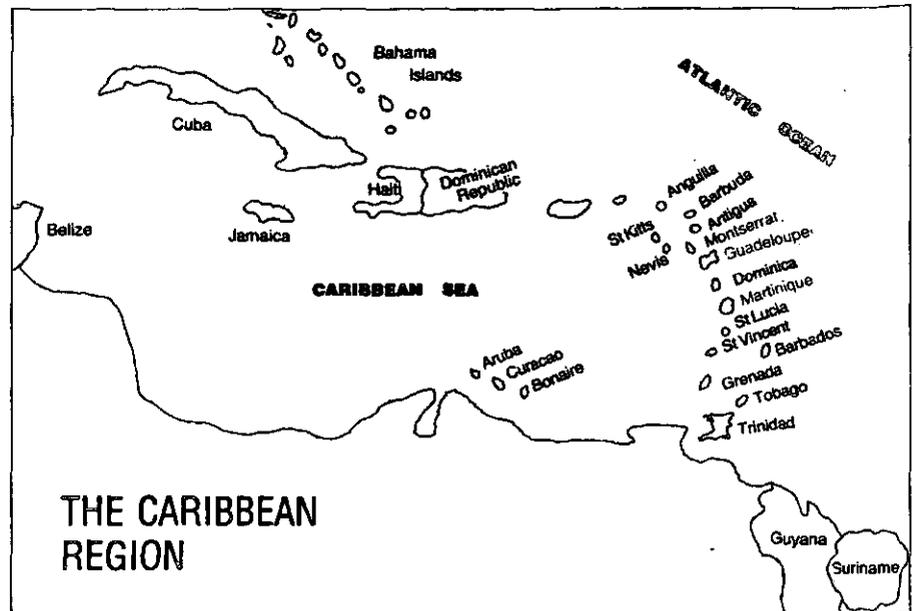


CARIBBEAN
DEVELOPMENT
AND
CO-OPERATION
COMMITTEE



CDCC/PWG:M/81/3

Distribution: Limited

11 August 1981

ECONOMIC COMMISSION FOR LATIN AMERICA
Office for the Caribbean

CARIBBEAN DEVELOPMENT AND CO-OPERATION COMMITTEE
AD HOC WORKING GROUP IN MANPOWER PLANNING

First Meeting of the Ad Hoc Working Group
for Manpower Planning

THE BASIC SITUATION IN MANPOWER PLANNING
IN CARIBBEAN COUNTRIES

by

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UNITED NATIONS

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THE BASIC SITUATION IN MANPOWER PLANNING

IN CARIBBEAN COUNTRIES

SECTION I

The Manpower Planning Framework of the countries that comprise the member states of the Caribbean Development and Co-operation Committee must be seen against the characteristics of their economic structure and their economic performance in the more recent past. With few exceptions, these countries are heavily dependent on a limited range of exports of primary products agricultural and/or mineral: latterly tourism and the export of light manufactures have lent some variety to this circumscribed list. Their growth rates are usually constrained by the experience of the export sector which provides the wherewithal for imports of capital goods, intermediate inputs and final demand consumer goods. The importance of this characteristic is generalisable throughout the entire range of the ideological and political spectrum from market-oriented economic systems to socialist or collectivised economic systems.

The international economic environment has not been particularly propitious to countries with such export regimes in the recent past. The demand for agricultural products like sugar, bananas, cocoa and coffee has not been buoyant. The only oil exporter, Trinidad and Tobago, has enjoyed a large unexpected windfall with the hike of oil prices following on the Arab-Israeli conflict of 1973. No such fortune has attended the mineral exporters: Suriname, Guyana, Haiti and the Dominican Republic in respect of Bauxite/Alumina and Cuba in respect of nickel. Tourism has been subject to the normal fickleness, contributing well to the development of Barbados but far less so to Jamaica because of the political tensions that beset the country in the latter years of the 1970's.

All these factors have generated a sense of gloom which pervades much economic thinking in the region, and have created enough disillusionment in some circles on the efficiency of economic planning in the face of so many variables over which planners have little discretionary power. The doubts that attend overall economic planning have cast a long shadow on

the more specific areas of planning, including manpower planning.

Whereas the nineteen sixties can be associated with a concern for economic development, the nineteen seventies were perhaps more synonymous with a preoccupation on the nature of the state, localisation of decision-making and the impact of divergent ideological orientations on the structure and performance of these economies. The major issues that have bedevilled economic planning in the 1960's and 1970's have remained almost as intractable. Low growth rates in G.D.P., unemployment, under-employment, inequality in distribution of income, segmented labour markets, balance of payment difficulties, structural transformation are as typical today as they have been in earlier periods. But to this list, the nineteen seventies have added the oil crisis and its attendant inflation which, besides creating havoc in efforts to solve the earlier problems, have had the important effect of galvanizing states into fashioning clear-cut positions on the major issues and identifying the specific model of development to pursue.

For the purpose of the present exercise, it is useful but not obligatory, to examine the size of the potential labour force in the region. The potential labour force is a function crudely of demographic factors on the one hand, viz birth rates and mortality rates, and on the other hand, of social and institutional factors like participation rates, the structure of the family, immigration and participation in the educational system. Data do not allow for an exhaustive analysis of all these factors. Thus we shall merely note some general tendencies.

DEMOGRAPHIC FACTORS:

The peculiar population structure of the Caribbean Countries, by and large, has created the parameters which must inform a manpower planning framework. It is appropriate therefore, to assess, albeit briefly, the demographic characteristics of the region since these will determine manpower availability through time. The following Table gives the distribution of population estimated for 1974 in the Commonwealth Caribbean.

TABLE 1.1

POPULATION, LAND AREA AND POPULATION
DENSITY FOR COMMONWEALTH CARIBBEAN, 1974

COUNTRIES	POPULATION	PERCENTAGE	LAND AREA	DENSITY
Jamaica	2,017,191	43.5	4,410	457
Trinidad + Tobago	985,828	21.2	1,980	498
Guyana	768,242	16.6	83,000	9
Barbados	237,193	5.1	166	1429
Windward Islands	370,853	8.0	821	452
Leeward Islands	137,180	2.8	303	379
Belize	132,456	2.9	8,866	15
All Countries	4,648,143	100.0	99,546	47

SOURCE: S.B. Chernick (1978) Table 3.1

If the population grew overall by 1.4%, the Commonwealth Caribbean would have had a population of just over 5 million in 1980. It is evident that there is some variation in the man land/ratio, a factor not without relevance to labour mobility in years to come.

*Why not use ...
are ...
Cuba*

The entire region is characterised by the youthfulness of its population. Chernick (1978) estimated that 46% of the population of the CARICOM member states were under age 15. It is estimated by the World Bank that the population of Cuba was about 10 million in 1980. The population of Suriname at last Census (July, 1980) was estimated at 352,041 of which 39.09% were less than 15 years of age. The situation is likely to be even more acute in the Dominican Republic and in Haiti, for each of which the population were estimated at 5 million in 1980.

Most of the countries are entering the phase of the demographic transition where the rate of natural increase in population would have started to slow. Mortality rates have been falling, but so has fertility. Barbados is in the forefront of this trend. There has also been a substantial decline in the crude birth rate and fertility rate in Trinidad and Tobago and St. Kitts. However, because of the post-war baby boom and because of the recency in the adoption of family planning in most of these countries, the population and the labour force in particular is, and will be youthful for short and medium terms. The major implication is that if participation rates are to be maintained, a substantial expansion in the number of jobs will be required. Since the countries with a few exceptions, have a highly urban bias, the employment problems of the future will be reflected in terms of open unemployment and under-employment in formal activities rather than in under-employment in subsistence agriculture. ✓

MIGRATION:

No discussion of the population and labour force in CDCC Countries can ignore migration, emigration and immigration, both of which have had tremendous impact on these countries. We have confined ourselves to the more recent past. The Commonwealth Caribbean experienced massive emigration in the 1960's, firstly to Britain prior to the enactment of Legislation in that country that required Commonwealth citizens to get entry permits, and then secondly, to North America, where manpower shortages had emerged in the mid-1960's and where there was some relaxation in the Legislation of

which large number of West Indians took advantage. The pull of North America and the push of the trying circumstances in these countries continued into the early 1970's. The rise of employment above normal levels in North America slowed the exodus at the receiving end. By and large, the departing migrants comprised a substantial proportion of the professional, technical and skilled manpower of the region.

There have been divergent experiences in these countries, which should be noted. It is only just over one year, that the unrestricted entry Surinamers enjoyed vis a vis Holland was ended. Here again, highly trained manpower constituted a significant element in this migrating flow. Haiti has suffered perennial losses to the United States as the so-called "boat-people" seek a higher standard of living in the United States where there are about 400,000 Haitian Emigrants. The South Eastern United States, specially the State of Florida, has been the main locus of such migrants, many of whom have been integrated into the labour intensive sectors of the economy.

The exodus from Cuba following on the events subsequent to the storming of the Peruvian Embassy has resulted in the loss of some skilled and professional cadres to the United States. However, this exodus does not compare with the losses experienced in the earliest years of the revolution and its impact is likely to be marginal, given that the Cuban Economy is far better provided with high level manpower today. Jamaica also suffered large losses during the difficult years of the 1970's following the oil crisis. Guyana also suffered large losses to North America but was well to Suriname, where a number of skilled cadres have found employment in fields in which Surinamers are not interested or are not skilled.

The Guyana-Suriname flow is not only the intra-regional movement. Trinidad + Tobago has attracted people from the Eastern Caribbean in the wake of the buoyant economic climate it has enjoyed because of its oil revenue and the heightened economic activity deriving from a number of projects that are to be or are being implemented. Haitians have constituted a migrant worker component in the labour force of the Dominican

Republic, for some time now. Barbados receives a regular contingent of Vincentians during sugar crop time.

While there may continue to be opportunities for intra-regional movements, possibly even officially promoted, the mood in the North Atlantic Countries is hardly likely to be well disposed to this large scale entry of people from the Caribbean Basin. The losses due to emigration are likely to be considerably reduced. At the same time, the manpower available will increase and so too will the demand for jobs, a result presumably beneficial to small countries whose major endowments are its people, provided the complementary capital and the markets are available.

PARTICIPATION RATES:

A few general comments can be made on participation rates. Firstly, the substantial increase in educational opportunities has affected the age-specific participation rates for both men and women. For example, in respect of Trinidad + Tobago, the age group 15-19 showed a falling off in participation between the early 1970's and the end of the decade, from about 42% to 39%. The overall participation rate had not changed however, and remained at 60%, thus implying an increase in participation in other age groups. An examination of the 25-34 age group shows that while participation rates for males remained stable, there was a noticeable increase in the participation rates of females in this age group. The decline in fertility and the improvement in the level of education have increased the participation rates for women and consequently, the total participation rate for Barbados, a trend that can be anticipated for the other countries, abstracting for the discouraged worker effect on the labour force. In countries where females constitute a significant number of household heads because of the nature of the West Indian family structure, the discouraged worker effect does not function in the same way as in the North Atlantic. In effect, some proportion of women workers is part of the primary rather than secondary work force.

There is a growing interest on the part of some countries, on the development of a population policy and in any event, in an increasing number of countries of the region, women's groups are asserting their rights and their roles in the development process, factors which would impact positively and directly on the labour force participation rates of women.

In spite of substantial emigration, there has been an increase in the size of the labour force for the countries for which we have data. Jamaica, Barbados, Suriname and Trinidad + Tobago showed an expansion in the labour force for the latter years of the 1970's which trend is presumably general to all the countries. To the extent that the economy was unable to generate jobs on a scale comparable to the expansion in the labour force, there would have been a consequential increase in unemployment. The level of unemployment in Jamaica rose from about 22% in 1973 to over 30% in 1979.

MODELS OF DEVELOPMENT:

All these countries are embarked on models of development which are expected to widen their productive base, to eliminate the monocultural dependence that colonialism and metropolitan domination had imposed on them as overseas extensions of the metropole. The major manpower problem they face is in respect of the creation of jobs, the reduction of structural unemployment and the elimination of segmentation of labour markets and consequential inequity in income distribution. The programmes and policies for so doing, diverge primarily on the basis of ideology. On the one hand, there are those countries which still assign a major importance to foreign investment in the creation of new productive capacity either for export-promotion or for import-substitution. The underlying assumptions are:

- (a) Foreign investors increase the pool of investible resources,
- (b) Foreign investors are likely to have easier access to export markets not normally available to local entrepreneurs who would have examples available for emulation.

These are the tenets of the so-called Puerto Rico model that was given academic blessing by Arthur Lewis (1950), who argued that over-populated island economies, short of capital, had no other recourse if they were to develop, but to invite foreign capital in to tap the vast supply of labour services available for the production of exports for metropolitan markets. The latter-day examples of this model are some countries South East Asia like Hong Kong and Singapore, which have experienced rapid growth through the development of export-processing industries. Many of the Caribbean countries, especially the smaller ones, are pursuing some modified version of this model in their attempt at structural diversification and growth: there is, in fact, a high degree of competition among the countries to attract foreign capital through generous fiscal arrangements like tax-holidays and remission of customs duties on equipment and inputs. Unfortunately, some of the firms responding are foot-loose in nature, shifting to new countries as tax-holidays end or as greater incentives are provided by other countries.

This open-ended reliance on foreign capital has been criticized in some academic circles as merely serving to deepen the problem of dependent underdevelopment that existed in the golden age of the plantation. The more recent literature on technology transfer in the Caribbean has served to emphasize the real difficulties inherent on the dependence on foreign investment. Girvan (1979) has argued that the most crucial characteristic of technology in the Caribbean is its "import intensity", which relates to the high dependence on imported manufactured intermediate and semi-finished goods. The pattern of production has often been inconsistent with the resource endowments, particularly the human resource endowments of these countries. In many cases, according to Best et al (1979), the technology has supplanted artisanal establishments using more labour-intensive technology and has therefore, generated net unemployment. Taxes foregone are excessive relative to the benefits created. The transfer of knowledge and expertise to nationals and to other sectors of the economy may turn out to be inconsequential especially where, as seems to be the case in some countries,

the emphasis is on processing of semi-finished products, e.g. electronics in enclaves or processing-zones. While output of such activities is for export markets, these were not the kind of export markets that were earlier envisaged by planners. The tendency is for firms involved in such activities to use cheap unskilled female labour with little else but their wages redounding to the credit of the local economy. On the other hand, it can be argued that however short-lived such enterprises, they generate the learning environment required for an industrialising country exposing the labour force to new systems and conceptions of time and productivity. In spite of the attendant problems, this model is very much in vogue and has, as we shall see, certain implications for manpower planning.

There is a smaller number of countries that have embarked or are embarking on a different path to transformation: Cuba represents the most strident departure from the classical model, with statist or mixed systems of state and private enterprises of Guyana, Trinidad + Tobago and Jamaica, up until 1980, falling somewhere in between. Grenada, which ideologically embarked on the socialist path of transformation, does not as yet show much structural differentiation from the capitalist model.

It is clear that economic planning and as well manpower planning will be informed by the ideological orientation of Governments, and will reflect the extent to which Governments ascribe to themselves a passive or active role in the management of the critical variables or whether they see variables as parameters. Thus, even though Cuba reflects perhaps as much of a monocultural dependence on sugar exports as Saint Lucia on banana exports, the former exercises far greater discretionary control, not simply in the production of sugar itself, but in the development of its by-products, e.g.

cattle feed, etc., than can be noted for St. Lucia. This distinction which, at first blush, may be regarded as a mere nuance in policy, has decisive implications. This report will focus only on the ramifications for manpower planning.

For the purpose of the present exercise, a crude typology shall be adopted, not because of its intrinsic value, but rather because it will

greatly facilitate the analysis of the manpower situation and help in identifying some of the approaches that countries may care to adopt in the short and medium term, consistent with the ideological orientation of their governments. One can distinguish among:

- (a) Fully private market economies,
- (b) Collectivised or socialist economies,
- (c) Mixed systems of production.

The dividing line between (b) and (c) is very difficult to demarcate and is therefore, purely a function of researcher interpretation and bias. The second model is exemplified only in Cuba. Guyana, in which the state reportedly controls 80% of the economic activity and Trinidad and Tobago, where a large state capitalist sector has emerged, are here considered examples of the last type even though there are important differences, both ideological and in the actual functioning of the economies of these two countries. Barbados may be regarded as the epitome of the private market based system, but it should not be assumed from this that the state eschews involvement in directly productive enterprises.

The relevance of the above typology is seen in our hypothesis that the greater the role of the state, the larger is likely to be the role of economic planning in the functioning of the economy, and the greater the confidence with which manpower planning can be linked to economic planning. There are other competing typologies that might have been used. For example, on the basis of some composite of population and land area, an entirely different approach might be applicable using size as a criterion. For present purposes, we shall concentrate on the manpower experiences of the three (3) types of countries we have identified above. Because of the difficulties of securing good data, secondary sources have been utilised in many cases. If we succeed in identifying the major characteristics of each prototype, the typology would have served its purpose.

SECTION II

In this section, we turn our attention to the countries that either eschew, as a conscious policy, active state involvement in directly productive activity, or have not yet embarked on such a road to development. Here the Government's role is conceived simply to provide the conditions and the infra-structure on which the Private Sector Enterprises will generate the income and the employment. Again, our typology is not to be accepted as watertight. In this group we include Barbados, the so-called L.D.C.'s of CARICOM, Belize, the Dominican Republic, Haiti and the Dutch Antillean Islands of Curaçao and Aruba.

Only a few of these countries were visited during the course of the mission and the questionnaire which sought to glean the relevant data was answered by only one country, Belize. The published data on those latter are too limited to admit of a comprehensive analysis on the basis of secondary sources. Even some of those countries that have been visited are short of critical data, which factor constrains us to discuss issues in general rather than in specific terms.

BARBADOS:

Except for Trinidad + Tobago which is favoured with oil resources, the economy of Barbados stands out among CDCC Member States in respect of its performance over the latter years of the 1970's. It is estimated that Real Gross Domestic Product expanded at over 5% on average for the period 1976-1980. The sectors Manufacturing and Tourism were the prime contributors to this expansionary trend. Manufacturing contributed 12% of Real G.D.P. in 1980, and Tourism 14%, as compared to 9% in respect of both in 1971. At that time Sugar also contributed 9% of Real G.D.P. as compared to 7% in 1980. In effect, therefore, the economy of Barbados was not only growing, but was demonstrating some amount of structural transformation over the decade 1971-1980. In some circles, the performance of Barbados is likened

to that of Singapore. The explanatory factor behind the growth in exports of manufactured goods has been the country's export promotion programme to North America, Europe and Trinidad + Tobago. Electronic components, processed food, and wearing apparel are the major items involved. The Government has encouraged the inflow of foreign capital and much of it has been of the export processing type. This feature makes the manufacturing sector highly susceptible to fluctuations in market conditions in North America, for example. The point here is that the sector grew and generated incomes and jobs over the period helping Barbados to escape the pitfalls of the monocultural trap.

The Tourist Industry was the subject of a major expansion also. Not only did hotel capacity increase, but as well the occupancy rates, up to 68.9% in 1980 from 40.9% in 1975. Total Tourist Arrivals increased from 221,500 in 1975 to 370,000 in 1980. The average length of stay increased from 8.6 days in 1975 to 10.2 days in 1980. Barbados has also been successful in the diversification of its Tourist Market and has been promoted in the rest of the Caribbean such that in the off-season when the North Atlantic inflow is at an ebb, the hotels cater for an increasing number of West Indians who elect to take their annual vacations with in the Caribbean.

MANPOWER PLANNING SITUATION:

The effect of these economic growth trends has been that the level of unemployment has been falling, and was estimated at 12.6% in 1980 as compared to 15.6% in 1976. Barbados has enjoyed low rates of population growth for decades and it is estimated that the population actually started to decline as of 1977. The labour force has shown some growth, due in large measure to an increased level of female participation which was estimated at 56.0% of the adult female population in 1980. Table 2.1 gives data on the population and labour force for selected years. It would appear that the major growth in the labour force in the foreseeable future would continue to derive from increases in female participation.

A substantial degree of segmentation already exists with women concentrated in the area of light manufacturing, assembly operations, and garment manufacture, a factor which will pose some problems for Manpower Planning in the future. Some preliminary work by Durant-González (1981) suggests that the skills acquired in such industries are of very limited utility and should these footloose industries seek better conditions elsewhere, the female workforce cannot be easily transferred to other more dynamic industries. In other words, these export-processing, final-touch industries provide no technical transfer to nationals, and the only credit accruing to the country is the wages paid to female workers, which may not turn out to be cost-effective, having regard to Government's investment in the provision of infra-structure and other services to the subsidiaries of foreign enterprises that merely allocate the labour-intensive, and drudgery-intensive aspects of production to small developing countries.

Unpublished data of the Barbados Statistical Services show that in the year 1977, the last for which such tabulation are available, garment workers had some of the lowest average wages in the economy, followed closely by some areas of light manufacture. As Caribbean Countries supercede the problems involved in the satisfaction of basic needs, the higher needs for

self-fulfillment in the work place will emerge soon as a problem for Manpower Planning. (Henry, 1981). For the immediate future, the expansion of employment is far more critical.

TABLE 2.1

<u>YEAR</u>	<u>POPULATION</u>	<u>LABOUR FORCE (FEMALE)</u>		<u>UNEMPLOYMENT RATE</u>
1976	251,100	104,100	(46,000)	15.6%
1977	253,300	104,600	(46,000)	15.7%
1978	253,100	102,600	(46,500)	13.4%
1979	254,300	109,000	(50,500)	12.8%
1980	249,000	114,800	(52,700)	12.6%

SOURCE: Table X, Barbados Economic Report, 1980

TABLE 2.2

EMPLOYMENT AND TARGETS, 1983

	<u>EMPLOYMENT (000)</u>	
	<u>1978</u>	<u>1983</u>
Labour Force	102.6	111.1
Employed	88.3	102.7
Unemployed	14.1	8.7
Unemployment Rate	13.9	7.8
Agriculture and Sugar	8.5	8.5
Construction, Mining and Quarrying	7.5	9.5
Manufacturing	15.1	20.0
Transport and Public Utilities	5.6	6.0
Distribution	17.0	18.8
Services (Government, Tourism and Other)	34.6	39.6

SOURCE: Barbados Statistical Service and Ministry
of Finance and Planning

In Table 2.2 are presented the Employment Targets of the 1979-1983 Development Plan. It is significant that the labour force in 1980 already exceeds that predicted by the Plan for 1983 - 114,800 as against 111,100, and the number of persons employed in 1980 stood at only 2,100 less than what is predicted for 1983, 100,300 in 1980 versus 102,400 for 1983. The Plan anticipates that the Manufacturing Sector will make the largest contribution to employment growth, but with significant support from the Services Sector and Construction. According to the Plan, employment in Agriculture would remain constant. The dependence of sugar-cane harvesting on imported labour, would signify a probable fall in the labour force in Agriculture. There is every likelihood that on the basis of current trends, the country will surpass the overall employment goals set

in the Development Plan.

There are, however, issues additional to the problem of labour market segmentation, and of expanded female participation rates that need to be noted for their relevance to Manpower Planning. Firstly, the manpower implications of the Development Plan are still to be fleshed out in greater detail. At the present time, the responsibility in this regard resides with the Barbados Institute of Management and Productivity (B.I.M.A.P.), which is co-ordinating the work of a number of Departments. The major problem has been the inadequacy of data, and the unavailability of the more recent Census Data. B.I.M.A.P.'s has had to rely on the 1970 Census Data and the forthcoming 1980 Census Data are required for testing the earlier estimates.

It seems that, in addition to the macro-economic estimates from which the projections to 1983 were derived, there is need for such macro data as can be gleaned from tracer systems on graduates of the various types of training, full and part-time, that are being mounted and from the actual investment by sector as can be had from the data collected by the Central Bank on the distribution of loans by the Banking System to the various economic sectors.

The major weakness in Manpower Planning in Barbados stems not so much from lack of data, but rather from the failure to utilise all the available data with which Barbados is already well-endowed. Given that the Government's role is to promote development through direct and indirect stimuli to the Private Sector, Manpower Planning requires the utilisation of a number of information sources to ensure that no area of the economic system is starved of relevant manpower and, at the same time that the labour resources of the country are fully utilised. A manpower information system is therefore, required to link up with such Institutions or Departments, like the Industrial Development Corporation, the Barbados Development Bank, Business Organisations, Employers' and Workers' organisations, the National Insurance System, the Ministry of National secu-

rity and the Central Bank, all of which are not normally regarded as the natural purview of Manpower Planners. It is assumed that the Manpower Planning Unit that needs to be established, not necessarily under B.I.M. A.P. will be linked in the normal course of events with the educational and training systems, and with the Ministry of Labour and the Statistical Service, which latter already runs a Continuous Sample Survey of the population and an Establishment Survey.

The link between the Manpower Unit and the Industrial Development Corporation and the Barbados Development Bank will not be a one-way flow of information. These Institutions need to be sensitised to the manpower implications of the technological sequel to the investment decisions they promote. It is quite possible that a number of decisions that are incompatible with stated objectives on employment, on technology-transfer or on resource utilisation, do get taken and implemented.

For the rest, it can be stated that Barbados is developing a reasonably reliable system of data collection which Manpower Planners will be able to exploit to advantage. For example, the Ministry of Labour is developing an Occupational Classification System so that good data can be prepared on occupational training, on the changes in the occupational structure, on the wage structure and on the more specific areas of job placement and job vacancies. With some important adjustments, Barbados will have achieved the wherewithal to operate the system required for its current approach to Economic Development and Manpower Planning.

CARICOM L.D.C.'s:

For the most part, the L.D.C.'s of the CARICOM have had trying times in the latter years of the 1970's. Here small size and monocultural dependence demonstrate the fullest challenge to the efforts at structural transformation. Traditional export markets for their agricultural products, have been depressed or stagnant and non-traditional agriculture has not made, with minor exceptions, the strides earlier anticipated. In some of the countries, income from tourism has helped to improve the economic picture of sluggish growth in exports. The continuing increase in the price of oil and the growing dependence on food imports, have exacerbated their balance of payments problem. The well-known difficulties created by a limited resource base, concentration of foreign exchange earnings in one or two products, paucity of local capital for investment purposes, inequality in the distribution of income and of wealth, the tendency to concentration of land in a few hands, and excessive parcelisation into uneconomic and unviable plots of less than five acres create a difficult situation for economic planning, let alone Manpower Planning. To compound an already bad situation, some of the countries have had more than their fair share of the ravages of nature - Hurricanes in Grenada, Dominica and St. Lucia and a volcanic eruption in St. Vincent.

The latter years of the 1970's also witnessed a serious decline in confidence of the regional integration effort which is a sine qua non for the longer term development of the smaller states if not all the states. The oil crisis triggered off a wave of myopic protectionism in some countries, which badly hurt the development thrust that was to materialise in the L.D.C.'s. The distribution of industries, and the very process of decision-making at the regional level have created even more friction among the states, leading to the dissipation of official energies on trite problems. Latterly except for Grenada, there has been a renewed interest in the development of export-processing zones geared for extra-regional

markets. The goal is to attract foreign entrepreneurs to utilise the available labour services. With technical assistance from the UNDP, an economic development plan for the period 1982-1986 for St. Vincent is being formulated along these lines.

The UN Team in Antigua involved in the implementation of the 1980-1984 Plan regards enclave-type manufacturing as a fire-fighting operation. The over-riding objective is to create employment. The two Industrial Estates in Antigua, have been developed with this intention. The same applies to the Industrial Estate at Vieux Fort, St. Lucia, where the International Airport has been built. In fact, the International Airports are now major industrial sites in Barbados, Antigua and St. Lucia.

MANPOWER PLANNING SITUATION:

Unemployment, under-employment, especially in peasant agriculture and informal sector activities, emigration of the skilled, high dependency ratio, high rates of population increase are some of the parameters which constitute the base for Manpower Planning in the L.D.C.'s quite apart from the economic plight that we have painted above. Open unemployment is estimated at over 20% in Grenada, St. Vincent and Dominica, and may even exceed 25%. In many cases, low paying agriculture provides 30% or more of available jobs. Because of the system of land tenure, there exists a substantial peasantry in some countries, notably St. Vincent, Grenada, St. Lucia and Dominica. There the excess supply of labour services do not get translated into open unemployment but are trapped in the Farm Sector, as peasants allocate less than normal hours to working limited land area available.

The massive expansion in the Trinidad + Tobago economy in the 1970's and the consequent increase in incomes and in the standard of living there have stimulated a substantial outflow of emigrants from the L.D.C.'s to the South. In some technical and professional areas this represents a serious loss to these countries, where the departure of one engineer may

result in a ten percent reduction in engineering manpower.

Since the Revolution in Grenada, some attempt is being made to introduce centralised planning, and a supporting system of Manpower Planning. The model being developed is likely to show some similarities with the Guyanese case. The control exercised by Government over the economy is still too limited to include Grenada among our mixed economy system. A Five Year Development Plan is now being prepared for 1982-1986, and the related Manpower Plan is to be developed. One can therefore, anticipate a transition period from an open-ended manpower system to a more determinate situation. In the former case, greater reliance might be placed on the price mechanism in determining the requirements of the economy. In the latter case, because of the planned infra-structural as well as directly productive activity of the State, the required supplies can be more easily estimated. Here again, the final wage rate will be critical in ensuring that the requirements/supply do remain matched in time as demand/supply especially where, as in Grenada, migration is an ever present alternative to the local job market.

In the other countries, economic development planning represents the probable state of the world if certain assumptions were to become a reality. Antigua has prepared a 1980-1984 Plan with the assistance of a UN Team. It is projected that some 6,750 jobs need to be created over the period of the Plan, but this is premised on the availability of funds and as well of managerial and technical manpower. Usually, the infrastructure requirements and the foreign investment requirements are the major targets of the development thrust, and of economic transformation. The development of small business and of non-traditional agriculture are regarded, for manpower planning purposes, as residual categories, in which the excess supply of labour will be retained or distributed. In this context, the economic development plan represents a Shopping List for aid. The manpower planning framework that can be informed by such approach, will need to take flexibility as its guiding principle.

With few exceptions, the L.D.C.'s lack the information base to practice serious manpower planning on a continuing basis. Intercensal Sample Surveys are occasional. There are few data series on wage rates, on migration and on work permits granted. Furthermore, there is a failure to exploit data that are regularly produced. The major case in point is the records of the National Insurance Systems which exist in most countries. A UN Team had recourse to the Social Security Data in undertaking an analysis of the labour force in Antigua, even though the data exclude self-employed. In the absence of establishment surveys and of continuous sample surveys of the population, the Social Security System was the only good source for labour force data, especially since no Census was undertaken in 1980.

In St. Lucia, the records system of the National Insurance Service is now being revised, but this revision is being undertaken without the inputs from other important prospective users of such data, namely the statistics Department, the Ministry of Labour and the National Planning Agency. On the other hand, the Ministry of Education has started a regular system of tracer studies, but there is little co-ordination between the latter and the Ministry of Labour which would find such data useful. Further, because of the absence of proper co-ordination, one often finds unflattering absurdities. In a particular case, a Ministry of Labour had developed a series on organised wage rates at the instance of Officials of the International Monetary Fund, thus providing the latter with data to monitor comparative movements in prices and wages. Yet, no other organisation within the National Government had accessed such data for planning purposes.

Because of the lack of manpower in sufficient quantity to man the Statistical Services of this sub-regional group of countries, it has been proposed that the ECCM Secretariat should develop a capacity to monitor the manpower situation in the L.D.C.'s on a continuing basis, and as well to provide assistance as required from time to time. In the organisation of Eastern Caribbean States, there may be greater co-ordination

displayed than heretofore in respect of industrial programming and allocation. The respective manpower situation of Member States should be one of the criteria to be utilised in industrial programming. For this reason also, the Secretariat should give some attention to manpower data in the region.

In any event, at the national level there is need for sensitivity of all probable users of the data as to what can be made readily available almost costlessly. Small countries can ill afford to waste information and information sources. At this level too, there is now a real possibility of close collaboration, sharing of expertise and interchange of ideas and systems these latter countries.

SECTION III

In this section, we shall attempt to review the experience of countries pursuing mixed systems in the process of structural transformation. It should not be interpreted here that this is by any means a homogeneous category. The structure and functioning of the economy of Guyana is substantially divergent from that of Trinidad and Tobago, with consequent implications for the operation of their labour markets and for manpower planning.

The countries included in this group are Guyana, Trinidad and Tobago and Suriname. Jamaica, prior to its recent change of Government, would have qualified for inclusion in this group and for the purposes of our present exercise, is treated as such. There has been some shift in policy since then, as the present Government is consciously disengaging itself from the state enterprise sector that the Manley Government had created. In so far as there still exists some commitment to macro-level planning, not much violence will be done to reality by the inclusion of Jamaica in this category of countries.

While it is still too early to establish this major revolutionary departure of the Government of Suriname, the avowed commitment to a socialist form of transformation suggests that in the short and medium terms, the system is likely to resemble what we conveniently call the mixed system.

One of the essential features of the mixed system for present purposes, is the fact that the Government is, or proposes to be, involved in directly productive activities through state corporations for joint ventures in which it holds majority or minority participation, or owns outright. It is estimated that because of its role in directly productive activity, the Government of Guyana has effective control of 80% of national output. All the commercial interests fall under the umbrella organisation, the

Guyana State Corporation, and the subsidiary companies span over a number of areas including Public Utilities (Telecommunications), Sugar Terminals, Transport Services, Oil, Pharmaceuticals, Fisheries and Rice Marketing.

Clearly, in situations where the state can either play directly a dominant role, or has the mechanisms to guide the economy, the development of manpower plans can, the more easily, be prosecuted because the state does have some capacity to make its plan stick. Thus, in this state of the world, an economic development plan is less a statement of hope and more a statement of intentions in the light of available resources. It means too that, the economic development plan can inform a manpower plan, which in turn, can inform an educational plan. In effect, planners can exercise real discretion over some of the critical variables.

Among this category of countries, one can identify at least two approaches to economic development planning and by extension to manpower planning. The first approach is almost a negation of planning, while the second suggests an abiding faith in the efficacy of comprehensive planning, sometimes with implicit assumptions about the ability of the planning bureau to project, with great numerical exactitude, the creation of the planners' paradise, five or ten years hence, on the basis of the control at present exercised in the planning office over the key variables. It might be argued that some measure of unreality has seeped in at the boundaries of both approaches. We shall examine, data permitting, the experience of some of these countries.

TRINIDAD AND TOBAGO:

In the case of Trinidad and Tobago, the Government enunciated a clear policy in respect of its participation in directly productive activities in the early 1970's. Prior to this, there was an inherent ambivalence in entering the arena of direct state participation.

The first and second five year plans of the Government of Trinidad and Tobago, were directed at the development of the infra-structure physical, administrative and financial, in which it was expected that the private sector, local and foreign, would play its part in expanding output, employment and exports. Thus, the Government's initiative in those earlier years into the field of directly productive activity was prompted by emergency situations, for example, by the need to protect the jobs of workers threatened with retrenchment on the withdrawal of foreign interests. A similar rationale was to prompt the Manley Government in Jamaica to enter this area.

By the early nineteen seventies, possibly in recognition of the failure of its industrialisation programme to generate much needed employment, and given the excessive subsidiarisation of the production structure of the manufacturing sector, the Government of Trinidad and Tobago decided that certain key sectors of the economy would be served for joint ventures, either between local and foreign firms, or a combination of the three. These latter arrangements were regarded as vastly superior to direct foreign investment in the achievement of the Government's goal in shifting the locus of decision-making from metropolitan centres to the local environment. It was therefore agreed that traditional private sector spheres would be candidates for state participation where, and whenever Government could:

- (a) accelerate the transfer of control from foreign to local centres of decision-making,
- (b) encourage or support local industry, and
- (c) save jobs in industries which, with nationalisation of their operations, would be made viable.

The bonanza created by the oil crisis has allowed the Government of Trinidad and Tobago to give full effect to this philosophy of economic management. The state now participates in the production of fertilizers,

steel, oil, banking, insurance and agriculture, to name a few.

MANPOWER SITUATION IN TRINIDAD AND TOBAGO:

Just at the moment when the country acquired the resources, or escaped the financial constraints that attend most plans, the Government of Trinidad and Tobago elected to discontinue the practice of planning in five-year cycles, and adopted instead, a system of project or sector-specific plan formulation. The rationale was that the flow of revenue was dependent on a highly fluid international environment and it was far more meaningful to plan in terms of very specific projects. The Government, therefore, set about developing programmes on infra-structure - namely roads, expansion of power generation, schools, hospitals and telecommunications, and as well larger-scale energy-based enterprises, like steel, fertilizers and methanol.

The consequence of this approach to economic development on planning has been enormous. No serious systematic attempt was made to identify in a generalized framework the effect of the phasing of the projects on the manpower situation of the country. There has been poor co-ordination between the supply generated or required of the educational and training system and the needs or demand of the new projects, partly because of the unstructured and poorly articulated relationship that existed between those involved in the planning and implementation of the myriad projects and those responsible for the training system. One mitigating factor has been the level of unemployment in North America and the sense of opportunity that now abounds in Trinidad and Tobago, which have together encouraged a return of some nationals with professional and technical skills. The state itself has mounted recruitment drives in North America and Europe, and has underwritten the costs of return to such national personnel hired from abroad. There is also a flow of technical and professional manpower from other Caribbean countries to Trinidad and Tobago. Still, it cannot be argued that there has been proper planning of requirements and accessing of supply.

The effects of the general lack of co-ordination were very evident in respect of construction manpower. There has been a massive increase in the demand for construction workers, and wages have risen astronomically and not unexpectedly given that the supply of truly skilled workers increased at a much lower rate than demand, thereby resulting in quasi-arents in some occupations, but as well in a certain amount of self-accreditation whereby unskilled workers don tools and attempt to pass themselves off as skilled workers with due costs to unwary employers.

Some limited effort was mounted by the National Training Board which developed a Construction Industry Project that allowed young trainees to receive a short-term apprenticeship in a cost-sharing arrangement between the State and the Construction Firms to which they were attached. However, because the Board, by and large, failed to implement the other major plank of its programme, namely to give the unemployed or those seeking to enter the industry for the first time an opportunity to get some measure of training through novel short-term programmes, the net increment to the supply of skills in the Construction Industry was not substantial. The country has had, therefore, to import some amount of construction manpower even at the lower levels of the skills pyramid. At the highest levels, the Government has been forced to allow into the country a substantial number of engineers and building technicians to supply the needs of the Construction Industry.

In respect of the operational manpower to staff institutions and firms once the stage of implementation or actual production is broached, the Government initiated in 1976, the O'Level Apprenticeship Programme, through which unemployed youths with High-School Diplomas (5 or more O'Levels) were exposed to the technological and business environment of some of the large firms operating in the country. The trainees were provided with allowances set by Government and paid by the firms on behalf of the Government. Provided such trainees were not retained by the firm on completion of that training, the firms would recover the full costs of the allowances.

It was expected that the new firms that were being developed by Government would have been able to absorb some of these trainees. Given that the method of training involved on-the-job activity, and given that trainees would have made a contribution to the output of firms, it is very probable that those large enterprises received a net subsidy by Government through this scheme, creating a situation of perverse distribution having regard to the fact that small artisanal enterprises, and the self-employed in the informal sector received no such allocations.

The following Table, Table 3.1, illustrates the impact of the development expenditure on the structure of the employment market. The number of jobs grew by 6% between 1969 and 1974, from 318,300 to 336,000, but by 17% between 1974 and 1979, from 336,000 to 394,200. The labour force itself grew by 21.4% and the number of jobs by 23% between 1969 and 1979, and there is now emerging evidence of tight labour market conditions. While the Construction Sector provided some 12% of the available jobs in 1969, and 13% in 1974, at the first surge in oil revenues, the sectors' contribution to available jobs climbed to 19% of total employment in 1979, recording the fastest rate of growth in any sector. There was almost twice as many jobs in Construction in 1979 than there were in 1969. The fact that this level of expansion ensued without a comparable increase in public and private training programmes deriving from a thorough manpower analysis of the requirements of the industry, does lend credence to the complaint that productivity must have declined in some sub-sectors of the Construction Industry. Unfortunately, there are no hard data available for testing this hypothesis, which incidentally, has been extended to the discussion of the performance of other sectors of the economy.

We have already noted the lack of co-ordination between those responsible for planning of the projects that fall under the direct purview of the state and those involved in the administration of the training system, assuming that this latter could have played the dynamic role predicted by such large scale developments. During the course of the Third

EMPLOYMENT BY SECTOR AT SELECTED DATES

TABLE 3,1

<u>Sector</u>	<u>DATES</u>		
	<u>30.6.69</u>	<u>30.6.74</u>	<u>30.6.79</u>
Agriculture, Forestry, Hunting and Fishing	76,000	58,700	45,200
Mining, Quarrying and Manufacturing	56,000	63,000	72,800
Construction (including electricity, gas and water)	39,000	42,900	75,500
Commerce	46,900	62,400	71,800
Transport and Communication	22,400	29,600	30,000
Services	77,500	78,000	98,600
Not Stated	-	800	400
T O T A L J O B S	318,000	336,000	394,200

SOURCE: Quarterly Economic Report (various issues)
Central Statistical Office, Trinidad and
Tobago.

Five Year Plan, there did exist some concern for the application of manpower planning models in the determination of the requirements of the various economic sectors. The Government of Trinidad and Tobago had been the beneficiary of technical assistance from the ILO in 1971, and a manpower requirements model was applied by S. Das Gupta (1971). While there were apparently serious misgivings on the acceptability of this approach in Trinidad and Tobago, the Government did set about institutionalising a framework to monitor, on a continuing basis the problems of manpower planning. The Ministry of Planning and Development was assigned a co-ordinating role in respect of a Manpower Planning Committee that comprised the Ministries of Labour and of Education and the Central Statistical Office.

This Committee, however, apparently remained but a passive witness to the large-scale developments that materialised after 1975/76 when the major projects started being implemented. As the Government enunciated its changed policy on comprehensive planning and absorbed the Ministry of Planning and Development into the Ministry of Finance, both in terms of nomenclature, and finally, in administrative operations, the Manpower Planning Committee, which never really enjoyed the status, recommended by a P.R.E.A.L.C Team in 1975, ceased functioning altogether.

It is noteworthy that there is apparently a new concern emerging in the present Government on the re-establishment of a planning machinery and from discussions with officials of the Ministry of Finance, it seems that a Manpower Planning Committee is to be re-established to ensure co-ordination but, as well, to create efficiency and effectiveness in the manpower systems.

In the absence of a total plan, it appears at best that the agencies involved in supplying the manpower required by the economy resorted to a mixture of a social demand approach and a feed back process using the indicators supplied from movements in wages by occupation from a biennial survey of graduates administered by Central Statistical Office, from

wage relativities gleaned from Industrial Agreements and from the firm data that might have been available from time to time on the needs of various projects. The underlying assumption here was that while good data might not have been available on the stock of manpower, as long as the increments made in the supply of trained or skilled manpower were being absorbed without difficulty, then the flow could be maintained or increased until unemployment among graduates or declining relative wages suggested that the stock was reaching saturation vis a vis existing requirements. The Manpower Planning Unit of the Ministry of Finance and the National Training Board adopted this generalised approach whenever attention was given to the identification of specific shortages.

This approach to manpower planning perhaps is the most practical where large scale or comprehensive planning is not acceptable to the Government and where great dependence is placed on the market mechanism. Yet, given the long gestation period that applies to some fields and given that a small country entering on new industrial complexes, is unlikely to have the manpower with the preliminary preparation on which can be mounted specific programmes of training, some elements of a manpower requirement model could have contributed substantially to relieving the critical bottlenecks that have emerged in the manpower structure. In any case, the agencies could have been more systematic and could have co-ordinated their operations. The growth in the system has been unplanned by and large. The expansion of some educational and training programmes would have resulted in the alleviation of the problem. For example, the new Senior Comprehensive Schools and a new Technical Institute in South Trinidad have provided greater training opportunities for new entrants to the labour force and to a much lesser extent to workers already in the labour force or returning to the labour force. However, the expansion has been more quantitative than qualitative, which latter is as much important in a country that is changing its industrial and correlatively its occupational structure. Most of the expansion has been in traditional skills and occupations.

Another mitigating factor has been the Scholarship and Annual Study Leave Programme mounted by the State, while here again there has been some increase, the account still is on the requirements of Central Government and Statutory Agencies and to a much lesser extent, on State Corporations and the private sector. Recipients are always expected to

TABLE 3.2

LABOUR FORCE BY INDUSTRIAL GROUPS AT SELECTED DATES

IN TRINIDAD AND TOBAGO

<u>Sector</u>	<u>DATES</u>			
	<u>31.12.69</u>	<u>30.6.75</u>	<u>30.6.77</u>	<u>30.6.79</u>
Agriculture, Forestry, Hunting and Fishing	78,200	57,800	57,600	47,500
Mining, Quarrying and Manufacturing	64,000	70,400	78,700	78,600
Construction (including electricity, gas and water)	54,200	60,900	78,700	98,500
Commerce	49,500	62,700	73,000	78,400
Transport and Communications	24,900	27,800	33,300	31,600
Services	81,200	82,300	92,100	105,700
Never worked	8,900	10,200	12,200	6,400
Not stated	-	3,800	3,400	500
T O T A L	360,900	376,000	430,800	447,300

SOURCE: The Labour Force, C.S.S.P. Various issues, Central Statistical Office.

return to work for the State. The absence of a generalised framework, where the needs or demands of the public and private sector are jointly assessed creates the situation where the state trains people who sooner rather than later defect to the new parastatal corporations which offer very attractive benefits resulting in continuing problems in the administration and operations of the Central Government. The Central Training Division of the Government's Personnel Department has to be more directly involved in overall national manpower planning, especially since it is estimated that Central Government, quite apart from State Corporations and joint ventures, accounts for over 30% of the employed labour force.

Unplanned though it may be, the manpower structure of the country is undergoing a large structural shift. Table 3.2 is illustrative of the process in the labour market. For the immediate future, one can anticipate the continuation of this trend. The ambitious projects still to materialise in the energy-intensive sector may generate along with the existing ones, large spin-off or down stream industries which would take up the slack when construction activity slows and releases some manpower. On the other hand, if the critical shortages in that latter industry (aggregate and cement supply) were relieved, the sector may continue to be highly dynamic as the need for housing gets translated into demand. Constant monitoring of all these developments becomes a sine qua non of manpower planning.

With the re-emergence of some concern for economic development planning and likewise for manpower planning, additional areas of co-ordination need to be explored. The policy of active promotion of Small Businesses on which the Government is embarked, makes it imperative for the Industrial Development Corporation, the Government Agency interfacing with the Small Business Sector, to collaborate with the Manpower Planning Agencies in the identification of the manpower demands in the expansion of the sector. The Ministry of National Security, that is responsible for the granting of work permits, would need to re-interpret its regulatory

function such that the more dynamic element of the training of nationals, and the transfer of technology would be considerably upgraded. In effect, an active manpower policy would have to be defined in keeping with new economic development thrust, which would put paid to the slowly reactive procedures that have applied so far.

There is emerging some veiled evidence of shortages of manpower even of the unskilled type, a phenomenon totally unheard of ten years ago. There are vacancies for clerks, handymen, porters, etc., and at the same time, there is wage explosion taking place in the economy. The drastic fall in the category "Never Worked" in Table 3.2 is illustrative of a trend. Since the unemployment rate is still around 10%, the task of manpower planners and labour economists is to identify whether 10% unemployment in the Trinidad and Tobago economy represents full employment. Correlatively, one must address the question of technical change and labour saving technology if the evidence suggests that the economy has gone beyond the turn pike, on the road to structural transformation. These are indeed large questions that need intensive examination, but not only for the manpower implications. The Manpower Planning Unit, of the Ministry of Finance has an interstatal role to play in co-ordinating the work of the various entities that include the Central Training Unit of the Personnel Department, the National Training Board, the Work Permit Committee, the Planning Unit of the Ministry of Labour, The Management Development Centre, and the Industrial Development Corporation.

JAMAICA:

The experience of Jamaica in the period 1972-1980, offers very useful lessons in the role of planning in resolving some of the major problems faced by Caribbean Economies. The Manley Government was elected in 1972 when the electorate of Jamaica sensed that rising unemployment (24% in 1972) worsening income distribution and poverty, required new political initiatives. The Manley Government responded with a number of policy measures, many of which had manpower implications.

Programmes were mounted to generate employment, to provide training for the unskilled, to eliminate illiteracy among a distressingly large number of adults, to prepare youth for the world of work through the National Youth Service, to create a climate of equality of opportunity between the sexes, to redistribute land to the landless sugar workers and to promote a viable small business sector.

Specifically on the economic front, the Government pursued a policy of securing greater control over the national economy as it enunciated its economic philosophy of "Democratic Socialism". A production levy was imposed on its major mining industry - bauxite - which had the effect of raising the price of aluminium ingot by 7.5% and sought to acquire a 51% share in the mining operations of the bauxite companies.

This leftward listing of the Government of Jamaica occurred at the same time that the emerging international environment was worsening for the Jamaica economy. The oil import bill escalated from \$40 to \$160m as a result of the OPEC price increases. During that period, business confidence waned, and there was a fall in business activity, and a sharp contraction in investment. Because of large scale violence and the international publicity it attracted, there was a sharp decline in the Tourist Industry further exacerbating the foreign exchange situation of the country. Because of the large social content of Government budgeting at the time, the impact of the various trends on the economy was one of redistribution with negative or zero growth. After intermittent co-operation with

and rejection of the IMF initiatives, the Government prepared an Emergency Production Plan to mobilize domestic production in agriculture, industry, bauxite and tourism. Unfortunately, these efforts did not succeed in reversing the slide of the Jamaican economy. The growth rate showed an uninterrupted negative trend over the period 1974-1979 (Department of Statistics, 1981). The fall of the Manley Government and the return of a more private economy model became a clearly predictable outcome by the end of 1979.

MANPOWER SITUATION:

While the Government made greater inroads into the traditional private sector preserves, during this period, nationalisation of industry and take-overs were not always the result of careful and phased planning. In a number of instances, the Government stepped in to save the jobs of workers threatened by retrenchment on the departure of foreign interests. It can hardly be argued that there was consistent economic planning as the Government faced the serious difficulties of fulfilling electoral promises with declining real budgets and a rapidly increasing foreign debt. Thus not much manpower planning was possible over that period.

The unemployment rate reached 31.1% in October, 1979. This high level of unemployment was one side of the manpower problem of the Jamaican economy; namely it could not provide jobs on the scale required given the increasing size of the labour force. The number of employed workers actually fell over 1978-79.

In reviewing the more recent trends in the labour market, the Department of Statistics (1980) notes that the labour force is composed of an increasingly larger number of young persons, particularly of women. There has been a marked shift of workers from the productive sectors to the services sector as the level of unemployment has risen. It would seem, therefore, that the level of under-employment would have increased considerably as many workers attempt to eke out an existence in informal

sector activities. To the extent that new jobs can be created in the productive sectors of the economy, manpower planning and analysis will have to take account as much of open unemployment as of under-employment as workers seek to better their incomes in the activities of the more formal sectors of the economy. The following Table, Table 3.3, presents some data on the labour force and on unemployment for the period 1973-1979. The Labour force grew by 14.28% in the period while the number of jobs rose by 12.34% between 1973 and 1977 and then fell by 5.12% in 1979

TABLE 3.3

LABOUR FORCE AND UNEMPLOYMENT IN JAMAICA AT

SELECTED DATES

	<u>OCTOBER 1973</u>	<u>OCTOBER 1975</u>	<u>OCTOBER 1977</u>	<u>OCTOBER 1979</u>
Population 14 years and over	1,129,600	1,216,000	1,285,900	1,378,800
Labour Force	803,200	865,600	917,900	962,500
Employed Labour Force	622,400	684,300	699,200	663,400
Labour Force as percentage of population 14 years and over	69.9	71.2	71.4	71.4
Percentage of Labour Force unemployed	22.5	20.9	23.8	31.1

SOURCE: The Labour Force, Department of Statistics,
Jamaica (1980).

TABLE 3.4

EMPLOYED LABOUR FORCE BY INDUSTRY GROUP IN
JAMAICA AT SELECTED DATES

	<u>OCTOBER 1977</u>	<u>OCTOBER 1978</u>	<u>OCTOBER 1979</u>
Agriculture, Forestry, Fishing and Mining	252,500	255,100	217,000
Manufacture	72,600	75,400	68,600
Construction and Installation	31,600	33,800	24,500
Transport, Communication and Public Utilities	30,200	30,300	28,400
Commerce	88,300	89,800	89,400
Public Administration	109,500	100,500	105,700
Other Services	96,600	97,400	101,500
Industry not specified	6,300	8,100	12,700

SOURCE: The Labour Force, Department of Statistics, Jamaica
(1980)

In Table 3.3 the shift in the sectoral distribution of the labour force is immediately evident from an examination of the Services Sector, in which total employment grew directly as a result of the fall in the demand for labour in other sectors as workers attempted to keep body and soul together. An important implication is that manpower planning cannot be divorced from the problem of income distribution, where the "formal"

sectors of the economy are unable to generate the jobs and income for the lower socio-economic groups, manpower planners must examine critically the role of such "spongy" sector as peasant or subsistence agriculture and petty commerce. It may well be that allocation of social investment to these areas will create additional output as well as employment through multiplier and inter-sectoral links. A number of studies on income redistribution in favour of the lower socio-economic groups and within the integument of a basic needs strategy tends to support the view that a higher rate of growth is possible since the structure of demand or the consumption of the poor is likely to be biased toward the goods and services that the local economic system can produce. The same income in the hands of the upper and middle classes is likely to be dissipated on imports of luxuries or on products with a high import content. The question of training for the residentiary sector is critical in Jamaica at the present time.

Another major manpower problem is the massive exodus of persons in the professional and technical cadres. This has meant that Jamaica has effected net capital transfers in the form of human capital to North America in particular. Since this category of manpower is complementary to much of the physical investment projected in both the public and private sectors under the new Government, the Jamaican economy will continue to be plagued in the immediate future by the shortage of critical skills. There is some evidence that a reverse flow has commenced with the advent of a new Government. The high level of unemployment in North America might be one of the push factors responsible.

In the private economy framework espoused by the new Government, there is need to establish the criteria for assessing costs and benefits of the regime of concessions that is being developed to promote the inflow of foreign investment and to stimulate local entrepreneurship, in the hope of creating a massive expansion in the demand for labour. The Caribbean countries, perhaps quite unlike the mini Japans of South East

Asia, have not enjoyed particular success with the traditional Puerto Rican model. Mc Intyre and Watson (1970) and Carrington (1968) have demonstrated its failure where the export markets for light manufacturers failed to emerge except within a regional context.

A massive expansion in the manufacturing sector and agricultural sectors is required to relieve the present and prospective unemployment problem, having regard to participation rates and as well as to the rate of population increase in Jamaica. The development of non-traditional agriculture geared to an income elastic demand structure is an absolute requirement for the small scale or peasant agricultural sector. The stimulation of agro-industry will follow naturally from this and there seems to be a deep-seated commitment of Jamaican Governments, of whatever ideological complexion, to this objective.

The winning of external markets for the manufacturing sector will determine the success or the failure of the promotion of direct foreign investment. The National Planning Agency, with technical assistance from USAID, is co-ordinating a large scale survey on manpower and on the identification of training needs in the public and private sectors of the economy. The other agencies involved in this exercise are the Ministry of Education, the Ministry of Youth and Community Development, the Department of Statistics and the Ministry of the Public Service. It is not altogether clear how the results of this survey will be integrated into a wider economic plan, especially, since small scale farming, the Small Business Sector and the informal sector are not directly included and all are very important in the Jamaican economic panorama.

Over the years, great attention has been given by the various Governments to the development of the training system. Besides the regular programmes of education and training in the Secondary School System and at the Technical Institutes, Jamaica has a dynamic Vocational Training System under the direction of the Department of Youth and Community Development which provide work related skills in industrial training cen-

tres. For example, there are a Garment Industry Training School and an Automechanics School under the jurisdiction of the Ministry. The major drawback for this Ministry as well as the Ministry of Education has been again the lack of co-ordination that existed between these latter and the Ministry of Labour and the National Planning Agency, departments which would have been able to provide indicators on the requirements of the labour market. As the economic recovery deepens, and spreads across sectors, the demand and supply networks need to be closely monitored by the National Planning Agency which seems best placed to prosecute this role.

The large-scale commitment that has been made to Adult Education through the Jamaican Adult Literacy Programme (JAMAL) and the developing range of the educational and training system should put the country in a situation where it can respond to new demands in its labour force with alacrity. However, there would be need for a greater focus on the training and retraining of adults already in the labour force than on youths as at present.

SURINAME:

Since the Revolution of February, 1980, the Government of Suriname has displayed a greater commitment to economic development planning. In the past, Government developmental thrust was heavily biased to the projects which could secure the approval of the Dutch Government, which had committed itself to provide assistance over the first few years of Independence. The funds available from this latter source were disbursed on the recommendation of a Mixed Commission or Foundation known as the Foundation for National Planning.

The new Government is in the process of preparing a Development Plan which should be completed by the end of 1981. It is a Five Year Plan, 1982-1986, with a ten year perspective. Among the Objectives are:

- (a) Strengthening and expansion of the agricultural Sector

- (b) development of Agro-Processing Industries with local and export markets as targets;
- (c) redistribution of land to ensure greater equity;
- (d) vesting greater control of the prime sectors of the economy in local hands;
- (e) diversification of markets for Suriname's exports;
- (f) establishing firmer links with Caribbean neighbours with the goal of becoming at some stage a Member of CARICOM

The Government has since announced that it proposes developing its own form of socialism which puts man at the centre of development. The palpable elements of this new philosophy are not readily identifiable, possibly because the Government does not intend any radical transformation in one fell swoop, but is rather more disposed to phase the introduction of the measures to be adopted.

The nature of the task faced by the Revolutionary Government is well exemplified in an examination of the structure of Suriname's Export Trade. Bauxite/Alumina/Aluminium provide over 75% of Suriname's export earnings. A subsidiary of the Transnational Corporation, ALCOA, dominates the industry. Rice exports were the other major foreign exchange earner. As aid from Holland tapers off, the Government will have to rely more on this sector to secure the foreign exchange vital for intermediate and capital inputs, given that inflows of foreign private capital are likely to be limited in the light of the socialist tendency of the Government.

A leftist leaning Government could, therefore, anticipate problems as it seeks to increase local control of an income accruing locally from the Mineral Export Sector. There are manpower planning implications involved in the efforts of the Government to transform the economic structure of the country and to reduce the excessive dependence on a concentrated range

of exports and of export markets.

MANPOWER PLANNING SITUATION:

Suriname has a very small population relative to its land resources. At the Census of 1980, the population was estimated at just over 352,000 with some 40% being under age 15. Table 3.5 gives the distribution by age and sex, as at July 1st, 1980.

TABLE 3.5

POPULATION OF SURINAME BY AGE AND SEX IN 1980

<u>SEX</u>	<u>AGE GROUP</u>			
	0 - 14	15 - 65	66 and older	age unknown
Male	69022	95375	6859	1827
Females	68582	100715	7834	1827
T O T A L	137604	196090	14693	3654

SOURCE: Stichting Plan Bureau Suriname (unpublished data)

The structure of the population has been influenced as much by natural factors as by the large scale migration of Surinamese to Holland that has taken place up until very recently. It is felt that the population might even have declined during some part of the late 1970's. But this outflow of Surinamese seeking Dutch Citizenship has been countered by an influx of migrants from Guyana. It is estimated that there are about 15,000 Guyanese living in Suriname at the present time, some of them

performing functions spurned by nationals. Many did bring much needed skills during the Construction Boom that lasted well into 1979. There is also a smaller influx of workers from Haiti who tend to be concentrated in agriculture.

The relative youthfulness of the population, the large scale migration of nationals to Holland, and the immigration of Guyanese and latterly of Haitians to Suriname are some of the major parameters faced by the Manpower Planners in 1981. The youthfulness of the population implies that the rate of expansion in the number of jobs required will be phenomenal if the cohorts of young people entering the labour market are to be absorbed effectively, and in order to avoid increasing the dependency ratio even further.

A tremendous burden will be placed on the education and training systems which in the past have demonstrated some disfunctionality vis a vis the world of work. The proper matching of the available human resources with the requirements of the economic system will eliminate the present phenomenon of high levels of unemployment, especially among the youths, co-existing with a large number of job vacancies.

The training system has to be organised to make up for the massive exodus of Surinamese to Holland in recent years. The middle and high level manpower stock would have been seriously depleted by the brain drain to Holland. Return migration is being encouraged, but the success of this process in relieving the manpower difficulties is a function of the weight nationals attach to their life chances in their country of origin as against what obtains in the metropole. For manpower planning purposes, not too much reliance can be placed on return migration of the skilled and professional manpower unless a massive expansion takes place in the Surinamese economy, at the same time that serious economic recession afflicts Western Europe. Cultural and racial factors need to be borne in mind.

Table 3.6 gives the distribution of the Labour Force by sector for selected years. Agriculture has declined in importance as a job-creating sector from 17% in 1975 to 14% in 1979. The Government sector showed the greatest increase, 35% between 1975 and 1979 as against a total labour force growth of 10%.

The Government has announced its intention to move rapidly to eliminate all vestiges of sex discrimination in the education and training systems and as well in the labour market. At the last Census, almost 30% of the labour force was female. With the removal of the restrictions, it is highly probable that the level of female labour force participation will rise, thereby increasing the demand for jobs. The commitment to equality will help considerably the primary female workers and female heads of household, a social phenomenon general to the Caribbean. Manpower Planning, therefore, has to accommodate for the massive expansion needed in the supply of jobs.

Another structural factor which was and will continue to create problems for manpower planning is the overmanning that has occurred in the Public Sector. It is now current as well as official opinion that the hiring practices that obtained in the public sector have led to an explosion in public sector employment quite beyond the actual requirements.

This has been blamed on the peculiarities of Surinamese politics in the past as well as on some elements of nepotism. Whatever the underlying causes, the public sector employed almost 40% of the labour force in 1979 as compared to 32% in 1975. The Government is apparently anxious to rationalise employment in the public sector, and as well to improve the productivity of Public Servants. The reallocation of workers that must be undertaken is substantial and will be a major task for Manpower Planning in the short term. As seen in Table 3.6, Government was by far the largest employer.

Besides the problem of external migration, manpower planning has to deal with the rural-urban drift which makes Paramaribo and its environs the

TABLE 3.6

DISTRIBUTION OF THE LABOUR FORCE BY SECTOR

<u>Sector</u>	<u>1975</u>	<u>1977</u>	<u>1979</u>
Agriculture	15300	14500	14200
Forestry	3500	3500	3500
Mining	6900	6700	6000
Manufacturing	9800	10100	10400
Public Utilities	1100	1100	1100
Building and Construction	4300	5200	3500
Trade, Restaurants, Hotels	14200	15000	14900
Transport and Communication	3500	3000	3600
Banking Institutions, Assurance Companies	1700	1900	2100
Government	29400	35900	39600
Other Services	3400	3400	3700
TOTAL	93100	100300	102600

SOURCE: General Bureau of Statistics, Suriname.

centre of attraction for manpower from all areas of the country, seriously hurting regional development. In addition, labour market segmentation, with workers unemployed, but only in respect of some industries or some jobs, the distortions and the demonstration effect of the high-wage capital-intensive mining sector are additional factors compounding the problem for manpower planning as has been shown in Jamaica and latterly in Trinidad and Tobago, where a higher than normal rate of unemployment

is tolerated as workers prefer to engage in job-search rather than take any job that is available, (Tidrick, 1977). Since the Government, even though socialist in orientation, does not control the commanding heights of the economy, organised wage rates and their effect on manpower supply and demand are not under the total control of planners and therefore, will need to be monitored from a number of angles.

The present Government has been attempting to grapple with some of these manpower issues in interesting and novel ways.

Up until 1980, Manpower Planning was almost totally the responsibility of the Ministry of Labour. The new Government however, decided to have this responsibility discharged through the Stichting Plan Bureau Suriname, which would co-ordinate the activities of the various agencies involved in Manpower Planning including:

- (a) Ministry of Labour;
- (b) Ministry of Education;
- (c) Ministry of Internal Affairs;
- (d) Ministry of Agriculture.

Along with the Department of Statistics, the Stichting Plan Bureau Suriname is developing a data base derived from the Census which would allow for annual modification of the plan. It can be said that the Government is striving to develop a system of comprehensive manpower planning in which not only will there be exhaustive information on employment in the public sector, actual and projected, but also there will be data on the private sector especially where it interfaces with the educational and training systems run by the State or with the Employment Exchange also run by the State. It is useful to note some of the emerging arrangements and the institutional framework through which they will function.

MINISTRY OF LABOUR:

This Ministry is at present developing a Manpower Information System which includes a register of workers in the private sector. Each establishment supplies information on the salary, occupation, age, nationality, education and number of hours worked per week on each employee. This Survey is limited to firms of ten or more employees. The Ministry also analyses the collective agreements assessing wages, allowances and other benefits in order to produce data on wage rates or compensation packages by sector and by occupation. These two data services should be able to give trends on generalised versus organised wage rates.

THE CENTRE FOR LABOUR MOBILISATION AND DEVELOPMENT:

The Centre, which has a number of Government Departments on its Board, is responsible for the training of workers, for Apprenticeship Programmes, and co-operates with the private sector including non-profit organisations in the development and implementation of training programmes. It has facilities to cope with up to six hundred trainees per diem. As of June, 1981, it is expected, that by a system of compulsory registration of job vacancies on the part of employers, on the one hand, and of the registration of unemployment on the part of workers, on the other hand, it would be possible to arrive at a better match between demand and availabilities. It is the intention of this organisation to develop programmes specific to the countryside in order to arrest the rural-urban flow.

The needs of women are being catered for, not by special programmes for women, but by ensuring that they have the wherewithal to enter any field they should choose. The Centre is expected to work closely with the Ministries of Labour, Education, Justice and Home Affairs.

INSTITUTE FOR THE PUBLIC SERVICE:

This Institute which falls under the Ministry of Internal Affairs has set about the task of preparing a plan for the restructuring of the public sector. An operational plan is being developed for each Government Department, with identification of the tasks to be performed and as well the qualifications required to perform those tasks. It is expected that a data bank will result from this large scale exercise which, along with the work being done in the private sector by the Ministry of Labour, will allow Planners access to comprehensive data on the manpower situation in the country at any given time.

The Manpower Division of the Stichting Plan Bureau Suriname is destined to play the dominant role in the co-ordination of the activities of the various entities involved in the manpower situation of the country, and at the same time integrate the manpower and economic development plans.

GUYANA:

It can be safely said that Guyana displays the greatest degree of State Control of the economic activity after Cuba. According to estimates of officials of the State Planning Secretariat, some 80% of the economic activity of the Country (G.D.P) is controlled by the State. It would appear therefore, that the process of manpower planning would be attended by far more control variables than apply in the other countries of the region, except Cuba.

Like other countries, Guyana is very dependent on a limited range of products for growth in G.D.P. and of exports. According to some recent estimates of ECLA respectively for 1975 and 1979, 46.8% and 34.1% of G.D.P. at Factor Cost was derived from export, agriculture (Sugarcane and Rice), Mining and Quarrying, and sugar Manufacture and Rice Milling, (ECLA 1980). For the period 1976-1978, Bauxite, Alumina, Sugar and Rice provided 89%

of total exports. Bauxite and Sugar constituted 67% or more of total exports. In effect, the performance of these two sectors determine to a large extent the state of the economy. Like elsewhere, economic diversification is one of the cornerstones of economic policy and some limited successes have been achieved in the agricultural sector and as well in the processing of agricultural products.

The recent experience of the Guyanese economy is one of substantial fluctuations in the rate of growth, and surely since the OPEC oil increases of 1973. Between 1974 and 1979 the available evidence does not suggest that real growth was very flattering. At the same time, the Government has been pursuing a policy of localisation of control, or more particularly, of state control. Consequently, it can be agreed that the transformation of economic control would have contributed its own share of transitional problems to the real difficulties imposed on a country whose major exports have not enjoyed the most buoyant demand situations.

On the socio-economic frontier, the Government has sought to create an environment on which co-operativism rather than economic individualism would be preeminent. In fact, the country was renamed the Co-operative Republic of Guyana. A basic needs strategy of development founded on this principle of co-operativism was expected to increase the size of the economic pie, but as well to ensure a more equitable distribution of income in the country among regions. The primary goal was to feed, clothe and house the nation. According to Standing (1979) the objectives of the basic needs strategy still remain to be fulfilled. The pie has not grown as anticipated and the Government has been forced to resort to very direct measures to conserve on foreign exchange, and to adopt very austere programmes generally. These measures have created some peevishness in the local and private sector and have tended to erode their confidence in the underlying strength of the economy. The 1980's have not yet dispelled these notions within the small private sector. This factor only serves to make the performance of the state sector more crucial to the development process. The effectiveness and

efficiency of control of Government as well as of the State Corporations determine to some extent the competitiveness of Guyanese exports, traditional and non-traditional, and the level of the surpluses available for investment or capital formation and for consumption. In some respects, the problems of central planning in Cuba are replicated in miniature form in Guyana. The State Planning Secretariat is developing an elaborate framework for the control and monitoring of the Central Government and the directly productive enterprises of the State which fall under an umbrella organisation, The Guyana State Corporation. The annual budget of the Government now includes the detailed appropriations projected for the various State Trading Corporations. Moreover, the planning approach adopted is oriented more to the principle of a "rolling plan" rather than to that of five or ten or such other cycle. The rolling plan is underpinned by a conceptualisation of the role of the State, and of the individual in accordance with the socialist economic philosophy of the Government.

MANPOWER PLANNING SITUATION:

Guyana's population was estimated at 842,000 in 1979. It displays all the normal characteristics; high birth rate, youthfulness in population and labour force, and a high dependency ratio; the labour force was estimated at 177,000 in 1970. Good current data on its size are lacking. It is expected that unemployment would have increased over the last few years. The single largest employer of labour has been the Sugar Industry which is estimated to have provided employment for about 24,000 workers in 1979.

The State Planning Secretariat has undertaken the role of developing the manpower balance associated with the centralised economic planning machinery that is being developed. Not unexpectedly, there does seem to be a problem of co-ordination between the Central Planners and those responsible for the performance of the individual Government Departments and State Enterprises in respect of manpower development. The fact that the State Planning Secretariat exists and examines and influences the decision-making process in the myriad of enterprises, ensures that major issues do

not get over-looked through piece-meal and disaggregated planning. The foreign exchange demands of expansionary proposals and their manpower planning implications can come more easily to attention in the form of bottlenecks to be eliminated or accommodated. Only a few of the manpower planning issues will be examined here.

RECENT APPROACHES TO MANPOWER PLANNING:

The shortage of skilled manpower in the late 1970's prompted the Government to undertake an analysis of the requirements for technical and vocational training for the country. The Anderson Committee prepared a Report in which a number of major recommendations were made, namely:

- (a) strengthening of technical education and the teaching of Science in the Secondary School System;
- (b) introduction of a Levy/Grant arrangement to support training in industrial and commercial undertakings;
- (c) establishment of a National Industrial Training Commission;
- (d) development within industry of a system of on-the-job training and supportive education for workers, but in the framework of national skills testing and certification system;
- (e) establishment of a new Technical Training Complex which would house a Vocational Training Centre for industry, providing skill and technical training for youths and workers and also a Centre for training Vocational and Technical Teachers.

The Committee's Recommendations were derived from the expressed needs of a sample of employees in the economy. There appears to have been some problems of conceptualisation which have postponed the full acceptance of these proposals. In some quarters, it is felt that the proposals are too elaborated for present requirements. It is not possible to determine the correctness of one view or the other. What is, however, clear is that there is a need for prompt action which perhaps is the present intention of the Government in the establishment recently of the Ministry of Higher Education which is responsible not only for higher education, but as well for certain types of extra-mural education and training. The continuing shortage of skills would constrain the fulfilment of targets if the relevant training programmes are not mounted with some urgency.

MIGRATION:

One of the major issues that Manpower Planners have to confront in the Guyanese context is the problem of migration. Firm data are hard to come by, but the exodus has been substantial in recent years. The relative sluggishness in economic growth is partly responsible but social and political disenchantment is also an intervening factor.

In a free society, it is not possible to restrict the emigration of individuals so that there is no guarantee that the development of training programmes will not contribute further to the brain-drain to Suriname and to other Caribbean Countries, particularly to Trinidad and Tobago or to the North Atlantic Metropole.

WAGE POLICY:

Since 1978, the Government has enunciated a policy on Wages through the Minister responsible for Planning. The goal has been to control the escalation in wages, but at the same time to narrow differentials and reduce inequality by increasing minimum wage rates while at the same time

stabilising the salary and compensation package of high level manpower in the public and parastatal sectors.

It is the view of Government Officials that the wage policy has been reasonably successful in maintaining a stable wage level, primarily because of Government's control over the economy. There are certain side effects of this policy that should be noted. In the first place, it is possible, as has been argued that the policy has tended to kill off initiative and drive since the parastatal enterprises function almost as extensions of the bureaucratic central administration where salary norms are determined by traditional hierarchies rather than in terms of economic contribution. If there is any truth in this, an immediate problem emerges for manpower planning, namely, how feasible it is to have administered wage rates, especially for high level manpower when the attraction of emigration is so high in terms of probable income. There is evidence that the individual enterprises have sought to escape the rigidity of the guidelines by paying individuals as close as possible to the top of the scale depending on their presumed worth. Furthermore, in spite of the existence of a Central Recruitment of Manpower Agency for the State Corporations which is supposed to reduce poaching and the competition for available manpower among the State Corporations, there still seems to be some vertical mobility as individuals beat the system and get transferred out and up from one enterprise to another.

There seems to be an inherent assumption that the wage and salary rates can be ignored in manpower planning in Guyana, and that no accommodation should be made by way of wage and salary rates for the shortage in one skill or profession vis a vis some other. This is perhaps a simplistic interpretation of reality given that individuals still retain latitude not only in respect of whether they should work, but also how hard they should work and whether they should work abroad instead of at home. There is also the attendant problem of which skills and occupations individuals will train for. While good tracer studies are only now being developed, which could identify the process statistically, Government Offi-

cials could cite examples of individuals who had been trained for one occupation, performing at tasks not even remotely connected with their programme of training. In all such cases, the difference in salary or in terms and conditions of service was apparently the decisive factor. In other words, the centralised economic planning and manpower planning frameworks of Guyana still do not afford Planners the luxury of ignoring wage relativities or prices in the process of planning. Job vacancy data are not the only data required in identifying the numbers to be trained in an occupation, as was previously conceived.

The ease with which people can migrate to Suriname suggests that Manpower Planners in Guyana have to include, as part of their framework sensitivity analyses of the response of workers to shortages in particular occupations or skill areas not only the going wage rates among sectors and comparable occupations in Guyana, but also the current situation in Suriname. It appears that through the centralised machinery: State Planning Secretariat, Central Recruitment of Manpower Agency, the Ministry of the Public Service and the proposed National Training Council, there is a growing awareness in the need to examine the demand and supply of skills for the various sectors of the economy.

SUMMARY:

From our review of the Manpower Planning situation in countries where the State plays or is expected to play a very active role not simply in providing the institutional framework for development, but also by engaging in directly productive activity especially in the commanding heights of the economy, a high premium must be placed in co-ordination of centralised planning and manpower planning in general. However, in spite of the fact that the state may control a large share of economic activity with the temptation this gives to assume that the will of Central Planning can dictate the pace of change in all variables, the price mechanism and in the case of manpower planning, pay scales are important intervening variables in the matching of

supply and demand. The State may influence but cannot guarantee the perfect fit unless the other factors are properly assimilated into its planning machinery. The data demands of such an approach is indeed extensive and there is need to ensure that all probable data gathering sources are tapped. Some important sources of data for a number of reasons are regarded as very remote to the needs of manpower planning when the opposite applies. For example, Ministries of National Security are responsible for work permits which determine the level of shortfall between available manpower and the requirements of industry. Such data should be integrated into the manpower planning machinery. Moreover, the question of technology transfer can be modulated more through work permits as through investment in imported plant and equipment with the attendant licence agreements. Ministries and Departments with responsibility for overseeing manpower data in the Public Service have to co-operate more closely with agencies involved in overall manpower planning. Unfortunately, in many cases they fail to recognise that the expansion of posts in the public sector on the basis of current rates of pay cannot be divorced from demand/supply problem in the private sector. In Trinidad and Tobago, the mere expansion of the number of positions in Engineering in the public service has made no quantitative improvement in the supply available to the regular public sector as compared to the private and parastatal sectors with pay rates vastly superior to the public sector and more in keeping with the demand/supply situation faced by the total economy.

Likewise, the data available from National Insurance Systems remains largely unexplored and under-utilised for manpower planning purposes and need to be integrated. The comprehensive system of data collection being developed by Suriname and Guyana, including the organisation of data banks, augur well for manpower planning even if it may never be possible to ensure that "social" planning is consistent with individual or private motivations.

Finally, equity and efficiency objectives require that the residential sector, i.e. the peasant agricultural sector, small business and the informal sectors need to be fully assessed in the manpower planning system given their importance not only in the growth of output, but also in the employment of Manpower.

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SECTION IV

In this section we shall examine some of the manpower problems attendant on the application of a socialist path to economic transformation as can be gleaned from the limited data available to us on Cuba. It was not possible, during the course of the Mission, to visit Cuba and, therefore, one must only rely on published data and analyses for this cursory overview. Even though there are likely to be grave deficiencies in these latter sources, it is hoped that our general interpretation would not do much violence to the existing realities.

In the immediate post-revolution period there were attempts to reduce Cuba's dependence on sugar, a dependence regarded as synonymous with the colonial or neo-colonial past. Thus, agricultural diversification and industrialisation were the major planks on which the Government sought to achieve economic transformation. Unfortunately, and for reasons which will remain unexplored here, these efforts were not very successful and there was a full return to a sugar dominated economic strategy. Today, sugar and sugar products constitute over 75% of total exports. Minerals, largely nickel, tobacco, citrus fruit and fish are the other major exports. The price of sugar in the international economy partially determines the fortunes of the Cuban economy since the greater proportion is marketed within COMECON. However when the world price of sugar escalates, Cuba can and does take advantage of the buoyant conditions. Like other monocultural island economies, the major determinant of overall economic performance and even of structural diversification hangs on the foreign exchange earning capacity of one or a limited range of products. Thus, except for the period 1973-1974, when sugar prices soared to record levels, the Cuban economy has had only a low to moderate rate of growth in the more recent past (ECLA 1979). Furthermore, instead of diversification of output, the country has succeeded rather in the diversification of markets.

What is particularly relevant for our present purposes has been the success of the Government in eliminating unemployment. This has been hailed as the major success of the revolution. In the earlier post-revolutionary period, production units were encouraged to expand employment, when the success of an enterprise was not measured in terms of

profits. If wages had been tied to productivity, employment expansion would have been much lower. According to Mesa-Lago (1974) there was a considerable waste of resources accompanying this achievement of full employment. In earlier years, as the country attempted to create the New Man who would be motivated by social goals rather than private gain, greater reliance was placed on moral rather than material incentives to maintain and increase productivity. Unfortunately, except for periods of social euphoria which tend to be short-lived, moral incentives do not seem to work. As is now very evident in countries following similar models, the reliance on moral incentives affect productivity negatively in the longer run. Furthermore there was apparently some tendency to over-manning in the work place.

The pattern of planning that was earlier adopted was heavily centralised with allocations of resources to the various enterprises determined by a central computer. This high level of centralization of planning and the ineffective system of incentives apparently created problems for the Cuban economy.

The Government reoriented its policy in the 1970's, and accepted that wage differences have a role to play in the supply of effort quite apart from the availability of skills. Thus, even where the manpower supply is generated by the educational and training systems, incentives are necessary to guarantee the supply of effort. According to Fidel Castro:

'Paying the same wage for the same type of work but without taking into account the production effort required to do it is an egalitarian principle we must correct' (Mesa Lago, 1974, p.43).

Besides accommodating differential material incentives, the Government, in the 1970's, moved to modify the relations between enterprises and the central plan with a new system of economic calculation. On the one hand, enterprises have created two funds; a Reward Fund and a Fund for Social and Cultural Measures; the former is aimed at the individual worker, while the latter provides for stimulation of collective efforts in respect of the building of houses, child care facilities, sports centres etc. On the other hand, a higher degree of autonomy was granted to enterprises but all in the context of the central management. The

new economic calculation system has made the vast majority of enterprises subject to the success of their management, and traditional indicators like prices, costs and economic returns have been reintroduced.

There are two major factors, along with the above, that must determine the manpower planning situation in contemporary Cuba. Firstly, one must note the massive explosion that has taken place in educational opportunity. The adult literacy programme mounted immediately after the revolution, coupled with an expansion of primary and secondary education for the cohort of school age has resulted in the attainment by Cuba of a high level of literacy in its population, approximately 96% in 1974 (Morawetz, 1980). A radical transformation of the educational system was implemented to obviate its elitist tendencies and to bring it in line with national needs. The technical, vocational and scientific fields have received far greater emphasis, while work/study arrangements allowed for acquisition of skills but more importantly for an appreciation of the world of work. Thus, it can be said that Cuba has been developing the throughput capacity to generate the relevant manpower. The enlistment of commitment is an entirely different matter, and the new incentive system is designed to attack this problem.

The other major factor derives its importance from its very antithesis of material incentives, namely, the divorce between payment received and contribution made. The wage system based, in earlier years, on moral incentives has served to reduce the level of inequality in the society.

According to Brundenius (1979) the poorest 40% of the population was receiving about 20% of the income in the mid-1970's as compared to 6% before the revolution. This is partially reflected in the narrowing of wages among sectors. Table 2.1 gives some data on wages by sector. It is also well known that a number of basic goods are supplied on a collectivistic basis, and at a very low cost, which factor would therefore promote even greater equity in the system.

Table 2.1

Average Annual Wages in Pesos in the
Civilian Sector, 1962 - 1975

	Total State Sector	Agric.	Indus.	Const.	Trans.	Comm.	Trade	Soc. Sc.
1975	1638	1543	1693	1883	1945	1675	1469	1458
1970	1396	1465	1515	1634	1633		1005	1076
1965	1593	1041	2084	1755	2252	1969	1479	1725
1962	1547	954	1941	1700	2227			

Source: Brudenius (1979) p.33.

The continuing emphasis on skills formation both locally and abroad will help to guarantee that there is little deficiency in terms of the manpower available to perform the various functions. Mesa-Lago (1974) had pointed to the fact that the numerical increase in skilled technical and professional cadres available afforded Cuban planners the opportunity of substituting technocrats for political cadres; but at the same time, the expansion of training facilities at every level also allowed the political cadres to approach required standards by acquiring skills. There does not seem to exist today any real problem in terms of skills probably available in the Cuban economy. So much has its manpower problem eased that the country can boast today of providing much needed expertise by way of technical assistance to a number of Third World countries, especially in Africa (Leo Grande, 1980). The major manpower problem faced therefore has to do with the supply of effort and the efficient distribution of the available manpower across economic sectors.

At the individual level, it is clear that material incentives are inescapable. Indifference in the work place, and lack of productivity and commitment to work can be partially corrected by the substitution of material for moral incentives even in the fact of the Government's commitment to create a socialist man.

While it is likely to reduce albeit marginally, the substantial level of equality achieved by Cuba, the reintroduction of material rewards, will however have to play a large role in the distribution of labour services

in the modified system of central economic and manpower planning. Labour planners in an earlier period might have worked out the requirements for different types of manpower on the basis of the centralised planning framework. Far more fluid policies will have to be adopted as managers at the enterprise level import economic calculus into their decision-making on investment, expansion, debt-management and inevitably on the numbers and types of workers needed to perform specific tasks in the enterprise.

The more recent concern with the introduction of self-management in the workplace could complicate matters further. The Economic Commission for Latin America (1979) in its annual survey of Cuba, has noted the lack of synchronisation of stocks and inputs in the production process and at the problems involved in self-management for enterprises in terms of its implications for different processes of production and their requirements in respect of raw materials and labour. In future, central planning models, and by implication, manpower planning models, need to rely far more on sensitivity analysis in accommodating for the micro-decision making process which is expected to improve efficiency at the level of the enterprise, and at the same time to keep the related manpower reasonably contented.

The Cuban experience is particularly instructive to other countries with open economies where the Government attempts to discard traditional systems of valuation in favour of the prices set by centralised planning models. The problems are indeed enormous but not insurmountable.

SECTION V

In this section, we review, albeit briefly, the major approaches to Manpower Planning and attempt to assess their usefulness in the Caribbean context. We would also note the major economic models that have been applied in the Caribbean and identify how well they have accommodated the requirements of Manpower Planning.

Historical Background:

Human Resource Economics or Manpower Planning Economics is a relatively new field of economic analysis which has developed over the last twenty years. Its emergence and growth can be attributed to a limited number of 'discoveries' that were made from the analysis of the postwar experience of both developed and less developed countries. In the former countries, there was a spate of studies which tended to show that traditional economic theory had failed to account for the changing quality of the labour force in allocating the differential contribution of factors of production to economic growth.

On the other hand, comparative analysis of the postwar experience of a number of developing countries could point to the strictures imposed on economic development when investment resources for capital formation, unmatched by improved levels of training and education in the labour force resulted in very low rates of growth relative to the size of the investments. The human investment revolution in Economics was launched. Economists thenceforth discarded the classical notion of labour as a capacity to do manual work requiring little knowledge and skill (Schultz 1961)...

The rejection of the classical notion meant that all types of expenditure on human beings could be examined coldly and critically under the rubric of investment analysis. Thus, expenditures on education, on training and on health would be justified not simply from social service/equity considerations, but also from the perspective of their contribution to real growth in G.D.P..

The Western Economics Establishment, by and large, accepted the principle of human capital analysis which could be easily accommodated in the neo-classical models of growth: thus output became not simply a function of capital and labour, but of capital and an array of differentiated

labour inputs (L_i 's). The most avowedly 'free marketeers' could now argue as Schultz (1961) that labourers are capitalists not from the diffusion of ownership of corporation stocks, but from their acquisition and control of knowledge and skills that have economic value in the market place.

In respect of the developing countries, the most dramatic development was the substantial expansion in funds allocated to education. The international lending agencies were now slow to get into the act and the World Bank and UNESCO performed a duet for many a Third World Country on the need to finance long term educational plans to complement other goals of their development programmes. The World Bank and the International Development Agency had allocated only 0.1% of loan finance to Education between their inception and 1963. Over the periods 1964-68 and 1967-73 the figures were 3.2% and 5.7% respectively (Baer, 1974). According to Van De Laar (1976) the Bank has shifted concern in the more recent past to informal education oriented as much of the fulfilment of equity, as to efficiency objectives. It is in this context that one can explain the initiatives of the World Bank and also of the I.A.D.B. in the educational and manpower development of some countries in the region. The structure of the educational and training systems being developed reflect the prevailing ideology of the lending agencies.

The socialist countries which pursued techniques of Central Planning had long since focussed their attention on the development of human resources to ensure complementarity with physical capital formation. According to Komarov (1968), it was Lenin who had argued that socialism required a higher level of preparation for the masses if a greater degree of labour productivity was to be achieved than under capitalism. Educational and Manpower Planning were institutionalised in overall state planning machinery of the socialist economies. To the extent that Cuba implemented centralised planning soon after the Revolution of 1959, the manpower planning model would have resembled largely the socialist state planning methodology.

Some of the methods, which basically assume a command economy, have sometimes been adopted in the so-called manpower requirements approach, often with unfortunate results since individual private responses may run entirely counter to the planners' objectives.

The developing world, by and large, tended to follow some of these models. The long-lead time involved in education and training required long-term models, which seemed to be consistent with conditions in developing countries, most of which were starting with low levels of literacy, and with very few individuals with high level training.

Approaches to Human Resource Investment:

There are three major approaches to Human Resource Investment or Manpower Planning namely:-

- (1) Social Demand Approach;
- (2) Manpower Requirements Approach; and
- (3) Rate of Return Approach.

The differences in these approaches have as much to do with political philosophy as with the role of the state in economic and social planning. One could hardly cover here the numerous issues that attend the actual application of each of these models. However, an attempt will be made to identify some of the philosophical underpinning in the analysis of the models so that the implications for Caribbean type economics could be clarified.

Social Demand Approach;

It can be argued that state, as distinct from private provision of education and training in the Caribbean has always been informed by social demand considerations. The term 'social demand' in the present context should be interpreted as a demand coming from the society or accepted as representing the better interests of the society. Thus, the members of the social group may through a 'consumer voter' process indicate their acceptance or rejection of procedures and methods designed to bring public education and training to members of the society. Alternatively, and more relevantly to the colonial period in the Caribbean, the administration would determine what is good for the society even though the feed-back process in respect of the level of satisfaction of consumer of these services is either non-existent or very tenuous.

The pre-eminent role of state and local governments in the United States in the provision of education and training is perhaps an ideal - typical example of the social demand approach prior to the application

of direct capital models in education and training. The voters determined to a great degree what type and quantity of education and training would be provided through the property taxes raised by their local governments. Here, the society determines what it considers 'good enough' in education and training without necessarily insisting on a presumed direct and explicit contribution to the economic system. The methodology consists simply of setting target output for the educational and training systems and finding the most cost effective method of implementing and achieving the target objective.

In the colonial setting of the Caribbean, where the State provided support for education, the objective was reasonably clear. According to Gordon (1963),

In the first decade after emancipation popular education was referred to as 'religious instruction' its aims were defined, clear-cut and well understood. There was never after that, an equivalent, all embracing aim for universal education.....

because there was little conception of using further education to produce candidates for activities needed to improve social and economic conditions. The most expensively educated members of the community gave relatively little in return.

(Gordon, 1963, pp. 6-7).

In more recent times, there has been a number of instances where Governments have responded to the popular appeal of certain programmes, quite apart from the demand for skills or for education required in the labour force. For example, since secondary education of the traditional Grammar School type provided a reliable mobility channel for the upwardly mobile in an era when white-collar pursuits represented the only step in the ladder beyond the poverty-stricken conditions of the urban and rural masses, the state has had to face, and has been forced to yield to, the inexorable 'demand' for universal secondary education. Such has been the trend in the period of decolonisation and of the push for self-government in the Caribbean, that is to say, the first twenty years after the Second World War. The Social conception of the relationship between secondary education and mobility is also responsible for the difficulty which many Governments in the Caribbean have had in justifying to their populations the need to reorient secondary education to include technical and skills-based subjects to suit the demands of a changing economy. A similar experience has

been noted in a number of African Countries now faced with the problem of the unemployment of the educated. The harambee or self-help type of education who have found their aspirations to white collar occupations frustrated by excess supply relative to the absorptive capacity of the economy. The political explosion that took place in Trinidad and Tobago in 1970 can be attributed in part to the hiatus between aspirations fostered by an irrelevant education system and the realities of the dependent economic structure.

In most Third World Countries, and surely in the Commonwealth Caribbean in the more recent past, the costliness and the labour intensive nature of education and training have forced Governments to observe greater rationality in their approach to human resource planning, even where a social demand method is being applied. There is therefore less of a predisposition to respond to social demand considerations willy-nilly and far greater emphasis is placed on economic criteria.

Given that educators and philosophers would continue to insist on the larger societal goals of education, of the moulding of the individual into an effective and committed member of the community, there will always be some element of the social-demand approach in manpower planning. It can be regarded as ministering unto the demand for education as well as training as a pure consumption good whether consumed privately and/or collectively.

The social demand approach is perhaps more closely linked with the rise of 'credentialism' through which, in situations of serious modern sector unemployment, educational qualifications are used as the criteria for selection of personnel for a larger proportion of the limited jobs available, without the level of education having any obvious bearing on the occupation in question. If junior secondary certificates do not guarantee employment then there is a push to acquire senior secondary certificates and then university education if necessary. Ronald Dore (1976) has characterized this process as the 'Diploma disease'.

A major redeeming feature of the social demand approach is the weight likely to be allocated to equity vis a vis efficiency. An underlying assumption of the democratisation of educational opportunity is that the lower income groups in the society can benefit from the tax-transfer process

where public funds are directed to the improvements of the educational and training opportunities available to the masses or to bring such provision in line with what the middle and higher income groups either receive through the state or provide for themselves through private funding.

Whether education and training are here regarded as consumption or investment would not disturb the assessment of benefits directed to specific target groups as would be expected in an analysis of equity objectives. Programmes for under-privileged youth, for women, or in adult literacy as JAMAL in Jamaica, may have as their objective redistribution rather than economic efficiency even though there may arise a situation of joint-product achievement. But even after we have dispensed with the problem of efficiency, the equity criteria continue to loom large as the experience of China vividly demonstrates. White (1981) has shown that since the formal educational system remains the major path of social mobility left in the process of socialist transformation, there now exists the conflict between 'meritocratic egalitarianism' and 'redistributive egalitarianism' with the society divided on which system represents equity in a modernising China. The former relates to rewards on the basis of performance, while the latter relates to rewards on the basis of need and equity. Social demand, in whatever form, can hardly be ignored in Manpower Planning, whatever the type.

Manpower Requirements Approach:

The Manpower Requirements Approach enjoyed great popularity in L.D.C.'s in the early days since it lends itself to an easy integration with overall economic development planning which has become standard practice in economic management in Third World Countries. While Manpower Plans are not always coterminous with economic development plans, the latter being usually of five years duration and the former of somewhat longer time perspective, a manpower plan itself is usually subsumed in the economic plan. The manpower plan itself normally provides the framework out of which will emerge the education plan.

The Manpower Requirements Approach, as its name implies, seeks to identify the manpower resources without which the targeted output for the various sectors of the economy will remain unfulfilled. According to Blaug (1967), five basic steps are involved:

- (1) Target G.D.P. disaggregated by sector;
- (2) Sectoral G.D.P. further broken down by industries;
- (3) Labour output co-efficient by industry and by target output;
- (4) Labour force by occupational categories;
- (5) Occupational structure of labour force converted into the educational and training structure.

Allowances are made for deaths, retirements and migration, etc., in arriving at final estimates for the target year as well as for the intervening years.

There are some serious problems involved in the application of this approach. In extrapolating past trends in output growth or, alternatively, in adducing the experience of a country with similar or comparable economic structure, there exists the inherent assumption of unique growth paths equivalent to a Rostovian stages approach. There is however, no prior reason why specific growth rates will be synonymous with particular economic structures and by implication with a specific manpower structure. Also too, the approach implies a planner's paradise in the sense that once the manpower has been created, persons will simply be absorbed in the occupations for which they have been trained without any reference to comparative wage scales. Additionally, employers would utilise labour in accordance with the occupational structure defined by the specific economy after which the manpower plan is modelled. This is a case of planning without prices which perhaps is only applicable in a command economy.

There is an inherent assumption of a fixity in the relationship between capital and labour and among the different types of labour; the manpower forecasting models posit a state of the world where zero or near zero elasticities of substitution between skills obtain. It has frequently been the basis for quick rules of thumb like engineer-technician-skilled worker ratios, and doctor/nurse/bed ratios, and is often more properly referred to as the technical manpower requirements approach. In a very simplified form the total requirements for a particular skill are given by :-

$$L_i = a_{ij} x_j$$

where

$$\begin{aligned} L_i &= \text{Total input of skill } i, \\ x_j &= \text{units of output of sector } j, \\ a_{ij} &= \text{number of units of skill } i \text{ per unit of} \\ &\quad \text{output } x_j \end{aligned}$$

In actual practice, one would need to have firm or near-precise predictions, of output by industry, aggregated from data from firms and one would need some reasonably reliable input-output model of the economy. There is no doubt that the large transnational corporations operating in the Caribbean have the planning framework that admit of this approach; there is great doubt that the same can be said for the smaller establishments, which make up the economic structure. In addition, there is difficulty in accomodating for peasant agriculture and for a large informal sector which performs the role of sharing the available productive work more widely and absorbing the residual when paid employment in the organised sector is exhausted. The spate of studies and analyses that have been done in the last ten years on redistribution and growth on basic needs policies and on small business and appropriate technology would warn against our assuming the informal sector to be a transitory phenomenon.

In respect of the more organised sectors, the approach assumes a high level of complementarity among the factors, including the different types of labour in the production system. In the real world, however, employers find mechanisms to substitute among types of workers in manning scales that depart considerably from the planners' dicta. According to Blaug (1971) regression analysis relating output by sector to occupational and educational characteristics of the labour force when applied to international data have yielded large variances which lend considerable support to the view that there is great scope for substitution within and between occupations (Bowles, 1970 and Psacharopoulos and Hinchliffe, 1972).

The Manpower Requirements Approach downplays the role of the incentive system in the determination of the demand for education and training, on the one hand, and of the supply of skilled or trained personnel on the other.

In fact, once we admit of the relevance of supply and demand factors, the weakness of manpower forecasting models becomes apparent Tinbergen, and Bos (1964) who developed one of the earliest requirements models admitted that :-

Our models do not aim at a description of the 'free development of the educational system under the forces of supply and demand... the purpose of the models is to aid in the process of planning for education and for labour market policies, tacitly assuming that ways and means can be found to induce the population to seek the desirable education

(Tinbergen and Bos (1964) (p. 126)

This tacit egregious assumption is attacked by those who place the burden of manpower adjustments on the forces of supply and demand.

A major counter argument is that, manpower planning has more to do with large structural shifts rather than with slight adjustments in the manpower structure. Thus existing price regimes are hopelessly inadequate in assessing the future manpower structure, a position that is not really untenable. The market-based approaches to manpower planning would insist that wages and salaries are likely to guarantee both the supply of manpower and the supply of effort from the manpower.

Das Gupta (1971) employed the Manpower Requirements Approach in developing a manpower plan for Trinidad and Tobago, which is therefore subject to the weaknesses we have identified above. Another notable example of the requirements approach is the Anderson Study on Guyana where it is estimated, 80% of the economy is under the control of the State. The Guyanese Government has pursued a tight wage policy, for the latter years of the 1970's, holding the line on salaries of high level manpower, but allowing some limited upward adjustments for the lower income groups. The political problems of the country but as well the lower level of rewards to skills and knowledge have resulted in a substantial exodus of professional, technical and skilled manpower to the North Atlantic, the Commonwealth Caribbean and to Suriname.

Emigration will make havoc with the estimates of requirements in the case of Guyana which stands out among the Commonwealth Caribbean Economies as the one case where the State, because of its substantial control over the economy, has the best chance of ensuring that its plan sticks. The experience of Cuba since the early 1970's demonstrates that even after the manpower supply has been generated, there may still be the need to provide the incentives to guarantee the supply of effort from the manpower supply. We have already noted the role of incentives in Revolutionary Cuba as discussed by Mesalago (1974).

Another problem involved in the use of the manpower requirements model relates to the question of unemployment. Manpower planning is as much concerned with the identification of the requirements of labour for particular industries as with the resolution of the severe unemployment and under-employment problems that affects the economy of Third World Countries. After the goals of the formal sectors have been identified and their labour needs established, invariably there is a large excess supply of labour to be absorbed by the informal sector or to join the ranks of the openly unemployed. The projection of labour force growth and the growth in requirements can determine the size of this group, but the requirements model does not direct itself to the issue of labor absorption in the economy, even though it may help in the identification of choice of technology where the relative price of factors is somehow accommodated in the model.

There are also lower level problems related to occupational classification systems where a high level of disaggregation is required. Trends based on the previous occupational structure or on that of some model country cannot be totally relied on for projection into the future when the composition and content of job would change. This is quite apart from the deficient statistical base existing in most Third World Countries. Quite often, the Manpower Requirements model has to be applied in a highly aggregative framework with projections made for high level and second-level manpower in broad categories e.g scientific and technical, as opposed to high level professionals in Commerce and Business Management, etc..

In spite of its obvious weaknesses, the manpower requirements approach is most useful where there is likely to be so large a structural change in the labour market that existing wage and salary rate would be substantially affected or where there is an obvious technological or societal constraint which limits possibilities for substitution or where a high degree of complementarity exists

for example, current teacher/pupil ratios may be followed as the norm for projection of the requirements for teachers. Through sensitivity analysis it may be possible to make varying assumptions on productivity growth and its relationship to the requirements for different types of manpower, i.e. a_{ij} may need to be adjusted for productivity changes. Furthermore, even where there are possibilities for substitution, say among types of teachers, or teachers and library systems, or teachers and educational television, the requirements approach yields useful data for the application of sensitivity analysis which can focus attention on the implications of satisfying demand through the one or the other method. In effect, at the disaggregated level, at which much manpower planning and educational planning take place in the Governmental bureaucracies, there is no escaping some application of the manpower requirements model.

Rate of Return Approach:

In the rate of return approach, educational and manpower investments are examined directly for their private and/or social returns on the basis of the prospective wages or salary profiles of the recipients on the assumption that these income streams represent an increment to output over the output attributable to a lower level of education or training. Proponents of this approach insist that it is the only method which successfully integrates educational and manpower planning into investment analysis. Correlatively, the decision-rules of investment theory are assumed applicable: expenditure on education and /or training should be undertaken up to the point where the rate of return is equal to that on investment in other types of capital, human or material: prior to this point, investments are presumably intra-marginal. The benefit cost method, the internal rate of return method and the present value method are simply variants on the same theme.

There is a number of assumptions inherent in this approach which should be noted:-

- (a) students and/or society are primarily concerned with the maximisation of financial returns on investments in education and training;

- (b) an individual's earnings are determined by his productivity which is a direct function of his embodied educational stock - his total educational and training experience;
- (c) cross-sectional evidence on earnings is indicative of longer term trends in earnings and therefore of prospective earnings to those contemplating educational investments;
- (d) increases in earnings are a function of age and/or experience rather than of 'non-economic' factors.

These assumptions have elicited a number of criticisms which are also important. In the first place, it is impossible to elide the influence of intervening variables like individual instruction, social class background, etc. Differences in earnings may have more to do with social convention and other non-economic factors than with education and training. This criticism is particularly relevant in a post-colonial society where race has had a substantial if even declining effect on earnings and income. (Harewood, 19 and Henry, 1974).

It is also contended that direct benefits (private and social) derivable from the rate of return approach are insignificant vis a vis the externalities or benefits external to each individual investment. The approach therefore, results in some amount of misplaced concreteness. Furthermore, at the level of the individual the assumption that there is a concern with maximisation of financial returns from education fails to take account of the psychic returns which may be far more important.

The rate of return approach carries the implicit assumptions peculiar to the neo-classical formulation that markets give the best indicators of efficiency in resource use. It is well known, however, that labour markets are not subject to the functioning of the free forces of supply and demand and a host of factors is responsible for segmentation and apparent irrationalities. Therefore, the existing wage structure may have less to do with marginal contribution to output and more to do with non-market factors, convention, monopsony power and corporate public relations.

While the approach has much to recommend it in situations where Manpower Planning and Educational Planning have to be performed in a market economy framework, the results need to be tempered with liberal adjustments in recognition of some of the valid criticisms noted above. To the extent that people do prefer to enter the more highly paid occupations, all other things being equal,

and to the extent that employers do relate their reward structure to some notional assessment of the contribution of the employee to the productive process, it is difficult to discard totally a manpower planning approach that uses these parameters in the analysis of the requirements or the demand for certain types of manpower.

It should be noted too, that the rate of return approach is sufficiently flexible to accommodate for a wider range of factors and assumptions on the operations of the labour market, especially in the computation of social rates of return and in the analysis of requirements from a societal perspective. Differential unemployment rates by occupation can be absorbed in the model by the adjustment of the real wage to reflect the probability of getting or not getting a job in the high wage sector as has long ago been shown in Todaro's and in Tidrick's modified Lewis approach (Todaro 1969 and Tidrick 1974). Likewise, would it be possible to introduce differential bargaining strength. One can also make adjustments such that social prices reflect 'shadow' valuations which are presumably more in keeping with the 'planner's' social preferences.

One may recall here the Little Mirrlees social benefit-cost analysis that uses internationally traded output for the 'true' valuation of social output (Little and Mirrlees 1969). Even though this method ignores the immiserisation process of trade in a situation of dependent under-development, characteristic of Caribbean Economies, the real problem in the application of the method is the kind of adjustments one may want to make rather than the approach itself. In fact, it is quite possible to apply the framework in a socialist or labour-managed system of production as in a capitalist or mixed economy system although in the former case, there is the added requirement of determining consistently the range or 'planners' prices.

The standard techniques would include an earnings profile on the basis of which the differential in income due to education and training is computed and discounted back to the present in normal rate of return procedure. The production function feeds into the process by determining the wage rate or contribution of the labour sector to output growth. The rate of return approach is not inherently a planning device. It merely describes the ex-post relationship between supply and demand at some point in time, However, it can be fitted neatly into the planning framework

by integrating it into some dynamic model of growth which gives a derived demand for labour. Even where the latter is not available directly, one may use other indicators like changing real starting salaries among different occupations or educational categories as indicative of new derived demand conditions for the manpower under consideration. The standard technique would include an earnings profile on the basis of which the differential in income due to education and training is computed, and discounted over the costs of such training and education according to standard rate of return procedures. The production function feeds into the process by determining the wage rate or contribution of the labour input to growth in output. Appendix 1 gives an example of one such model....

There is of course substantial debate on the applicability of the standard production function models to developing countries. We need not detain ourselves here with the pros and cons inherent in the use of one or the other of these models. It suffices to note that there is always a functional relationship between inputs and final output even though the determination of the exact relationship for the economy as a whole at a point of time and, more importantly for the present discussion over a period of time, is fraught with many problems not simply of estimation but rather of conceptualisation.

It is clear that a mixture of models is required in most Caribbean applications, with each method or variant providing a type of sensitivity test for the other. The specific objectives of economic development and manpower planning will have to be accommodated. For example, such issues as redistribution, satisfaction of basic needs (which includes education and some amount of training in some approaches to social planning in the Caribbean), choice of technology and technology transfer are now essential ingredients in planning.

On the other hand, it is important to guard against the import of models of whatever genre that are highly sophisticated in terms of mathematical and econometric techniques, but are totally unrelated to the realities of the economics of the CDCC member states or require statistical data that are not available in normal surveys.

Models of Caribbean Economy and Manpower Planning:

It is not the intention to analyse in depth the theories of economic development specific to the Caribbean and their treatment of manpower resources. For the most part, the theories have tended to be centred on physical capital: they have sought to address the problem of generating the supply of capital which would in the process of production absorb the available supply of labour services. This is evident whether the strategy relied on export markets or on internal markets developing from

the import substitution phase up to the scale where international trade becomes a possibility. The work of Arthur Lewis (1950) and William Deman (1964) are notable examples. Both theorists recognised the importance of human resources but their treatment of the subject leaves Manpower Planning as an almost peripheral issue.

Inherent in the Lewis dual economy model of development is the notion that homogeneous supply of labour is available from the subsistence sector and is absorbed by the industrial sector as the rate of investment expands in the latter sector. The economic development plans that were prepared in the Caribbean in the 1950's and 1960's, which had the Lewis model as their intellectual base and the Puerto Rican experience as an identifiable exemplar, focused, in large measure, on the savings constraint, and on the need to attract investors, especially foreign investors, to tap the availability of a cheap labour supply. The attention given to human resources, related mostly to needs of the state sector to acquire administrators, teachers, engineers, etc. There were little more than generalised manpower projections usually in terms of General Secondary education. The concern with education and training tended to derive more from a social demand perspective than from a specific requirement or investment approach.

The 'plantation' economists and the dependency theorists perhaps because of their focus on exploitation, give greater explicit emphasis to the role of human resources in the transformation process. The dependent nature of the economy results in the concentration of economic activity in primary production or latterly in finishing touch work, both of which require little more than physical exertion on the part of the labour force, while product elaboration and the consequent need for the technical development of the labour force remain in the ambit of the metropole: the net result is higher value added in the metropole vis a vis the local economy.

Best (1979) in his conceptualisation of the residentiary sector, implies a preeminent role for human capital formation. More recently too the discussion on technology transfer and on the requirements for small countries seeking to ensure a continuing competitiveness in international markets has forced analysts to examine more pointedly the role of human resource planning (Farrell 1979 and Girvan 1979) in creating

a comparative advantage.

For the economies that are not pursuing the Socialist path of economic transformation, there remains a need for the full elaboration of manpower development plans consistent with the economic strategies that are being pursued. The link between economic planning and manpower planning is still rather tenuous and needs to be improved.

A major factor in manpower planning in the CDCC member states, is the role of Government revenues and expenditure in the labour market. Since in a number of cases, Government revenues are highly dependent on exports or on export earnings, employment growth and the entire manpower framework is influenced by the rate of growth of the former.

The Trinidad and Tobago situation is a case in point. The Public Sector has grown by over 30% since 1974, when oil prices and consequently government revenues rose dramatically. The policy of the Government as an employer and its position on the wage structure in the public sector, are major parameters to be considered in manpower planning, and whatever model is applied, should allow for the inter-relationship between export earnings, government revenues, labour absorption, or manpower utilisation. This is as much an exercise for the Manpower Planners as for Economic Development Planners.

SECTION VI

In this Section, we shall identify the approaches that are required to improve Manpower Planning in the CDCC Member States and as well the mechanisms for co-operation among states.

There is need for substantial co-ordination, in most countries, in respect of the organisations that collect data that are useful for manpower planning. The collectivised system of Cuba almost guarantees that the total manpower needs of the economy are reflected in the central planning level. There is also greater sensitivity displayed on the need for co-ordination of all relevant agencies in Suriname, Guyana and Jamaica. For the most part, the other countries need to establish a centralised monitoring framework. This is all the more important in countries which do not practice any form of centralised planning. In such situations, the accent must be on the development of information with constant feedback processes to allow manpower analysis to influence the supply of manpower to the extent that demand can be identified from time to time.

DATA SYSTEMS:

It is necessary to exploit fully all the data that are available or potentially available. One can identify a few of the sources that can be more intensively utilised.

NATIONAL INSURANCE SYSTEMS:

The National Insurance Systems constitute a rich reservoir of data so far untapped for manpower planning on most countries. The registration cards of workers, employers and also self-employed workers provides an arrangement where essential data on the majority or a substantial proportion of the economically active population can be collected. Where essential data on the majority or a substantial proportion of the economically active population can be collected. Where peasant or subsistence type agriculture is important the NIS sources are likely to be

less comprehensive since workers in this sector tend to be excluded from coverage. The vast hiatus between the administration of the National Insurance Systems and the Agencies with primary responsibility for manpower planning has to be closed since its very existence constitutes a waste of resources in the form of information foregone. Small Countries with weak statistical services cannot afford to be wasteful in their information gathering services.

It is proposed here therefore that all National Insurance agencies collect in their registration of workers as well as in the updating undertaken from time to time, information on the occupation, training and exact wage rate of the worker. Up until recently, Trinidad and Tobago National Insurance Service collected earnings data by classes, thus foregoing the essential wage rate data which manpower planning could use to gauge changes in demand for specific occupations, assuming that movement in relative wages over time reflects divergent demand trends among occupations. The likely additional costs of occupation-specific wage data are likely to be picayune, especially where the data are being computerised and would be highly useful to the National Insurance Agencies themselves as they attempt to improve the benefits offered. The data also lend themselves for better in-house actuarial analyses which, as they become more sophisticated, the National Insurance Agencies will be expected to perform.

Whereas in the cases of Jamaica and Trinidad and Tobago regular sample surveys are routinely undertaken, the National Insurance data provide as well a test against the sample survey techniques. On the other hand, in the other countries where sample surveys are less frequent or are never undertaken between censuses, the National Insurance data are the only continuing source of good manpower data on the formal sectors of the economy.

TRACER SYSTEMS:

The censuses that have been undertaken in some of the countries will generate an important data source in respect of the stock of manpower with different skills available to the local economy. It behoves all countries

to develop tracer systems so that the major manpower flows can be monitored over time. For example, Trinidad and Tobago has developed the 'Survey of Graduates' which collects data on the employment experiences of young people who enter the labour market from the educational and training systems. Countries with a limited number of educational and training institutions should have little difficulty in sampling graduates some six to twelve months after they have been through a programme of training.

Even in countries where the stock data are not available nor are accessible from census reports, information from tracer studies will still prove useful in so far as they indicate how well the flow of new entrants is being absorbed into the existing stock. Without setting too great a store on the internal efficiency of labour markets, it has been the experience in most of the countries, that where demand for certain types of skills is increasing either the relative wage rate in the occupation rises and/or the level of unemployment among people with the specific training falls. The reverse process tends to hold where demand is falling. Thus, by monitoring the employment experience of new entrants into the labour market, it is possible to gauge the adequacy of the stock even when the quantum of the latter is unknown. Useful manpower planning can be undertaken through a process of adjustment and feedback.

The approach suggested here can be modified for more disaggregated analyses that treat with issues like job-satisfaction, career prospects, availability of training to the actual requirements of the job (i.e. employee satisfaction) and under-employment and/or labour hoarding. It would be the responsibility of those performing the tasks of manpower planning to determine what is practicable in the circumstances. In any event, because all the countries have been devoting or are about to devote a substantial share of their resources to education and training for the world of work, the implementation of tracer studies becomes an inherent responsibility, whatever the economic system applicable. Even in socialist Cuba, the new orientation to greater autonomy of enterprises and the reinstating

of material incentives would suggest that some skills will receive greater rewards depending on the nature of demand. Strict monitoring of wages and salaries in Guyana has not prevented the emergence of important differentials in skills and across sectors. Tracer systems will therefore be valid and relevant to the CDCC universe.

In some countries, attempts are being made to improve the system of employment exchanges, and as well, to collect on a continuing basis data on job vacancies. In the case of Suriname, it is even contemplated that legislation will be enacted requiring employers to register vacancies with the Centre for Labour Mobilisation and Development.

JOB VACANCY DATA:

It is proposed here that all the countries should give serious consideration to the development of data sources on job vacancy. Short of legislation moral suasion can be employed to enlist the support of employers in an arrangement where they are likely to benefit in the long run. Correlatively, the manpower services of Ministries of Labour must improve their systems, assessing and even testing the unemployed job-seekers so that employers could be spared some of the costs involved in performing the tasks themselves for a large number of applicants. In providing this service, the manpower services division would help to create the atmosphere where job vacancy data would be supplied by firms. It is recognised that informal job-placement networks are still very important in the Caribbean especially in small societies, and where ascriptive rather than achievement-oriented criteria are still large intervening variables. Yet change is taking place and the development of the employment exchange systems would demand some thrust in the collection of good job vacancy statistics directly from enterprises quite apart from the continual work needed on newspaper advertisements.

ORGANISED WAGE RATES:

In most territories, there is legislation requiring employers and workers' organisations to register ratified wage agreements with Ministries of Labour and/or Industrial Courts. This requirement allows the official agencies access to data that could be utilizable in manpower

planning, namely - wage rates by occupations, number of workers by occupational category and, as well, other benefits by occupations: there are sometimes occupational differences in some benefits, which may be important. These data which should be collected on a continuing basis, are useful in identifying shifts in wage relativities and in internal labour markets which have as their base the changing demand/supply picture for different types of manpower. The data would also be relevant for minimum wage fixing machinery and for the meditation role performed by Ministries of Labour.

WORK PERMITS:

Work Permits data are another source of information for identifying the skills in which the local economy is deficient. Unfortunately, in most countries, a seal of confidentiality tends to surround this information source, even though the only rationale for confidentiality seems to be implied from the mere fact that the agency responsible for the administration of work permits is the Ministry of Home Affairs, Department of the Interior or Ministry of National Security. The data required for the purposes of Manpower Planning are simply statistical in nature. A regular submission of tables on number of work permit holders by occupation, education, training and experience would satisfy all the demands of manpower planners.

MIGRATION DATA:

There is still a dearth of good data on migration. Small countries, in which the human resource is perhaps the only resource that could be varied at least in terms of quality, cannot afford to ignore the problem of migration. Economic conditions in the North Atlantic is one factor determining the northward bound flow and needs to be monitored at that level. At least national agencies can be assisted by the international organisations in the collating of such data on a periodic basis. There is also a large intra-regional flow that is inadequately monitored; Guyanese to Suriname, Eastern

Caribbean peoples to Trinidad and Tobago, Haitians to the Dominican Republic, and to Suriname etc. Developments in one country affect the development of others because of these migrating flows. Their monitoring is critical even though, admittedly the mechanisms for so doing are not easily put in place. Marshall (1979) has undertaken the first truly exhaustive analysis of migration in the region, their study examines the 'Haitian Problem' but more of such studies are required. The compilation of data is a major but not impossible problem as Marshall (1979) has shown.

CO-ORDINATIVE ACTION:

From the foregoing, it is clear that there is a number of data sources likely to be available which either already produce or have the potential to produce data for manpower planning purposes. The present indifferent arrangements in many countries result in the loss of information which conditions can be corrected almost costlessly.

There is need for member Governments to create a Manpower Planning Secretariat, possibly located in the Planning Agency with responsibility for co-ordinating on a permanent basis the manpower related activities of the type mentioned above in respect of Departments of Education and Training, of Labour, National Security and National Insurance. The Planning Agency seems to be the most logical location from the evidence available on most countries. But there are other agencies about which inputs are required. Government Departments, Public Utilities, para-statal and large private corporations are often in a position to establish their incremental requirements in the short and medium terms and their inputs are critical in aiding the process of manpower planning whatever the planning methodology employed.

The co-ordinating Committee, which must meet periodically, possibly quarterly, should in fact operate in a tripartite framework or at least allow flexible arrangements in order that the business sector, or the directly productive enterprises sector as well as the labour organisations can make inputs in the planning process. Such an arrangement is likely to create for manpower planners the environment in which there is a continuing feedback of information between the intent and the result of planning

approaches. Manpower planners would for example be able to adjust their technical coefficients in the light of information on technology changes in industries or sectors. In other words, even in situations where long-term perspective planning is applicable, the manpower planner can at each phase monitor developments and affect relevant adjustments.

In sum, there is much that can be done cheaply in most CDCC states to enhance manpower planning, if the appropriate authority structure is created. For the moment in too many cases organisations function independently and sometimes at cross purposes, the one of the other. Whatever the system of planning, co-ordination is important for the reason that human capital embodied in men will always have discretionary power in respect of the way it is utilized in the production system. In manpower planning, perhaps more than in any other field, it will always be necessary to establish that the official plans are consistent with the way in which those planned for are privately planning.

INTERSTATE CO-OPERATION:

A related issue in the co-ordination that can be easily affected is in the area of co-operation among countries. The problem of migration across national boundaries deriving from divergent rates of growth needs to be treated by member states in a climate of co-operation; migration has manpower and demographic implications for the states to and from which migrants go.

Another important area of co-operation concerns the technical expertise that countries can share among themselves, as well as the fund of knowledge that is generated where technicians performing similar functions need to examine issues of common concern.

The sharing of technical expertise among Governments is bound to add to the intellectual capital of the region. In such an arrangement, the poorer and the richer help one another. The CDCC framework can be exploited to assist this approach.

TRAINING FOR MANPOWER PLANNING:

Of the countries visited, or submitting responses to our questionnaire, there are no cases where there is a total absence of personnel with some modicum of training to which training in manpower planning can be added. There should be short intensive courses e.g. four to six weeks residential seminars, for officials directly involved in co-ordinating or performing manpower planning activity. Such a course should be designed to examine the divergent problems and needs of the CDCC member states in such a way that participants could appreciate the issues in their different contexts. The relevance of the techniques identified above would also be a subject for discussion. In respect of logistics, this course or seminar should form the first thrust of a programme to develop or improve the manpower planning machinery in CDCC member states. It is advocated that high priority be given to mounting such a course and, as far as is possible, practitioners from the region with high level experience and training as from manpower planning agencies and as well from the Universities and Research Institutions be selected as resource personnel. There will be need for a joint effort by ILO and ECLA here with the latter providing the 'feed stock' or perspective base of economic planning among member countries possibly using our typology above on which the manpower planning framework will be mounted. The ILO, on the other hand, cognisant of the problems of its earlier initiatives in Manpower Planning in the area, PREALC, should be well placed to develop the specific manpower planning component. Periodic meetings of manpower planners in the region will in itself allow for the cross fertilisation of ideas and the transfer of the knowledge and skills among manpower planners.

TRAINING AND EDUCATION FOR ADULTS:

It is necessary to single out this area for special comment. Human resources are subject to qualitative variation, a feature that is highly relevant to the productive process and to Adult Education and Training. In most Caribbean countries, education and training

are synonymous with the preparation of the school age cohort within the population. As shown in Section I, the population of these countries is very youthful. Their economic performance will, for a long time, be determined; not simply by their import-substitution regime, local or regional, but by their ability to enter and remain in the forefront of changing export-markets. Morawetz (1980) has shown the difficulties inherent in autarkic development under the socialist mode of production. Indeed the experience of the small socialist countries calls into question the transformation process advanced by C.Y. Thomas (1974). Income elastic exports, as opposed to the traditional primary staple product export markets, offer the best opportunity for growth in foreign exchange without which not only consumer goods but also intermediate and capital goods cannot be imported.

If Caribbean countries are to hold their own in export markets where product demand is consistently changing, with implications for local production structures, there will always be the need to train and retrain the cohort in the labour force who exceed by far the cohort at present undergoing education and training in the formal school system. The present generation of workers are likely to be in the work force for many years hence. Since a limited physical resource base and low level of economic diversification for the most part, make these countries exceedingly vulnerable at present; their real comparative advantage seems to depend on the extent to which they exploit the latitude in respect of their human resources; which are indeed a variable factor in so far as people can be refurbished with new skills that are more relevant to the international export markets. The system of Adult Education and Training is indeed the axis around which will revolve this capacity to transform the work force. The term is here used to apply to formal systems of education and training for adults, but is as well applicable to on-the-job training; part-time study; day-release programmes, and correspondence courses. Given its critical importance in meeting manpower shortages and in retooling the work force, the system of Adult Education and Training, previously regarded as a residual category will have to be closely monitored in the manpower planning structure required by CDCC countries.

STUDIES:

It is envisaged that at the very next meeting of manpower planning officials the priorities in research will be identified. Personnel from regional institutions can be contracted by ILO/ECLA to undertake these studies which will be a special agenda item at each meeting. Some of the areas that emerge as immediate candidates for investigation include:

- (a) contribution of export processing to employment growth;
- (b) present agriculture and employment creation;
- (c) migration, intra-regional and extra regional, and impact on labour force in recent years;
- (d) labour market segmentation;
- (e) secondary and primary female participation;
- (f) technology choice and manpower training and developments;
- (g) comparative wage structures and 'competitive' industrialization.

The divergent experiences of the countries in view of export processing assembly in generating employment needs to be examined. To what extent can peasant agriculture directed at income-elastic products be made to provide adequate support for labour that would normally revert to the status of open unemployed? To what extent does the choice of technology facilitate the development of skilled and technical cadres? These are some of the issues in need of early attention.

There is also need for prescriptive purposes to relate sub-regional industrial and agricultural co-ordination to manpower planning. The formation of the Organisation of Eastern Caribbean States is a case in point: there are manpower implications inherent in the policy of industrial allocation. The manpower planners in the final analysis will guide the determination of research priorities.

REGIONAL AGENCIES:

Implicit in the discussion is the large roles to be performed by ECLA and ILO, not simply in providing a locus for discussion of issues, but also in deepening the process of collaboration among the countries

in respect both of economic planning and manpower planning. Both organisations should be able to bring intellectual as well as physical and monetary inputs into the process. For example, seminars and meetings could be graced with high level experts from other regions, but sponsored by ECLA or ILO. For example, a discussion of a paper on export processing in the Caribbean could benefit from a companion piece from a researcher with expertise and knowledge of the South East Asia experience. ILO/ECLA would need to involve the important regional organisations in this endeavour of deepening the collaboration process: the major agencies include the CARICOM Secretariat and the Caribbean Development Bank in the Commonwealth Caribbean sub-region. There is, however, too large a hiatus between the latter sub-region and the other Caribbean countries of Haiti, Dominican Republic, Cuba, the Dutch Antilles, and Suriname, and concerted efforts must be made to ensure their fullest involvement. The language barriers will have to be broken or surmounted by having proper translation services at all meetings.

Under the rubric of ILO/ECLA, a much greater effort must be made to enlist the services of Caribbean academics but as well Caribbean practitioners whose expertise could be of great assistance to another country through short-term consultancies; thus a Guyanese manpower planner could be made available to Grenada for a few weeks to tackle some problem. The approach suggested here will require far greater at base or lateral co-ordination between ILO, ECLA, among the countries and CARICOM.

APPENDIX I

Rate of Return Approach in Manpower Planning:

$$(1) C_{k(t)} = W_{k-1(t)} + \bar{I}_{k(t)}$$

$$(2) W_{k(t)} = B_0 + B_1 X_1(t) + B_2 X_1^2(t) + \sum_{j=1}^m A_j(t) T_j(t)$$

$$(3) R_{k, k-1(t)} = \left(\frac{\sum_{t=0}^n W_{k(t)} - W_{k-1(t)}}{(1+i)^{t+1}} \right) \left(\sum_{t=0}^{t-1} \frac{C_{k(t)}}{(1+i)^{t+1}} \right)^{-1}$$

$$(4) X_t = F \left[K_t, L_1(t), L_2(t), \dots, L_k(t) \right]$$

Equation 1 is an identity showing that the costs C_k of education of level k consists of the opportunity costs in terms of income foregone W_{k-1} as a worker at the lower level, but, institutional and direct costs Z_k involved in pursuing education at level, k.

Equation 2 is a wage function for labour with education k and is a function of age or experiences X_1 and other factors T_j like race, employment, status and sex. The quadratic formulation implies that income will rise with age up to some point, after which a decline sets in.

Equation 3 gives the benefits-cost ratio R of level k, education over k-1 at interest rate i, the going rate of interest. Alternatively, this could be replaced by v, the internal rate of return that would make R=1. n is the number of years of working life and L the number of years of training involved. Equation 4 gives output of labour of different educational levels. It is assumed that the partial differentiation of the function gives the marginal productivity of each input. The production function therefore gives the implied demand for labour.

Equation 4 presents problems, where there is an absence of good national accounts broken down by sector. Fortunately, one can substitute observed changes in real wages and salaries for new entrants as a proxy for the marginal contribution of a worker with a specific level of

education and training. Individuals respond to the private market situation as indicated by relative current wage differentials, unemployment, vacancy rates and the costs of training. If, therefore, the real wage rate for technicians increases from one time period to another, compared to that of craftsmen; or if the unemployment rate for technicians declines dramatically vis-a-vis craftsmen, which is the same thing as an increase in the average rate for technicians, ipso facto, there would be a change in the height of the income profile, equation 2, without any change in shape of the function. Experienced workers would be receiving increases commensurate with those received by the new entrants. Thus having determined the income profile in any particular time-period, it is possible to update one's estimates in the short-term, using such short-term indicators of derived demand; like starting salaries and unemployment rates for new graduates.

APPENDIX II

Individuals Interviewed:

ANTIGUA:

1. Mr. T. McCartan (UNDP) Ministry of Economic Development;
2. Mr. Grossman, " " " " "
3. Mr. Riviere, ECCM Secretariat;
4. Mr. C.W. Edwards, ECCM Secretariat.

BARBADOS

1. Mr. Williams, Ministry of Development;
2. Mr. W. Rogers, Ministry of Labour;
3. Mr. C. McVoy (D.A.S.) Ministry of Labour;
4. Mr. Straughn, Department of Statistics;
5. Mr. F. Branch, Barbados Development Bank;
6. Mr. R. Leslie, Barbados Development Bank;
7. Mr. B. Prescod, B I M A P;
8. Ms. G. Branker, Ministry of Education;
9. Mr. E. Greene, Barbados Development Bank;
10. Mr. I. Carrington, Barbados Development Bank;
11. Ms. A. Scantlebury, Department of Statistics;
12. Ms. M. Small, Ministry of Labour;
13. Mr. A. Mitchell, Ministry of Labour;
14. Mr. A. Alleyne, Ministry of Education;
15. Mr. H. Harewood, " " "

GUYANA

1. Mr. Clarence Blue, State Planning Secretariat;
2. Mr. Malcolm Johnson, Central Recruitment Agency;
3. Mr. L. Ragrap, Ministry of Public Welfare;
4. Mr. Patrick Alexander, Caricom Secretariat;
5. Ms. Noreen Alleyne, " " ;
6. Mr. Allan Munroe, Ministry of Higher Education;
7. Mr. Rupert Daniells, Ministry of the Public Service.

JAMAICA:

1. Ms. Daphne Whitley, Department of Statistics;
2. Mr. Roland Booth, " " " " ;
3. Ms. Pauline Knights, National Planning Agency;
4. Mr. Dexter Manning, Ministry of the Public Service;
5. Ms. Barbara Hall, Ministry of Labour and Employment;
6. Ms. Sylvia Goldson, " " " " " " ;
7. Ms. N. Brown, National Insurance Service;
8. Mr. T. Lawrence, Ministry of Youth and Community Development;
9. Ms. M. Thompson, " " " " " " "

ST. LUCIA:

1. Mrs. C. Elwyn, Office of the Prime Minister;
2. Mr. L. Simon, Ministry of Education;
3. Mr. H. Rosemond, Ministry of Labour;
4. Mr. A. Auvergne, Ministry of Planning;
5. Mr. G. Calderon, National Development Corporation;
6. Mr. G. Haynes, Department of Statistics;
7. Mr. Cenac, National Insurance Service;
8. Mr. St. Hill, Youth Development Agency.

ST. VINCENT:

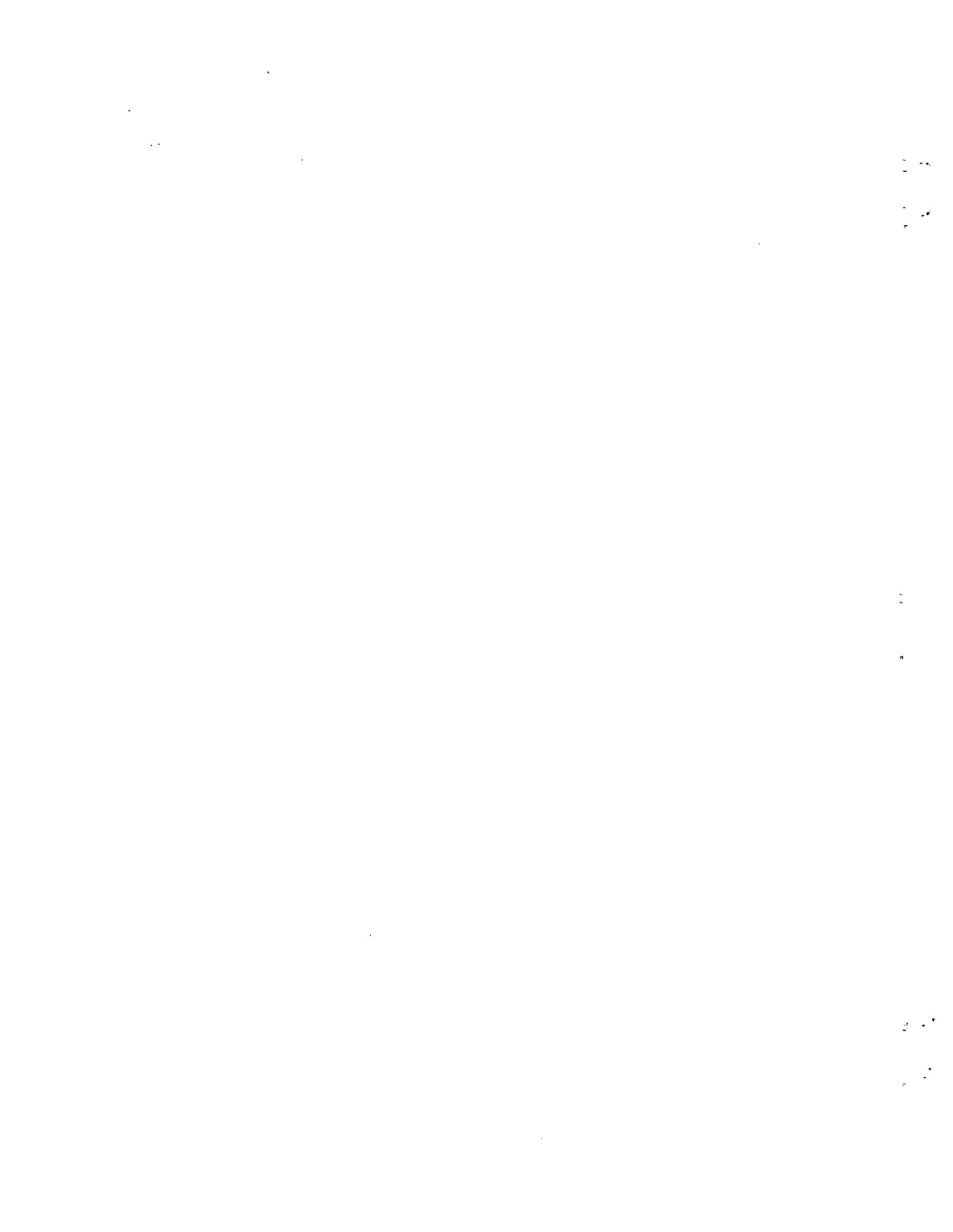
1. Mr. G. Venner, Ministry of Labour;
2. Mr. J. Gochenour, U.N.) Ministry of Finance;
3. Mr. Olivierre, Department of Statistics.

SURINAME:

1. Ms. Joan Heezen- Antonius, Stichting Planbureau Suriname;
2. Mr. Goedschalk, Stichting Planbureau Suriname;
3. Mr. Waegmeester, Ministry of Labour;
4. Mr. R. Simons, Department of Labour Relations;
5. Dr. L. Kraagketerdyk, Centre for Labour Mobilisation and Development;
6. Dr. N. Motil, Centre for Labour Mobilisation and Development;
7. Mr. C. Daleboudt, Ministry of Internal Affairs.

TRINIDAD AND TOBAGO:

1. Mr. A. Bartholomew, Ministry of Finance;
2. Mr. C. Greaves, Personnel Department;
3. Mr. L. Pujadas, Central Statistical Office;
4. Mr. H. Edwards, Industrial Development Corporation.



APPENDIX III

Questionnaire to be completed by Institutes or University Departments
involved in Manpower Research:

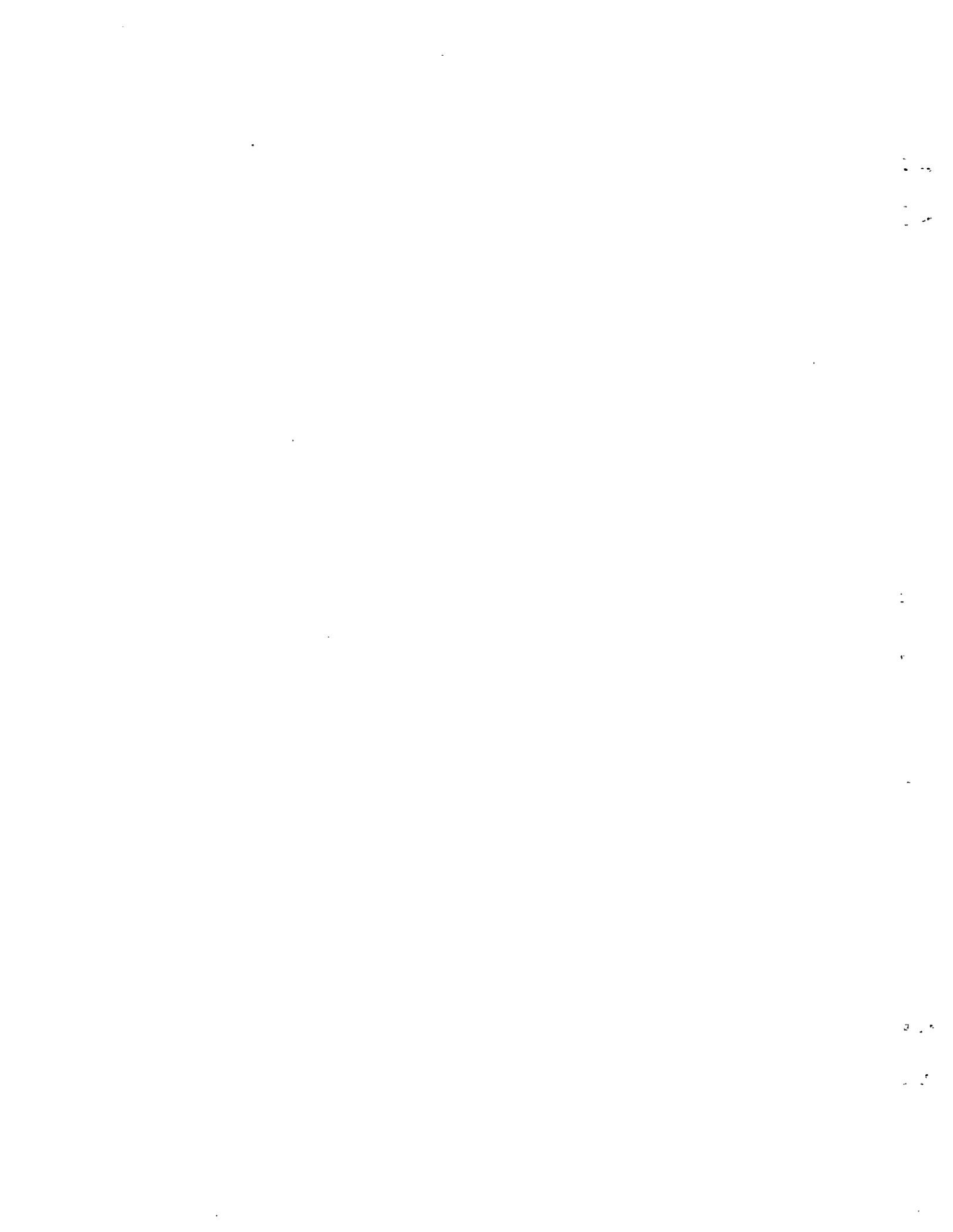
Name of Institute _____

Address of Institute _____

Name of Official completing Questionnaire

Signature.....

Date.....

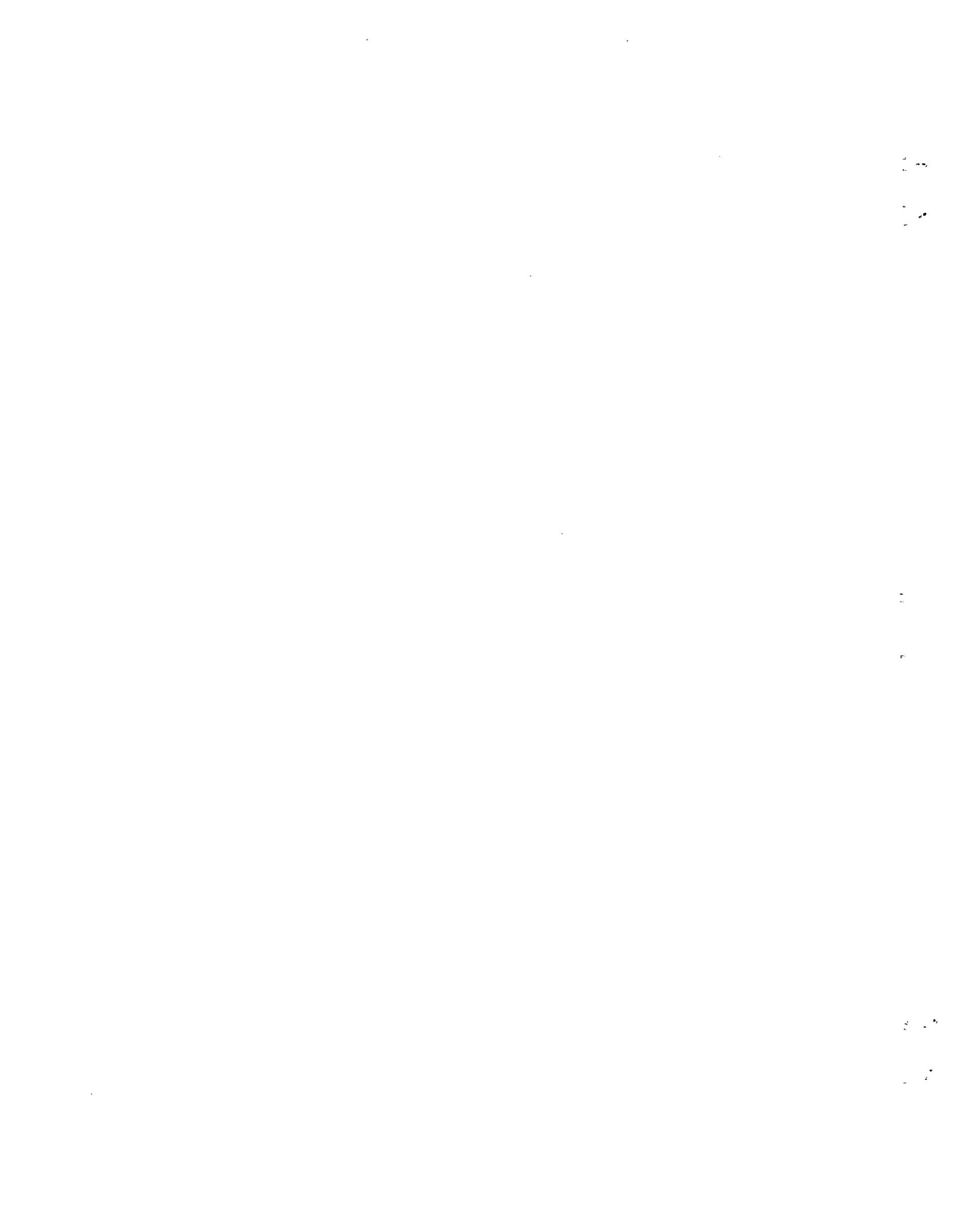


1. List of members of faculty, or staff at present engaged in manpower research:

2. Describe briefly the official arrangements that exist between your Institute/University/Department and governmental agencies responsible for manpower planning in the country.

3. List major studies that have been undertaken within the last five years by your Institute/University/Department that are relevant to manpower planning or employment.

4. Give a brief outline of the Methodologies and/or models in current use in your organisation which relate economic development planning to manpower planning.



APPENDIX IV

C D C C Manpower Planning Review

1. List organisations actively involved in manpower planning and research:

Public Sector

(a) _____

(b) _____

(c) _____

(d) _____

Other, e.g. Universities, Institutes, -etc:

(a) _____

(b) _____

(c) _____

2. Describe briefly the existing machinery for the coordination of manpower planning and research activity of the organisations listed in 1. above:

3. Is the country at present pursuing an Economic Development plan of more than one year's duration:

Yes No

1

2

3

4

5

6

4. If yes to question 3, describe briefly the relationship between the economic development and the manpower plans with specific reference to the methodology used in both.

5. List regular surveys undertaken by major data gathering agencies in respect of manpower demand/supply, labour force, new entrants to labour force, graduates of educational or training system, etc:

Agency	Name of Survey	Target Group	Periodicity	Level of Coverage of sample, total population, etc.
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6. List any special surveys undertaken in the last five years of relevance to issues in 5 above as well as any major reports on manpower planning. Indicate the agency that undertook the survey and describe briefly the major results discovered or major recommendations made in respect of reports.

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2 45

6

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2 45

2 45

7. Specify occupation, give average wage/salary rate (indicate whether monthly, weekly, etc) in the following sectors for unskilled, semi-skilled, skilled, technical and professional level of workers, covered by union agreements, for at least two recent years, e.g:

Commerce	1978	1980	Construction	1978	1980	Public Sector	1978	1980
Labourer			Labourer			Messenger		
Sales Clerk			Carpenter			Clerk/Typist		
Accounts Clerk			Foreman			Accounts Clerk		
Computer Programmer			Architectural Draughtsman			Architectural Draughtsman		
Accountant Trainee			Civil Engineer			Economist		
Accountant						Civil Engineer		

(Where information is not available in respect of the examples shown above, choose appropriate occupations at the unskilled, skilled, technical and professional levels)

8. (a) If available give data for at least two recent years on immigration and emigration

	Emigrants		Immigrants	
	1978	1980	1978	1980
Unskilled				
Skilled				
Technical				
Professional				
Total				

- (b) Give number of work permits issued over last year: _____

- (c) Describe briefly the understudy arrangements (if any) designed to prepare nationals for positions for which work permits were generated:

9. (a) Give present level of participation of men and women in the labour force: _____

Give breakdown by sectors if available.

- (b) Identify specific programmes developed to prepare women for the world or work, and indicate what is their current level of participation in (1) the training programme itself and (2) the occupations for which they were being trained vis-a-vis men.

10. Describe briefly any special programmes of aid and assistance by the state for the development of (a) small scale agriculture (b) small business or informal sector.

11. (a) Describe briefly what you see and the major problems that beset the practice of manpower planning in your country and identify any mechanism you consider appropriate.

12. Identify the foreign, bilateral or international assistance which is at present available for manpower planning.

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