regions or districts overdependent on a limited range of processing or other industries (Bukoba - coffee; Tange - sisal; Rungwe - tea).
- To increase the possibility of alternative employment for redundant peasants.

Social:

- To stimulate the expansion of culture in the rural areas.
- To obtain a balanced population distribution in the country.
- To encourage the rural population to settle down in communities with at least a few hundred, but preferable a few thousand inhabitants.
- To curb mobility of labour in areas with a large (population) migration surplus.

(D) HOW COULD GOVERNMENT AFFECT THE LOCATION OF NON-AGRICULTURE ACTIVITIES

1. Indirect Government Action

Government affects the location decisions of private and parastatal investors in many direct ways.

(i) Through normal legislation as far as there are geographical variations in its application, e.g. those relating to hours of work, minimum wages, safety and health requirements, fixed prices for raw materials, capital and consumer goods, etc.

(ii) Through its taxation and expenditure as far as there are geographical variations in its application, e.g. local taxation and duties, an unbalanced allocating and spending of the central Government development funds by region or

district which means that some of the important location factors, like infrastructure and social structure, are getting more developed in some regions/districts than others.

2. Direct Government Action

Direct Government action on location decisions can be exerted in several ways with a variety of effects. In this paper we only want to deal with one specific measure which - in our opinion - is very effective, low-costing and easy to implement:
The introduction of a financial incentive for the establishment of non-agricultural activities in previously determined "Development Zones."

Briefly this measure provides for the following:
Central Government designates or declares a certain number of districts in Tanzania as special development districts - grouped together in DEVELOPMENT ZONES - and provides each particular DEVELOPMENT ZONE with a special financial inducement (a so-called Training and Running-in loan) which intends to stimulate the location of non-agricultural activities in the rural areas.

As set out in the "Recommendations" this financial incentive will be given in the form of a 25 year loan, interest free and repayable in 20 yearly instalments, beginning after the 5th year.

Because this loan is designed to encourage non-agricultural activities it will only be given to entrepreneurs who are actually creating new jobs in new ventures or expanding their activities.

Investigations into the real intentions of every prospective investor are therefore a "conditio sine qua non".

The applicability and size of the loan will depend on the stage of development of the DEVELOPMENT ZONE in which the prospective investor wants to start economic activities.

The total amount of government money involved in this PLAN OF ACTION is according to a cautious estimate fairly moderate. In the period 1962-1966 Industrial Employment achieved an average annual growth rate of 2.9%. The total number of people employed in the industrial sector increased from 42,347 in 1962 to 49,000 in 1966. This means that about 1,500 new jobs have been created annually of which most of them in Tanzania's six big towns.

If we assume that the above encouragement scheme will provide annually about 1,000 new jobs in the rural areas, we can expect a total amount of about Shs. 2,000,000 is going to be invested from central government funds into the interest-free Training and Running-in loans.

However, it should be noted that the provided, interest-free TRIN LOANS are not completely without any returns. Productive industrial employment is a source of income to central and local government authorities (e.g. by taxation) which may more than compensate the waiving of the interest.

TABLE No. II: NAME AND NUMBER OF DISTRICTS CLASSIFIED BY DEVELOPMENT ZONES

Region	Development Zone No. VI Rating under 600	Development Zone No. V Rating 601-650	Development Zone No. IV Rating 651-725	Development Zone No. III Rating 726-775	Development Zone No. II Rating 776-825	Development Zone No. I Rating over 826
Arusha Region.	Arusha			Mbulu	Masai	
Coast Region.	DSM	Mzizima	Bagamoyo, Mafia, Kisarawe	Rufiji		
Dodoma Region.			Dodoma	Mpwapwa	Kondoa	
Iringa Region.			Iringa	Mufindi	Njombe	
Kigoma Region.				Kigoma		Kibondo Kasulu
Kilimanjaro Region.		Kilimanjaro	Pare			
Mara Region.			Musoma	North Mara		
Mbeya Region.				Mbeya Mbozi	Rungwe	Sumbawanga Chunya
Morogoro Region.			Kilosa Morogoro		Ulanga	
Mtwara Region.			Lindi Mtwara		Masasi	Kilwa Nachingwea Newala
Mwanza Region.	Mwanza		Kwimba	Ukerewe Geita		
Ruvuma Region.					Songea Mbinga	Tunduru
Shinyanga Region.				Shinyanga, Maswa	Kahama	
Singida Region.						Manyoni Iramba Singida
Tabora Region.			Tabora	Nzega	Mpanda	
Tanga Region.	Tanga	Pangani Korogwe		Lushoto	Handeni	
West Lake Region.			Bukoba		Bihara-mulo	Ngara Karagwe
Zanzibar Region.		Zanzibar Pemba				
Total No. Districts	4	6	14	14	12	13

(E) METHODOLOGY APPLIED FOR THE CLASSIFICATION OF DISTRICTS INTO DEVELOPMENT ZONES

1. The study of the hierarchical distribution of districts according to Development Zones mainly depends on data and information readily available by districts.

   No attempts have been made to apply a sophisticated resource allocation system like, e.g. "The Resource Allocation Method," devised by the Stanford Research Institute and therefore the criteria on which the study has been based have been selected in a rather arbitrary way.

2. The first stage started with a selection of the criteria which in one way or another are related to the development of the different districts. Each of the criteria were assigned special values depending on its level of importance, taking into consideration that the average value per criterion equals about 7. Distinguished were 14 criteria, divided into five categories.

   The high value of criterion No. 14 is based upon the assumption that districts bordering foreign (especially hostile) countries require a priority in development above other districts.* (See Table III)

* At that time Mozambique and to a certain extent Zaire were hostile and to-day of course Uganda and in a way also Kenya. - M.P.

TABLE No. III: VALUE OF SELECTED CRITERIA BY CATEGORY

Category	Criteria	Value
A. Demographic	1. Population density per square mile	9
	2. Annual population growth (1957-67)	5
B. Infrastructure	3. Distance from District H.Q. to the nearest urban centre of 10,000 inhabitants or more	9
	4. Distance from District H.Q. to the nearest Railway station	9
	5. Distance from District H.Q. to the nearest harbour	7
	6. Distance from District H.Q. to the nearest airport	6
C. Economic	7. Monetary value of Agricultural output per 1,000 inhabitants	15
	8. Number of employees in industrial establishments per 1,000 inhabitants	9
	9. Number of inhabitants per trader	7
	10. Local Tax rate per Taxpayer	5
D. Social	11. Number of places in primary schools per 1,000 inhabitants	4
	12. Number of places in secondary schools per 1,000 inhabitants	6
	13. Number of Hospital beds per 1,000 inhabitants	4
E. Strategic	14. Security: Borders with foreign countries .	10

3. In the second stage an inventory on the actual situation and performance of the selected criteria by districts, was first prepared. Based upon this information, some kind of a merit rating system was designed, in which the values of the criteria were weighed according to the actual situation or performances in the districts. Weights were allotted in a range of 5 to 10 points. An example will make the application of above mentioned method clear:

The distance from District H.Q. to the nearest airport (criterion 6; value: 6) for Bagamoyo District amounts to 45 miles. These 45 miles are given, according to the devised rating-system a weight of 6 points. The total value for criterion 6 for Bagamoyo District comes to 6 (value) x 6 (weight) is 36 points. By accumulating the number of points of each criterion for each district, we get the total value of all the criteria by district. A list indicating all these values has been shown at the end of this chapter.

4. In the third stage the groupings of the districts into DEVELOPMENT ZONES were made according to the total values achieved. Taking the view that each development zone corresponds with a certain level of development/backwardness one distinguished 6 zones (Zone I most underdeveloped, zone VI most advanced). Table II, indicating the name and number of districts by development zones has been included in Chapter D of this Annex.

For the groupings of the districts the following classification was used:

under 600 points - Development Zone VI
601 - 650 points - Development Zone V
651 - 725 points - Development Zone IV
726 - 775 points - Development Zone III
776 - 825 points - Development Zone II
over 826 points - Development Zone I

ANNEX E

ANNEX E

GUIDELINES FOR INDUSTRIAL FEASIBILITY STUDIES*

(A) ESSENTIAL ELEMENTS OF A PROJECT - PRE-FEASIBILITY STAGE

Three types of principal parties will be concerned:

1. Investors.
2. Financial Institutions.
3. Government Departments and International Agencies.

1. Elements of Primary Interest to Investors

The investor is the principal risk-taker.

1.1 Present and Potential Markets

Need to show at the pre-feasibility stage that there is a reasonable prospect of marketing the project's output. This can usually be done at moderate cost. Extensive market surveys outlining in great detail the market prospects may be required at a later date.

Dangers to be avoided:

(i) overestimating market demand;

(ii) failure to allow for natural growth during project preparation and construction;

(iii) not allowing for expansion of the project at a later stage;

(iv) ignoring possible need for import or export protection or subsidies, and the risk of losing this assistance;

(v) market acceptance of the new product.

1.2 Technical Feasibility

To establish a project's technical feasibility at this stage requires expert knowledge and judgement, which can frequently be obtained at modest cost from men with extensive working experience.

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* Source: Lecture given by author at ILACO Seminar "Industrial Promotion in Developing Countries," December 1973, Arnhem, The Netherlands.

Two dangers to watch out for are:

(i) organisations offering such advice at low or nil cost, who have an overt interest in the project, such as providing plant. These people could be useful after the decision has been made to proceed with the project.

(ii) Offers to conduct a major study at considerable cost at this stage. These should be undertaken by government departments with responsibility for resource development.

1.3 Financial Feasibility

The financial viability of a project depends on several additional problems to market and technical feasibility.

(i) inherent difficulty in projecting the future course of prices and costs.

(ii) estimating the time required for project construction and commissioning to full production.

(iii) providing funds to cover short-fall in revenue during start-up period.

(iv) arranging sources of finance to cover unexpected costs arising from delays to completion of project; and agreeing penalty clauses for delay.

(v) scheduling payments with equity and loan contributions.

(vi) security of continuance of government assistance, in particular:

- export subsidies
- exemption from import duties
- tax allowances and holidays
- investment grants
- subsidies for labour training

especially if viability is dependent on one or more of these.

2. Elements of Primary Interest to Financial Institutions

Factors which influence the decisions of foreign investors are:

(i) the size of the investment and the relative amounts needed for fixed assets and working capital.

(ii) the desirability of limiting their financial stake and obtaining local participation in the enterprise and its risks.

(iii) whether loan capital at attractive rates of interest to be repaid within a fixed time after allowing a period of grace, are available.

(iv) obtaining loans for working capital that stand for the life of the project.

(v) obtaining risk capital in the form of either loan or equity, to stimulate economic development, from local sources.

Points of particular interest to the financiers are:

2.1 Adequate Preparation

Proposed projects will be considered only if they are well defined and present evidence that all relevant technical, market and financial aspects have been given adequate consideration, and further, that there is a high probability that the venture will be profitable. The financiers do not usually require a great amount of information since they can frequently secure their loans by mortgage or the guarantee of one or more of the principals.

2.2 Security of their Investment

Special attention will be paid to:

(i) evidence that the enterprise will generate sufficient funds to meet the service charges and keep the enterprise in an adequate state of financial liquidity.

(ii) the currency in which the project's funds will be generated.

(iii) exchange control regulations and the ability and willingness of the country to provide foreign exchange for debt repayment and capital transfers.

2.3 Opportunity for Sharing in Profits

Financial institutions will frequently wish to share in the profitability of an industrial enterprise. Often it will not be particularly attractive to take up common stock because of lack of access to an active capital market.

An increasingly popular alternative is to arrange for at least part of their participation to be in the form of convertible debentures. If the enterprise is only moderately profitable, their position is secure; under more favourable circumstances, modest interest payments may be supplemented or replaced by larger dividends and capital gains.

2.4 Debt/Equity Relationship

For projects in developing countries, a debt/equity ratio of as high as three to one may be acceptable to financing institutions due mainly to the availability of funds from inter-governmental and international lending agencies. This contrasts strongly with typical commercial situations where a ratio of one to one would be considered as the maximum under normal conditions.

Unless provided in accordance with special policy, loans for working capital tend to need more security and be repaid sooner than long-term debt. Typically, less inventory is financed by short-term loans in developing countries than in developed countries. The lender may well pay more attention to the reputation of the principals than to the details of the project.

3. Elements of Primary Interest to a Government

Apart from an interest in the viability of the project itself, a Government has broader interests to consider.

3.1 Social Costs and Benefits

The study should show calculations for social costs and benefits to the host country from the project.

The costs should be based on:

- average annual earnings in their present employment of each factor to be allocated in the enterprise.
- government revenues and expenditures associated with the present employment of the factors.

Likewise the benefits should be based on payments to factors and net revenues to government arising from the project.

The excess of the benefits over the costs indicates the increment to social (or national) income that the project will generate. The ratio of benefits to costs is a valuable measure (although not the only one) for comparing the proposed project with other projects.

Indirect costs and benefits should also be discussed, such as:

- income multiplication through re-spending.
- investment acceleration through need to supply project with equipment and materials.
- up-grading of skills through the project that can be applied to other economic activities.
- creation of employment.
- less dependence on certain imports or exports.

3.2 Foreign Exchange Effects

Initially most projects will use foreign exchange, both directly for purchase of imported materials and equipment and payment of managerial staff; and indirectly for the import content of the increase in national income that will result from the construction of the project.

A well chosen project will have significant long-term exchange earning and/or exchange saving (import substitution) effects to add to the initial influx of foreign exchange by overseas investors in the project.

The net impact of the project on the foreign exchange account is the difference between these inflows and outflows. The ratio of the net foreign exchange effect to initial expenditures provides a useful measure for comparing the proposed project with other projects.

Consistency is important in evaluating projects where a developing country uses multiple exchange rates, especially at artificially high levels.

(B) PRESENTING THE CASE FOR INVESTMENT

1. General Approach

1.1 The report is usually to investors, and therefore, emphasises those aspects of most interest to them.

1.2 Financiers require a logical and written presentation, that works on the basis of currently known facts and best estimates of trends.

1.3 The report should discuss well defined projects for the investors. General surveys will seldom be sufficient to persuade investors to commit their money.

1.4 Generally, the report covers only important financial factors in any detail. Market and technical descriptions should be sufficient just to define the project. Detailed analyses and specifications are usually covered at a later stage, but if some are already available, they can be added as Appendices.

1.5 The report should state clearly its conclusions and, if appropriate, recommendations for action by the investors, e.g. a commissioning programme or a detailed study into a particularly important factor such as market prices. This should be summarised at the beginning of the report so that busy people can find it quickly.

1.6 A brief analysis may be included of the sensitivity of a project's viability to changes in parameters from the values assumed in the report. Avoid over-complicating this, keep the range of values to within expected variations, and beware giving spurious accuracy to crude data.

2. Structure and Layout of the Report

The structure and layout of the report should enable a busy executive to follow it easily, be drawn to the correct conclusions and find quickly in it any aspect that may be discussed. It is often the only record of the consultants' work, as well as an end product and therefore has a considerable influence on their image.

A suggested structure is as follows:

(i)	Cover Page	The main parties concerned.
(ii)	Contents	Contents of the Report.
(iii)	Introduction	Background to the study, its object and the scope of the report and to whom it is directed.
(iv)	Summary	The important findings, conclusions and recommendations, especially financial aspects.
(v)	Social, Economic and Physical Considerations	The Country: its people, climate, institutions, languages, state of development such as education and infrastructure, geography and politics, in order to portray to the investor the background.
(vi)	Market Appraisal	The current state of development of the Sector concerned and its projected growth rate. Competition. Seasonal effects. Prices including those taken for the project. Scope for new projects and position of proposed project. Imports and Exports.
(vii)	National Policy	Economic plans, employment policy, development and training organisations, taxation, foreign exchange regulations, partnerships with local organisations, incentives such as tax concessions, subsidies, exemptions from import duties, assistance with accommodation, local sources of finance.

(viii)	The Investment	*Definition of the project; - site,* facilities provided and their standards, breakdown of the estimated building and equipment costs and associated fees and costs of finance during construction stage. Commissioning costs. System of management and operation. Programme, especially if carried out in stages.
(ix)	Proposed Capital Structure	The Shareholders; contributors to loan capital and equity and their conditions, terms of loans, such as interest rate and repayment pattern. Source of working capital. Repatriation of foreign capital.
(x)	Trading Projections	Analysis of operating income at build-up rates of activity to full rate. Analysis of operating expenditure showing selling costs, materials, staff (numbers and costs) and over-heads. Management fees. Working capital requirements. Trading profit.
(xi)	Appropriations	Depreciation Provisions. Taxation. Renewal of Equipment. Repayment of Loans. Proposed dividends. Cash flow.
(xii)	Project Evaluation	Criteria - for the investors, e.g. internal rate of return, pay-back period, dividend rate, security of investment. Criteria - for the National Economy, e.g. foreign exchange account (savings to initial cost), investment per job created employment created. Sensitivity of these parameters to changes in values of important factors such as market prices.
(xiii)	Recommendations	The next stage - further study work or proceed with the project. Obtain certain concessions and assurances. Site acquisition. Exchange control considerations.

Appendices

- Maps and photographs.
- Tables of data supporting information given in main body of the Report.
- Discounted Cash Flow Computations.
- Copies of important correspondence or publications relating to concessions or availability of sites, plant, etc.
- Schedules and specifications for physical facilities.
- Other documentation significant for a particular project.

ANNEX F

ANNEX F

PLANNING AND IMPLEMENTATION SYSTEM FOR THE CONTROL OF A NATIONAL INDUSTRIAL PLAN. *

Background.

The successful implementation of any Development Plan is dependant on the existence of a detailed operational plan together with a system for the coordination of activities and the systematic and regular evaluation of progress.

Where there is a complex governmental structure, with a number of Ministries and semi-autonomous parastatals, the need for coordination and control becomes more acute.

The best results would be achieved if the functions of co-ordination, follow-up and control were to be carried out by a single body.

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* A report prepared by M.Peled for the Ministry of Economic Affairs & Development Planning, Dar Es Salaam. May 1970.

The establishment of a "Standing Committee" (of Ministers) makes it even more essential to concentrate these functions, since a committee can only operate successfully through an executive body which accumulates data, presents reports and follows up the implementation of the Committee's decisions.

In order to enable the Coordinating Body (The Standing Committee and the Ministry of Economic Affairs) to achieve full coordination and control, it must be provided with the following :

1. Clearly defined and sufficient authority in relation to parastatals and other Ministries, with regard to those matters for which it is ultimately responsible.

   This authority should be based on the activities which the Ministry must perform. These activities, in turn, should be derived from the detailed operational plan and from the requirements of the information system.

2. A comprehensive integrated information system, to provide data for decision making, coordination and control.

   The system must provide data for the regular and systematic evaluation of progress in each Ministry and Parastatal.

   This means that an effective procedure for reporting should be adopted throughout the entire administration. In order to make the procedure meaningful, projects and programmes should be analysed into their component parts, and realistic targets fixed for the completion of work on each section.

   The feed-back of information from the operative and implementing levels should enable the planning agency to assess the impact that delays and difficulties of implementation would have on overall plans and re-examine the targets that have been fixed.

   The review and evaluation of progress should also draw attention to shortcomings in the administrative structure, or in the capacity of particular sections, so that special urgent measures can be taken in order to maintain the planned rate of progress.

In order to obtain the maximum benefit from the implementation of theproposed information system, it is recommended that a "National Operations Room" be set up within the Ministry for Economic Affairs.

This "Operations Room" will be an instrument for the Management of the Development Plan. It will record data on the economy and present them in a manner suitable for decision making. The data will be recorded in visual form on charts and display panels, showing actual performance side by side with targets, so that short falls would be revealed in a manner that will enable prompt remedial action. These displays will contain critical information on the development programme and indicators for the performance of the economy as a whole.

The basic objective of the Operations Room will be to provide, in one central place, as comprehensive a view as possible of the activities of the economy as they occur, a view which will include such things as the progress on the investment programme in relation to planned goals, actual production of major commodities as measured against output targets, exports and imports compared with targets of foreign exchange earnings and the import programme. For this purpose, the displays will be organised at three levels; the national economic, the sectoral and theproject level.

The operations room will serve as a focal point for all work connected with theplan implementation andprogress control. As such it will be used in planning, in implementation and in expediting project execution.

At a subsequent stage, a similar Operations Room should be set up within each Ministry and Parastatal, in order to enable each to control theprogress of its own programme.

3. A suitable organisation structure.

The activities to be performed by the Coordinating Body and the requirements ofthe information system, will determine the organisation structure of the planning and control unit within the Ministry of Economic Affairs.

The recommendations regarding the planning organisation should include a description of the structure, a definition of the responsibility and authority of each function and an explanation of the appropriate work procedures.

4. Qualified Personnel.

The organisation structure, the system to be operated and the proposed work procedures, will make it possible to prepare job descriptions for all the key functions in the planning and control unit.

This will enable the selection of suitable persons, and the preparation of courses for class-room and "on the job" training.

It will also enable an assessment to be made of the need for supplementary help by outside experts in the actual operation of the system. These experts will have to work with counterparts to be trained to the point where they will be able to initiate and carry out projects on their own.

Recommended stages of implementation.

In order to develop and introduce a system for the control of the Industrial Development Plan, the following stages of work are proposed, in accordance with the attached Logical Path Diagram. (Appendix 1).

Stage A. Preparatory Planning.

This stage would include the following steps :

1. Determination in principle of therequired organisational structure, including

- Definition of the authority of the Coordinating Body vis-a-vis the various Ministries and Parastatals.
- Concept of the planning function.
- Concept of the information flow, the updating of operational plans, and the issue of instructions for corrective action, in accordance with the attached schematic diagrams (Appendices 2 and 3).

2. Determination of operational targets for the Development Plan, as the basis for the follow-up system.

- Study of the medium and long term plans and concepts.
- Analysis of the development budgets.
- Study of the planned achievements of the post.
- Definition of operational targets, based on the new Industrial Development Plan and on the relevant budget and expressed in terms of quantities, costs and time required for their completion.

3. Confirmation of the basic concepts.

- Summary of the finding and conclusions of steps 1 and 2.
- Preparation of interim report.
- Presentation, discussions and confirmation.

4. Appointment of Counterparts.

- Definition of functions to be performed by counterparts, both during the project and thereafter.
- Definition of the qualifications required for the counterparts.
- Interview of candidates and recommendations of suitable persons.

- Preliminary training of counterparts.

  In order to enable the counterparts to participate as actively as possible in the implementation of the Expert's recommendations, it is highly desirable that they be chosen as early as possible, so that special training can be given to them during Stage A of theproject.

Stage B Setting up of the National Operations Room.

This stage can only be started once confirmation has been received on the recommendations of Stage A.

1. Study of the possibilities of obtaining data from Ministries and Parastatals.

- Preliminary study of the extent of the detail in which the operational plant of the various Ministries and Parastatals are prepared.
- Preliminary study of the types of reports prepared by the Ministries and Parastatals included in the sample.
- Discussion with Department Heads on their plans to extend their reporting systems in the near future.
- Preliminary assessment of the qualification of the existing staff in the units in the sample, for work in connection with the information system.

2. Design of the Information System.

- Definition of control indicators whereby the progress of each project can be measured.
- Definition of suitable units for the measurement of achievement.
- Definition of the type and source of information required by the Coordinating Body for the control and coordination of projects.
- Definition of the required frequency of reporting, taking into account the needs of the Coordinating Body and the ability of the Ministries and Parastatals to supply data. This assessment will be based on the findings of step 1 (above).

- Design of the central information system.
- Preparation of detailed work procedures for the provision of information by the Ministries and Parastatals to the Coordinating Body.
- Preparation of detailed work procedures for the operation of the central information system.
- Definition of personnel required (number of persons needed, qualifications, experience) to operate the central information system. This assessment will be based on the organisational structure and the work procedures.

3. Design and Provision of the Physical Facilities required for the Operations Room.

- Preliminary planning of the equipment (display panels etc)., and the layout of the Operations Room.
- Detailed planning.
- Design of printed forms.
- Ordering of equipment and forms.
- Supervision of the execution of work on equipment and forms.
- Supervision of the assembly of equipment in the Operations Room.

4. Preparation of Manuals.

- Preparation of detailed Organisation and Instruction Manuals, describing :

  a) The organisation, responsibilities and authority of the Coordinating Body, and of the information unit in the Ministry of Economic Affairs.
  b) All work procedures connected with the information system, including the activity of the National Operations Room.

Stage C. Manpower.

1. Staffing and Training of Information Units.

- Advice on the choice of staff for the information units in the various Ministries and Parastatals, with reference to the requirements as specified in Paragraph 2 of Stage B.
- Preparation of training courses for class-room teaching.
- Preparation of a programme for "on-the-job" training.

- Presentation of courses to selected candidates.
- Examination of candidates on the completion of the courses.

NOTE : The courses would include relevant subjects, for examples :

- Scheduling
- Critical path analysis
- Statistics
- Introduction to data processing
- Forms Design
- Reporting Techniques

The exact content of the courses and their duration, would be determined in the light of the level of knowledge of the candidates.

2. Planning Units.

There is always a shortage of qualified planners in the Ministries and Parastatals. This shortage of skilled personnel will hinder the achievement of optimal results from any Development Plan.

Since the proposed control system aims at a balanced development of both the control and planning functions, we would recommend that a training programme for planning personnel be instituted.

Since the process of development of human resources is, of necessity a very slow one, it is essential that such a training programme be started as early as possible. Such a training programme should include subjects such as :

- Project planning
- Project evaluation-cost effectiveness studies
- Programming
- Capital budgeting
- Allocation of scarce resources
- Cost accounting
- Long range planning

The exact content of the courses and their duration should be determined after studying the level of knowledge of the available personnel.

Stage D. Design of Information Systems for the Ministries and Parastatals.

1. Statement of the Problem.

It is clear that both for purposes of proper reporting to the Coordinating Body, and of improved managerial control, it is desirable that the information system of the operative Ministries and Parastatals be brought to an optimum level.

Should this work have to be done exclusively by outside Consultants, it would take an excessive amount of time, and be exorbitantly expensive.

2. Recommended Approach.

The detailed planning in each Ministry and Parastatal be carried out by the counterparts, who will be trained and guided as described in Stage C.

In order to fully understand the existing conditions, to provide a fully worked out example ofa comprehensive information system and to coach the counterparts, one should undertake the planning of such a system in at least one Ministry and one Parastatal.

3. Programme of Work.

The detailed design of the comprehensive information system in the selected units, would include the following steps :

- Definition of the operational targets of the Ministry.
- Definition of the key factors in theoperational plan which must be followed up.
- Detailed planning of the information system of the Ministry.
- Preparation of detailed work procedures for the operation of the system.
- Training of the personnel in the operation of the system.
- Planning of the visual aids required for the Operations Room of the Ministry.

- Implementation of the system by the counterparts.
- Summary and evaluation of results achieved, as a basis for training of counterparts and preparation of work programmes for the remaining units.

Stage E. Implementing the National Operations Room

- Preparation of a step-by-step implementation programme for the introduction of reporting and follow-up on the following levels :

  - Project
  - Sectoral
  - National economic

- Actual implementation by experts of the Operations Room and the counterparts acting as assistants.
- Provision of on-the-job training to the assisting counterparts.

NOTE : At the first stage of implementation, the data which will be used will be whatever can be obtained from the Ministries and Parastatals, in accordance with the requirements, as specified in Paragraph 2 of Stage A (Determination of Operational Targets), and Paragraph 2 of Stage B (Planning the Information System).

The type of information available will be improved as a result of work by the experts and their counterparts in the Ministries and Parastatals. (Stage D).

- Improvement in the information system and in the methods of presentation of data in the Operations Room, in the light of the experience gained in actual operation.
- Provision of supplementary training courses, for the staff of the information units of either the Coordinating Body or the individual Ministries and Parastatals, as deemed necessary.

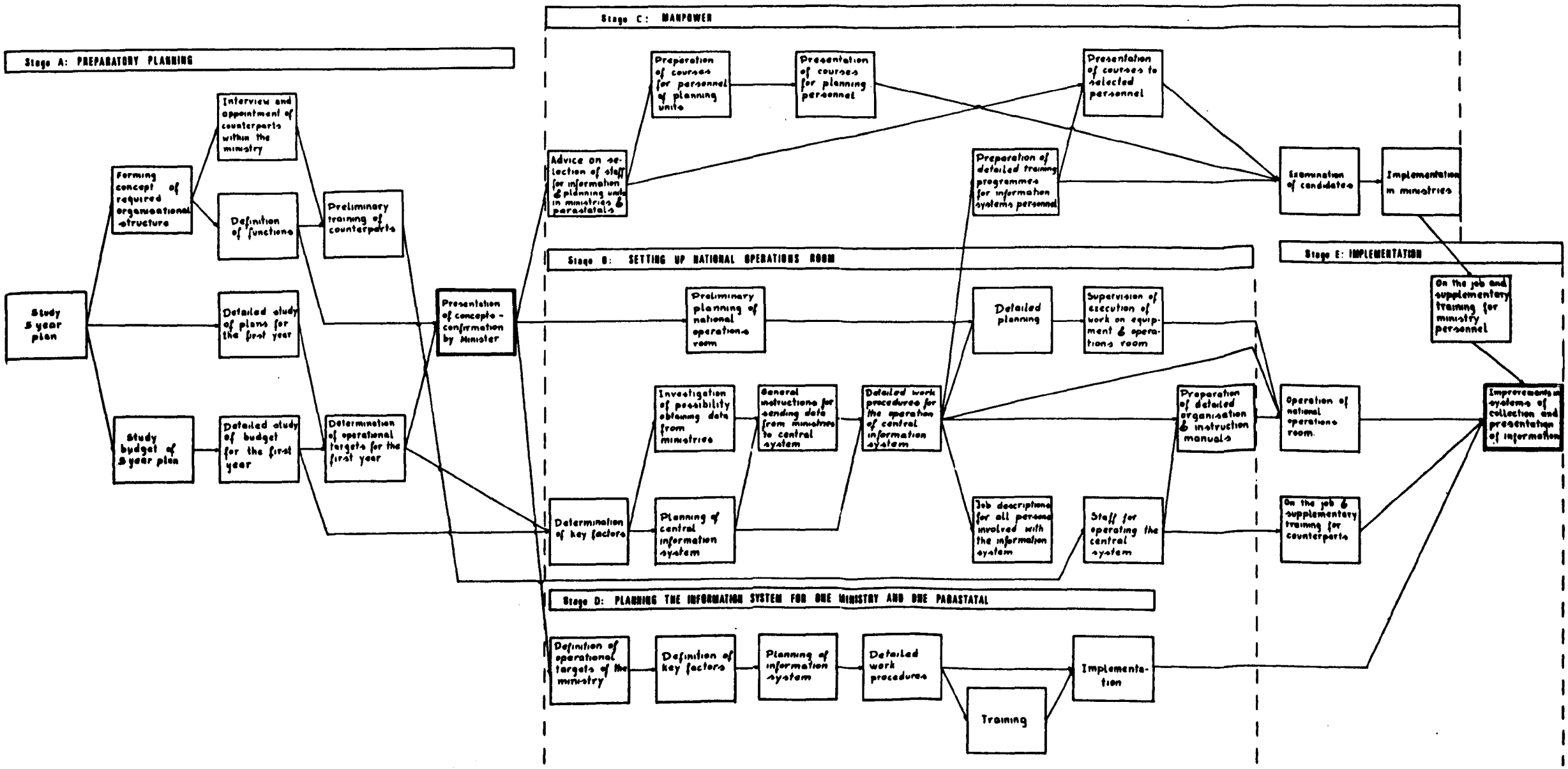
Appendix 1 - Logical Flow Diagram for Project Implementation

Appendix 2 - Schematic steps for design of the Information System

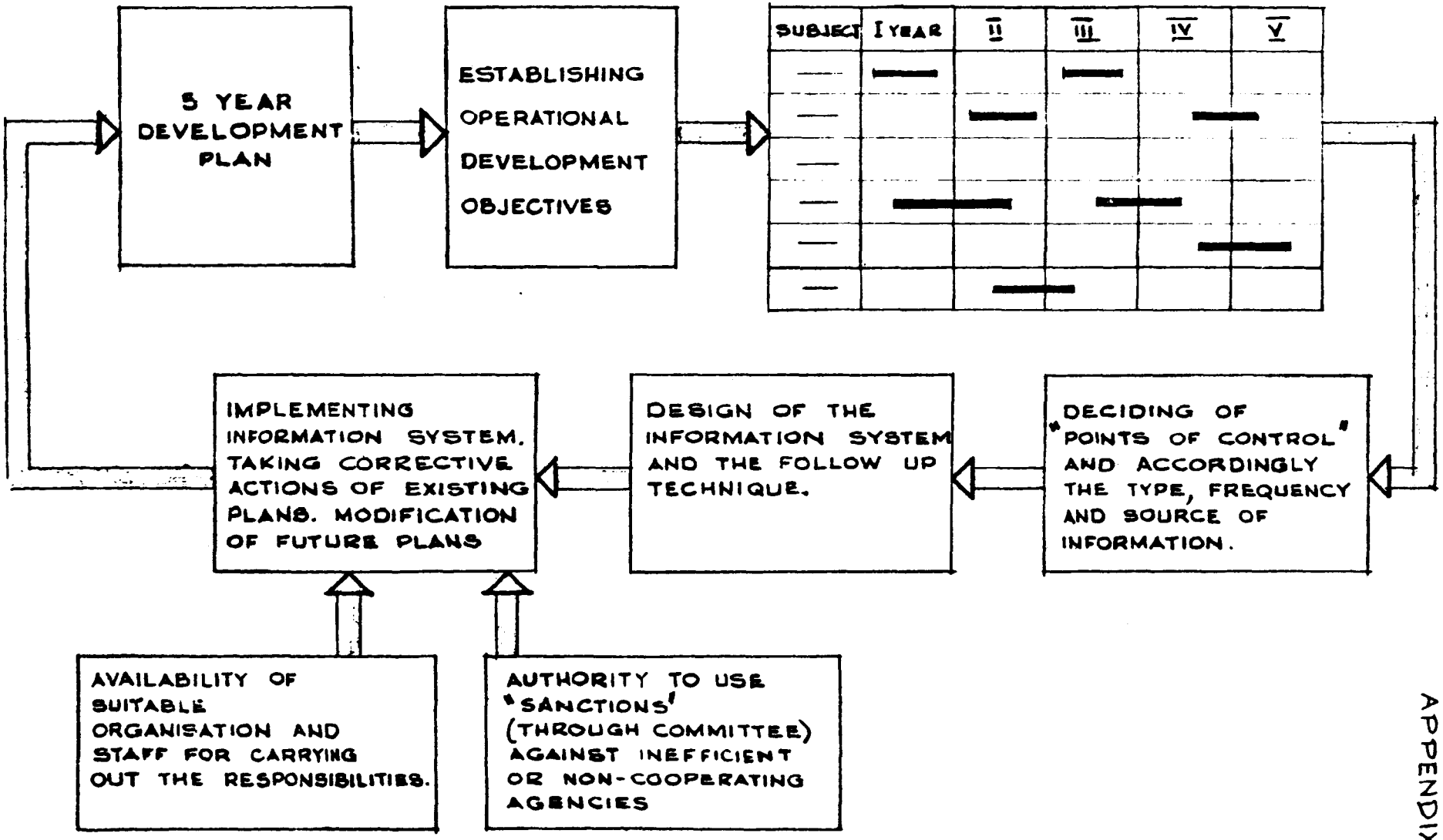
Appendix 3 - Schematic plan for the Information System for Co-ordination & Control.

APPENDIX 1

LOGICAL FLOW DIAGRAM FOR PROJECT IMPLEMENTATION.

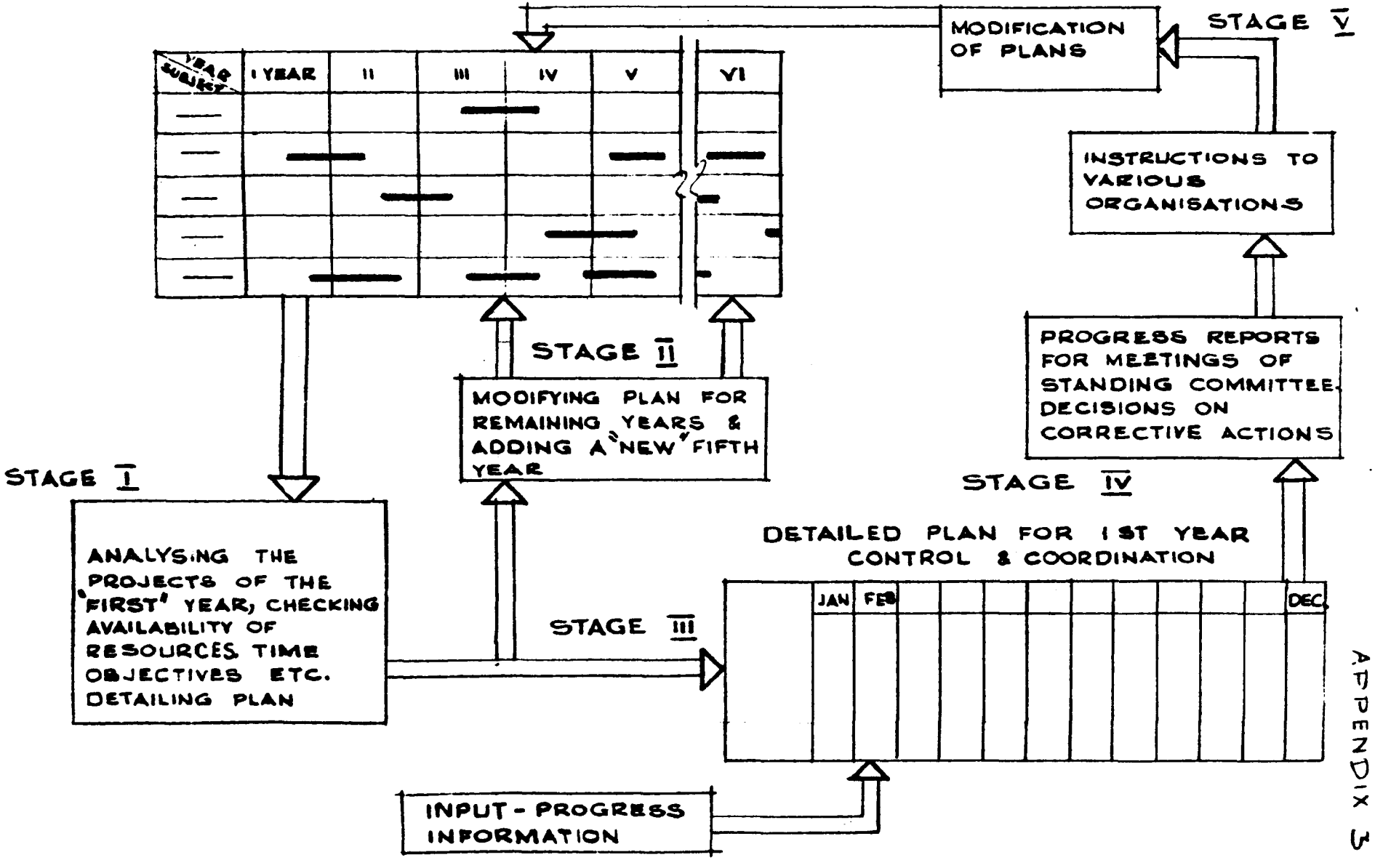


SCHEMATIC STEPS FOR DESIGNING THE INFORMATION SYSTEM



APPENDIX 2

SCHEMATIC PLAN FOR THE INFORMATION SYSTEM FOR CO-ORDINATION AND CONTROL



APPENDIX 3

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