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ECONOMIC DEVELOPMENT PROSPECTS IN NEWFOUNDLAND

One of a series of reports
on development prospects
in the provinces, territories,
and regions of Canada
prepared by *Canada*
the Department of Regional Economic Expansion



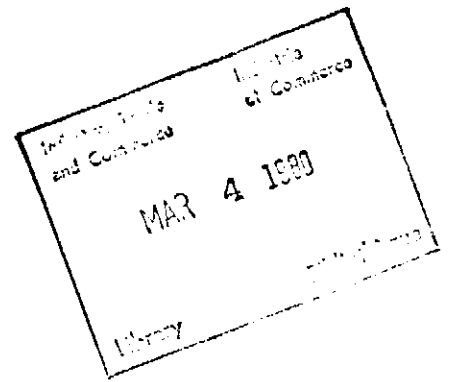
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ECONOMIC DEVELOPMENT PROSPECTS
IN NEWFOUNDLAND

PREFACE

In 1973, the Department of Regional Economic Expansion issued a series of reports on the economic circumstances of each of the provinces and their prospects for development. These reports were useful in discussions which lead to the successful implementation of a new federal-provincial mechanism, the General Development Agreement, which was designed as a flexible tool to pursue regional development in Canada. This mechanism has as its central objective the formulation of integrated federal-provincial regional development strategies based on the identification and pursuit of development opportunities.

With the aid of hindsight, it now appears that the mid-1970s represented a watershed period in many respects, as fundamental realignments and adjustments occurred internationally and within Canada. These considerations, in conjunction with the recent public discussion concerning the appropriate roles of business, labour and governments in the economy, suggest that this is an opportune time to review, in a comprehensive fashion, some major economic issues and factors affecting regional development. This report expands upon previous DREE reviews of provincial economic circumstances and opportunities by examining the major factors affecting the provincial economy's performance. In addition, it explores the policy issues and instruments which affect development planning and which have a bearing on the potential for realizing development opportunities.

The analysis begins with a detailed description of factors relating to economic development and an assessment of the economic performance of the province. This section provides a context for the next section which deals with specific development problems facing the province and the issues which bear on its economic development. Federal and provincial approaches to development are then discussed. The following section on development opportunities is the central focus of the report. In this section, the comparative advantages of the province are described and potential economic development opportunities are highlighted.

It is a truism that, over time, regional economic circumstances and development opportunities will continue to change and evolve. In a similar vein, it is apparent that economic development will continue to require an evolving spirit of policy coordination within and between various orders of government. In this context, it is hoped that this report will serve as a backdrop to federal-provincial discussions on the economy and to the further formulation and implementation of integrated federal-provincial development strategies and, at a broader level, contribute a spatial dimension to economic policy-making over the medium term.

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1. OVERVIEW

During the period from 1971 to 1977, Newfoundland found it difficult to hold its own with the rest of Canada vis-à-vis most economic indicators. Perhaps the most important cause of this was the rapid growth in the labour force which occurred as a result of increased participation rates, reduced out-migration and a large entry of young people. This high labour force growth combined with relatively slow growth in the economy has led to a doubling of unemployment since 1971. One bright spot during the period was a substantial increase in personal income, however much of this increase was the result of increased transfer payments, since this component of personal income grew much faster than the earned component. However, the period ended on a note of renewed optimism, derived from emerging potential in a number of the primary resource sectors, notably hydro-electric power, offshore oil and gas, mining and the fishery. This renewed optimism was reflected in a 1978-79 budget supplement entitled "Into the Eighties - Blueprint for Development" in which the provincial government outlined development strategies for the above sectors which are projected to create 40 000 new jobs by 1982.

Development problems in Newfoundland are, in part, a function of a narrow resource and industrial base which results in a limited number of absolute or comparative advantages for the province. The economy is largely dependent on the utilities, service and mining sectors for its real domestic product, and heavily dependent on federal transfer payments as sources of provincial revenue and personal income.

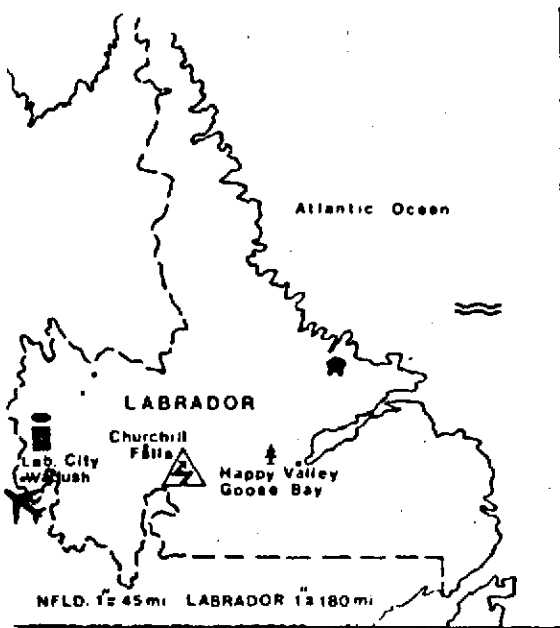
The financial state of the provincial government is weak with the net annual increase in the provincial debt averaging \$170 million in recent years. Resulting low credit ratings make it increasingly costly to take advantage of development opportunities requiring heavy provincial capital inputs.

While the financial picture is discouraging, there are several areas of potential that give cause for optimism. Development opportunities for the expansion of the primary resource base have the potential to substantially improve the economic picture. The re-emergence of the fishery and developments in the forestry sector suggest a brighter outlook, particularly over the medium and long terms. Current resource developments are indicated in Figure 1.

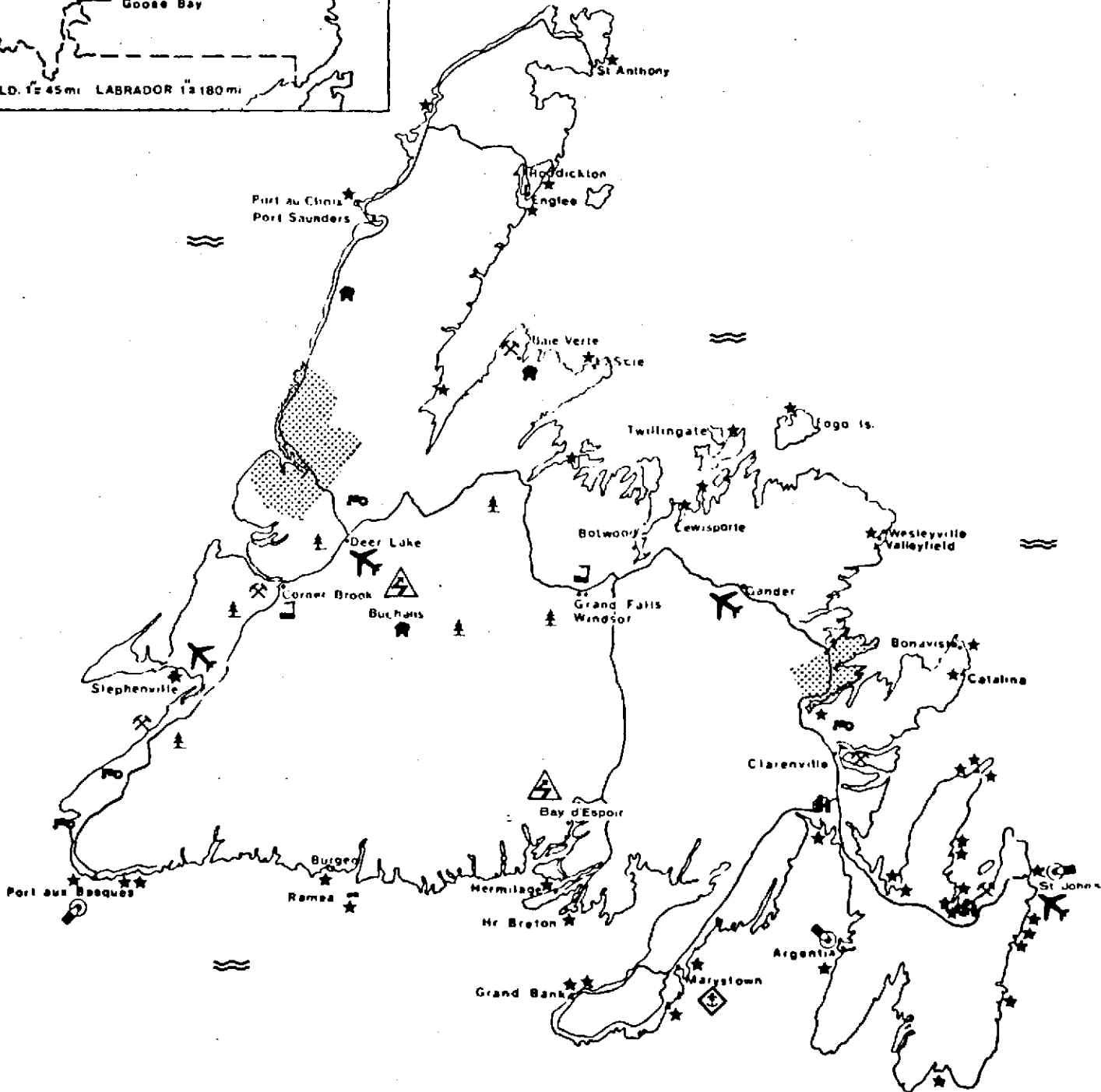
Development strategies pursued under the Canada/Newfoundland General Development Agreement (GDA) have, in the last five years, emphasized the provision of basic support

FIGURE 1

NEWFOUNDLAND RESOURCE DEVELOPMENTS



- | | |
|------------------------|-------------------------|
| ~ Fishing Grounds | ☐ Iron Ore |
| ★ Fish Freezing Plants | ★ Non-Ferrous Metals |
| 🌲 Forests | ⚒ Non-Metallic Minerals |
| 🏭 Pulp & Paper Mills | ◊ Shipyard |
| ⚡ Hydro-Electric Sites | 🚛 Agriculture |
| 🛢 Oil Refinery | Ⓢ Port of Entry |
| | ▨ National Park |
| | ✈ Airports |



components to assist the private sector in capitalizing on resource development opportunities, together with programs to improve long-run planning and resource management capabilities in government. With an expanded resource base from which the economy can grow in an orderly fashion, the resolution of outstanding issues, such as the hydro dispute with Quebec over current and future hydro-electric development strategies for Labrador, and the potential development of offshore oil and gas, Newfoundland can be expected to improve its economic position vis-à-vis the rest of Canada over the next decade.

2. ECONOMIC DEVELOPMENT FACTORS

2.1 Overview of Economic Performance

2.1.1 Output

Table 1 presents gross domestic product, (GDP), population and GDP per capita for Newfoundland and for Canada as a whole for the years 1961, 1971 and 1977 and permits an evaluation of relative changes in these indicators between Newfoundland and Canada over time. It should be noted that the values for GDP are stated in current dollars and, to the degree that inflation was a factor in the economy over this period, they reflect price increases rather than productivity changes.

TABLE 1

SELECTED VALUES, GROSS DOMESTIC PRODUCT,
NEWFOUNDLAND & CANADA - 1961, 1971, 1977

	<u>1961</u>	<u>1971</u>	<u>1977</u>
1. GDP (\$ million)			
1.1 Newfoundland	515.0	1 273.0	2 755.2
1.2 Canada	39 615.4	95 070.5	214 829.3
2. Population (000)			
2.1 Newfoundland	457.8	522.1	563.9
2.2 Canada	18 238.3	21 568.3	23 257.7
3. GDP Per Capita (\$)			
3.1 Newfoundland	1 125.	2 438.	4 886.
3.2 Canada	2 175.	4 408.	9 237.

Source: Statistics Canada, Census of Canada,
Catalogue No. 13-213

Newfoundland GDP rose from \$1 273 million in 1971 to \$2 755.2 million in 1977, an increase of 116.4 per cent. Per capita GDP increased by 100.4 per cent. For Canada as a whole, GDP grew by 126.0 per cent and per capita GDP grew by 109.6 per cent over the same period. Newfoundland's share of Canadian GDP decreased slightly from 1.34 per cent in 1971 to 1.28 per cent in 1977.

TABLE 2

REAL DOMESTIC PRODUCT BY INDUSTRY,
NEWFOUNDLAND - 1961, 1971, 1977

Industry	1961		1971		1977	
	\$million	% of Total	\$million	% of Total	\$million	% of Total
Agriculture	-	-	-	-	-	-
Fishery	10.2	1.6	25.1	2.1	18.8	1.2
Forestry	17.1	2.7	17.9	1.5	16.8	1.0
Mining	66.5	10.6	145.9	12.4	191.3	11.7
Manufacturing	70.2	11.2	112.1	9.5	82.1	5.0
Construction	99.7	16.0	237.2	20.1	116.4	7.1
Utilities	<u>11.9</u>	<u>1.9</u>	<u>44.8</u>	<u>3.8</u>	<u>372.7</u>	<u>22.8</u>
Goods	275.6	44.1	583.0	49.4	798.1	48.9
Transportation, Storage, Comm.	5.7	0.9	12.0	1.0	16.1	1.0
Trade	84.3	13.5	141.3	12.0	203.3	12.5
Finance, Insurance, Real Estate	54.6	8.7	102.7	8.7	149.5	9.2
Community, Business, Personal Services	120.1	19.3	234.3	19.9	311.3	19.1
Public Adminis- tration, Defence	<u>84.3</u>	<u>13.5</u>	<u>106.5</u>	<u>9.0</u>	<u>153.3</u>	<u>9.4</u>
Services	349.0	55.9	596.8	50.6	833.5	51.1
TOTAL	624.6	100.0	1 179.8	100.0	1 631.6	100.0

Source: Conference Board in Canada, January 1979

Table 2 presents the value of real domestic product (RDP) by industry for the years 1961, 1971 and 1977. The figures presented in the table are estimates produced by the Conference Board in Canada and are presented here to show the order of magnitude of each sector's contribution in relation to other sectors, rather than the absolute magnitude of its contribution. In discussions with provincial officials it has been determined that the estimates for the manufacturing and fishing sectors are lower than would be expected, while the utility sector's contribution to RDP has been over estimated. In addition, the fact that 1971 was an unusually good year for construction magnifies the apparent decline in this sector over the 1971-77 period.

During the period 1971-77, provincial RDP increased by 38.2 per cent, while Canadian RDP increased by only 29.1 per cent. Output in the province grew in both the goods-producing and service sectors over this period, however, growth in the service sectors was considerably more than in the goods-producing sectors. This reverses the trend of the 1961-71 period in which the goods-producing sectors grew faster than the service sectors. The following is a brief review of the output performance of each of the goods-producing sectors.

The province's annual value of fish landings increased from \$36.8 million in 1971 to \$108.9 million in 1978. Notwithstanding this considerable growth of 195.7 per cent in the value of landings, growth in the first half of the seventies, particularly for the volume of landings, was very erratic -- the over-fishing of the previous decade was taking its toll. However, the enforcement of quotas coupled with the considerable stock regeneration capacities of the fishery has resulted in a dramatic recovery in the sector in recent years. Newfoundland's position relative to the national situation has improved since 1971. The value of the province's fish landings as a percentage of the total Canada fish landings has increased from approximately 18 per cent in 1971 to 20 per cent in 1978. The extension of the Canadian fisheries jurisdiction to 200 miles on January 1, 1977, has heralded a new era for the fishing industry in the province, given its comparative spatial advantage in relation to some of the largest fish stocks in the North Atlantic. The rapid increase in the volume and particularly the value of fish landings which has occurred since 1975 is indicative of the impact of the 200-mile limit on the fishery sector. Table 3 contains selected statistics related to the Newfoundland fishery sector since 1971.

TABLE 3
SELECTED STATISTICS, PRIMARY FISHERIES SECTOR,
NEWFOUNDLAND, 1971-1978

	Volume of <u>Landings</u> (000 metric tons)	Value of <u>Landings</u> (\$ million)
1971	396.0	36.8
1972	295.2	36.5
1973	306.3	47.9
1974	234.5	42.9
1975	255.1	45.7
1976	339.6	64.7
1977	394.1	85.5
1978	432.4*	108.9

* January - November

Source: Statistics Canada, Catalogue Nos. 61-202, 24-201

Two of the most significant occurrences in the forestry sector in the past five years were the signing of the Canada/Newfoundland forestry subsidiary agreement (April 1974) and the closure of the linerboard mill in Stephenville (August 1977). While the latter has caused a short-term setback in the forestry industry (the mill is presently being converted to produce newsprint and is due to commence production in 1981), the subsidiary agreement has produced a host of development activities having significant longer term benefits.

As a result of the circumstances of the linerboard mill, pulpwood production peaked in 1973-74 and has since regained a balance in line with the full operating capacities of the two major paper mills in the province. Notwithstanding the linerboard mill, census value-added has increased approximately 72 per cent during the period 1971 to 1976.

Pulpwood production in the province as a percentage of all-Canada production rose slightly from 3.4 per cent in 1971 to 3.7 per cent in 1978. Table 4 depicts selected statistics of the forestry sector in the province from 1971 to 1978.

TABLE 4
SELECTED STATISTICS, PRIMARY FORESTRY SECTOR,
NEWFOUNDLAND, 1971-1978

	<u>Pulpwood Production</u> (Cunits)	<u>Census Value- Added</u> (\$ million)
1971	536 607	18.9
1972	710 647	24.4
1973	1 012 868	29.3
1974	1 010 994	37.4
1975	730 301	36.6
1976	696 871	32.5
1977	676 147	--
1978	598 635	--

Source: Statistics Canada, Catalogue Nos. 61-202, 25-001

Newfoundland's mineral production has experienced considerable growth during the 1970s mainly as a result of iron ore production in Labrador. Total mineral production in 1979 is forecast to reach \$950 million -- almost three times the value of production in 1971. Census value-added has increased

111.6 per cent during the period 1971 to 1976. Notwithstanding the increase in production experienced in the province, its share of all-Canada production has decreased from 5.8 per cent in 1971 to 4.7 per cent in 1978. This decline in mineral production was partly attributable to a four-month strike at the Iron Ore Company of Canada, but for the most part it is a reflection of the rapid increase in the value of the oil produced in western Canada which overshadows the substantial increase in the value of Newfoundland mineral production.

TABLE 5
SELECTED STATISTICS, MINING SECTOR,
NEWFOUNDLAND, 1971-1978

	Mineral Production (\$ million)	Census Value- Added (\$ million)
1971	343.4	180.6
1972	290.7	132.5
1973	374.4	167.1
1974	448.6	212.6
1975	551.0	296.1
1976	745.0	382.2
1977	867.1	--
1978	611.4	--

Source: Statistics Canada, Catalogue Nos. 61-202, 26-202, 26-201

The value of manufacturing shipments has risen considerably during the period 1971 to 1978, from \$261.6 million to \$836.3 million, an increase of 220 per cent. Growth in manufacturing activity was reversed in 1975 and 1977 as a result of the closures of the Come-by-Chance oil refinery and the Stephenville linerboard mill. A major factor positively affecting growth in the manufacturing sector was the increased value of fish processing, particularly since 1976. Table 6 presents selected statistics of the manufacturing sector in the province since 1971.

TABLE 6
 SELECTED STATISTICS, MANUFACTURING SECTOR
 NEWFOUNDLAND, 1971-1978

	<u>Shipments</u> (\$ million)	<u>Census Value-Added</u> (\$ million)
1971	261.6	135.5
1972	284.1	142.9
1973	382.6	196.8
1974	711.1	280.3
1975	650.0	208.0
1976	599.0	243.3
1977	697.0	343.7
1978	789.5 ^P	--

P Preliminary

Source: Statistics Canada, Catalogue Nos. 61-202, 31-001, 31-201

The construction industry plays a significant role in the performance of the Newfoundland economy. In recent years investment has been highlighted by major developments: Churchill Falls hydro, Stephenville linerboard mill and Come-by-Chance oil refinery. The delay, or lack of new projects such as the Gull Island power project, has resulted in a significant drop in the level of employment in the construction industry.

Investment expenditure in construction work performed in 1978 amounted to \$664 million, an increase of only 6.5 per cent over the previous year. From 1971 to 1978 the value of building permits has increased 212 per cent. The number of housing starts in 1978 was 2 865 units, down 23 per cent over 1977.

The past few years have seen substantial reductions by the private and public sectors in the level of investment expenditure in construction. Moderate gains are expected in 1979 as major reconstruction of the Trans-Canada Highway is under way and an increase is expected in residential construction. As well, the Hinds Lake hydro project is presently under construction in central Newfoundland. Table 7 presents selected statistics of the construction sector in the province since 1971.

TABLE 7

SELECTED STATISTICS, CONSTRUCTION SECTOR,
NEWFOUNDLAND, 1971-1978

	Value of Building Permits (\$ million)	Census Value- Added (\$ million)
1971	35.9	311.5
1972	41.2	233.7
1973	88.2	223.0
1974	68.6	308.2
1975	64.8	310.6
1976	106.6	402.8
1977	128.0	--
1978	112.0	--

Source: Statistics Canada, Catalogue Nos. 61-202, 64-001

Value-added in electric power production increased 225 per cent during the 1971-76 period. Investment in the utilities sector totalled \$1 230.3 million between 1971 and 1978.

Churchill Falls is currently producing 34.5 billion kilowatt hours of energy annually. The Hinds Lake development, on the island portion of the province, is currently under construction with completion scheduled for 1980. Table 8 presents selected statistics of the utilities sector in the province since 1971.

TABLE 8

SELECTED STATISTICS, UTILITIES SECTOR,
NEWFOUNDLAND, 1971-1978

	Census Value- Added (Electric Power) (\$ million)	Investment (\$ million)
1971	42.5	199.8
1972	60.8	157.6
1973	87.1	144.5
1974	126.5	129.1
1975	123.8	126.3
1976	137.9	203.4
1977	--	127.9
1978	--	141.7

Source: Statistics Canada, Catalogue Nos. 61-202, 61-206

2.1.2 Investment

Capital investment in Newfoundland has tended to be cyclical during the period 1971 to 1977 with 1971 and 1976 being peak years. Relative to Canada as a whole, a higher portion of investment in Newfoundland was channeled into the institutions/government departments and utilities sectors, based on an aggregation of investment from 1971 to 1977. In contrast, investment in the manufacturing, trade/finance/commercial services, housing and primary construction sectors was relatively lower in the province than for the nation as a whole. Table 9 presents an overview of investment expenditures for Newfoundland and Canada during the 1971 to 1977 period.

TABLE 9

SELECTED VALUES, INVESTMENT BY SECTOR*
NEWFOUNDLAND & CANADA, 1971-1977

	1971 (\$ million)		1977 (\$ million)	
	Canada	Nfld.	Canada	Nfld.
1. Total Investment	20 184.0	678.2	46 597.5	711.8
1.1 Primary and Construction	3 113.0	122.0	7 902.0	78.3
1.2 Manufacturing	2 994.0	140.5	6 080.7	41.5
1.3 Utilities	3 988.0	199.8	9 187.9	127.9
1.4 Trade, Finance & Commercial Services	1 915.0	26.4	5 334.6	97.2
1.5 Institutions & Gov't Departments	4 149.0	119.3	7 027.5	202.6
1.6 Housing	4 025.0	70.2	11 064.8	164.3

* Excludes repair expenditures

Source: Statistics Canada, Catalogue No. 61-206

2.1.3 Employment

The Newfoundland labour force has increased from 147 000 to 198 000 during the period 1971 to 1978, an overall increase of 34.7 per cent, or 4.3 per cent annually. The comparable national increases were 26 per cent and 3.4 per cent respectively, implying that the province's labour

force has increased approximately 40 per cent faster than the national labour force during the past seven years. It is noted that the labour force, as a percentage of the population, has increased 7.9 per cent faster in Newfoundland than in Canada as a whole. In 1978, 34.8 per cent of Newfoundland's population was in the labour force as compared to 28.2 per cent in 1971. The comparable national percentages were 46.3 per cent and 40.1 per cent.

The unemployment rate in the province has increased from 8.8 per cent in 1971 to 16.4 per cent in 1978, a 86.4 per cent increase. While the province had improved its unemployment position relative to the Canadian rate during the last half of the 1960s, the situation has since deteriorated. A major reason for this is that the province's participation rate has increased from 45 per cent in 1971 to 51.7 per cent in 1978.

TABLE 10

SELECTED VALUES, LABOUR FORCE & EMPLOYMENT
NEWFOUNDLAND AND CANADA 1971, 1978

	<u>1971</u>	<u>1978</u>
1. Labour Force (000)		
1.1 Newfoundland	148	198
1.2 Canada	8 639	10 882
2. Unemployment Rate (%)		
2.1 Newfoundland	8.8	16.4
2.2 Canada	6.2	8.4

Source: Statistics Canada, Catalogue Nos. 71-201, 71-001

Table 11 presents the employed labour force by industry for the years 1961, 1971 and 1976. Over the 1971-76 period, employment in the primary and construction sectors has remained relatively stable. The major employment increases have been recorded in the service sectors, although the manufacturing sector has showed steady growth since 1961.

TABLE 11

EMPLOYED LABOUR FORCE, BY INDUSTRY

NEWFOUNDLAND AND LABRADOR, 1961, 1971 and 1976

	June 1961	June 1971	1976 (Annual Average)
Agriculture	1 580	1 095	13 000
Forestry	5 217	1 905	
Fishing & Trapping	7 815	6 530	
Mining	4 021	4 725	
Manufacturing	11 325	15 900	
Construction	7 719	13 170	13 000
Transportation Communications & Utilities	14 193	15 565	20 000
Trade	18 250	21 900	31 000
Finance, Insurance Real Estate	1 408	2 510	4 000
Community Business & Personal Services	17 371	31 005	44 000
Public Admin- istration	12 039	11 265	13 000
Industry Unspecified	3 099	12 065	--
All Industries	104 037	137 640	158 000

Source: Statistics Canada, Census of Canada, Catalogue No. 71-001

2.1.4 Income

The growth in average weekly wages and salaries in Newfoundland since 1971 has been a compensating factor to some degree. During the period 1971 to 1978, weekly wages and salaries have increased approximately 100 per cent in the province, compared to approximately 92 per cent for the nation as a whole. In 1971 the provincial wage was 89.9 per cent of the Canadian wage, in 1978 the figure was 93.6 per cent.

Per capita personal income in Newfoundland rose from \$2 190 in 1971 to \$5 039 in 1977, an increase of 130 per cent or an average annual increase of approximately 14.9 per cent. The corresponding national rates were 115.7 per cent and 13.5 per cent respectively. Provincial per capita personal income as a percentage of national per capita personal income increased significantly over the years. In 1961, 1971 and 1977 the respective percentages were 58.2, 63.8 and 68.

The government transfer payments component of personal income increased much faster than the earned income component from 1971 to 1977, the former's increase being 185.5 per cent and the latter's being 113.3 per cent. The comparable national figures are 152.2 per cent and 111.1 per cent respectively. Although the transfer payments component has increased significantly, it should be noted that Newfoundland's earned income component has increased at a slightly faster rate than that for Canada. Table 12 depicts selected values related to personal income.

TABLE 12

SELECTED VALUES, PER CAPITA PERSONAL INCOME,
NEWFOUNDLAND & CANADA - 1961, 1971, 1977

	<u>1961</u>	<u>1971</u>	<u>1977</u>
1. Personal Income Per Capita (\$)			
1.1 Newfoundland	961	2 195	5 039
1.2 Canada	1 651	3 435	7 411
2. Earned Income* Per Capita (\$)			
2.1 Newfoundland	804	1 680	3 583
2.2 Canada	1 438	3 053	6 445
3. Transfer Payments Per Capita (\$)			
3.1 Newfoundland	157	510	1 456
3.2 Canada	148	383	966

* Earned income includes: wages & salaries, business income, interest, dividends and investment incomes, and other income excluding transfer payments.

Source: Statistics Canada, Catalogue No. 13-201

2.2 Development Factors

2.2.1 Background to Development Factors

Newfoundland's economic history is characterized by the uncoordinated exploitation of its natural resources. In recent years there has been selected investment in provincial infrastructure and public services to attempt to bring them up to the national average. This, in part, accounts for the impressive growth of the service sector in recent years, which in turn has fostered some related growth in the manufacturing

sector. However, the economic base continues to be the province's natural resources.

The following section considers the basic development stock of the province in terms of the factors of production, physical resources, labour, and capital.

2.2.2 Resource Endowments

Agriculture

Agriculture is the least developed of the renewable resources and has only limited potential for expansion. In 1978 agriculture accounted for about 0.2 per cent of the total Newfoundland gross domestic product.

There are 400 farms with a total area of 29 373 acres. Factors contributing to a generally low level of production include poor soil structure, stoniness, low fertility, excess water, steep topography, relatively short growing season, and a cool and damp climate. Consequently, the range and volume of crops that can be produced are severely limited. Livestock production shows some potential for future development, however this too is limited by the inability of the province to produce sufficient forage crops.

Table 13 shows the increase in hectares brought under cultivation between 1971 and 1976 with a negligible change in the number of farms.

TABLE 13

NUMBER AND HECTARES OF FARMS
NEWFOUNDLAND, 1971, 1976

	<u>No. of Farms</u>	<u>Total Hectares</u>
1971	402	21 119
1976	398	29 373

Source: Statistics Canada, Catalogue No. 96-801

While the physical attributes of the province mitigate against dramatic growth in the sector's absolute contribution to the economy, some potential exists for expansion of agricultural production to decrease the dependency on high-cost imported foods and for specialized export opportunities such as blueberries.

Forestry

Over 25 per cent of the land area of the province is productive forest land. With three major pulp and paper mills, two of which are operating at present, and numerous small sawmills, the forests represent a major provincial resource.

Some hardwood species, primarily white birch, are available on the island portion of the province, however at present they are utilized only for firewood. The dominant softwood species of spruce and fir are the economic base of the forest industry. The total forest industry in 1978 provided employment for about 5 000 people.

Newfoundland faces a future wood supply problem resulting from past high-grading cutting practices, spruce budworm infestation, an imbalance of age classes, and poor regeneration from forest fires. To counteract this situation, the provincial government is taking measures to improve management practices.

The problems of the imbalance in age class and spruce budworm damage permit a short-term increase in the harvest of wood to maximize the use of the available supply. For the near future, the available wood supply is in excess of the current pulp and paper mill capacity and is available for export or for use in other processes.

Fishery

Historically, the fishery has been the mainstay of the Newfoundland economy. In recent years the dramatic increases in production from the forests and minerals have somewhat over-shadowed the role of the fishery. However, with the availability of extra stocks, due in part to the declaration of the 200-mile limit and the cyclical improvement in the basic stock, the fishery is once again assuming a major role in the economy. The recent upswing in fish prices has also improved the provincial returns from this renewable resource and has served to both increase and improve the quality of the fishing effort.

The fishery remains a major employer in the province, accounting for approximately 7.5 per cent of the labour force, including a large number of part-time and occasional participants. Only 4 per cent of Newfoundland fishermen worked full time, i.e. ten months or more in 1976. The great majority spend less than five months actually fishing.

With improved prices and the greater availability of the North Atlantic stock, the potential for increasing fish landings and extending the harvesting season appears favourable. Recent years have seen the extension of the fishing effort into new and/or under-utilized species such as squid and mackerel for export. The potential returns from this renewable resource are far from being fully realized. However, it must be remembered that the natural availability of fish stocks tends to be cyclical; consequently, the fisheries contribution to the economy may not be consistent on a year-by-year basis.

Minerals

In terms of both employment and revenue, the mineral sector is now dominated by one commodity: iron ore from western Labrador. This one commodity accounts for approximately 85 per cent of the value of the province's mineral production. The remaining 15 per cent is made up of a variety of other metals and minerals including zinc, copper, asbestos, gold, lead, gypsum, pyrophyllite and silica.

The province has considerable untapped mineral potential. Historically, large tracts of provincial lands have been tied up by a small number of companies with little active exploration effort. Further, the level of basic geological survey and mapping in the province lagged behind other high-potential areas of the country. In 1976, legislative revisions provided for provincial re-acquisition of mineral rights, and now large areas of the province are again being made available for claim-staking. In addition, the current DREE/Newfoundland minerals exploration subsidiary agreement is raising the level of mapping available to exploration and mining companies. These two activities are serving to increase the mineral exploration activity in the province. The province is examining ways to increase the beneficial impact of the iron ore industry on the provincial economy. Future prospects include: the development of the Julian Lake, Labrador property owned by the province; the establishment of transportation and ship-loading facilities for iron ore in Labrador, and any form of further processing that could occur within the province.

Energy

The province has a great potential for the production of hydro-electric power. One of Canada's largest hydro-electric generating plants is located at Churchill Falls, Labrador. This station has an installed capacity of 5 225 megawatts. Over 92 per cent of this power is sold to Quebec on a long-term contract and is not available for Newfoundland consumption. However, in addition to this plant the province has identified

that over 4 100 megawatts of untapped potential rests in Labrador, principally at Gull Island on the Lower Churchill River.

It has not yet been confirmed that commercial reserves of oil and gas exist off the coast of the province. Exploration continues as does optimism that Newfoundland, like Alberta, has major hydrocarbon endowment.

Summary

The natural resource base will continue to play a fundamental role in the development of the province's economy. The major resource sectors appear to be under-utilized and show varying degrees of potential for expansion and diversification. In addition, particularly in the area of the non-renewable resources, much is yet to be learned of the true development potential.

2.2.3 Market Environment

Newfoundland's major international exports are its primary resources, with little secondary processing within the province. The province does not enjoy a monopoly in any of its exports; consequently production levels and economic returns are decided in the international arena. Two of the largest volume exports, fish and iron ore, would face stiff tariffs in the receiving countries if shipped in a manufactured or fully processed form. The tendency for the low-value, high-volume primary resources to be subject to dramatic demand fluctuations in the international market place creates further problems in the provincial economy. The minerals and forest industries appear to be the most often affected.

Newfoundland is well-located for bulk exports by sea to such places as Europe and South America. While some of the province's product moves in this direction, the majority of the exports at present tend to be by road and rail to U.S. markets, a situation that puts a heavy demand on the gulf ferry service and adds extra cost to the shipment of Newfoundland goods.

The major market for Newfoundland fish products is the United States. Over 70 per cent of all fish exports are sold to the United States. The European market buys about 15 per cent of the total exports and the remainder is shipped to South American and Japanese markets. World prices for fish products have increased considerably over the past several years and the demand for these products appears strong. Although global demand for fish products continues to increase, Newfoundland processors must maintain high quality if markets are to be

expanded or developed. The largest market potential for an expanded catch lies in Europe and Japan. However, the existence of extensive processing capacity in Europe and traditional reliance on whole fresh fish in Japan pose difficulties in attempting to export finished consumer packaged seafood products to these countries.

Two of the major mineral producers in Newfoundland and Labrador are Wabush Mines and Iron Ore Company of Canada. Wabush Mines exports approximately 60 per cent of its iron ore production to the United States and the remainder is shipped to various Canadian markets. The Iron Ore Company of Canada, which is the largest iron ore producer in Canada, exports about 55 per cent of its production to European and Japanese markets and the remainder is sold to the United States. The Daniel's Harbour zinc mines export approximately 60 per cent of their output to the Canadian market and the remainder to the United States. Overall, it appears that the United States is the major buyer of Newfoundland mineral production. World market prices are currently steady and the outlook for the near term appears bright.

Currently, world demand for pulp and paper products is strong. Bowaters Company Limited and Price Newfoundland Limited are major producers of pulp and paper products in Newfoundland. Again the United States is the major consumer for these products. Approximately 70 per cent of the total production is exported to the United States market. Only 2 per cent is sold to the Canadian market and the remainder is shipped to Europe.

As can be seen, very little of Newfoundland's products are currently consumed in the Canadian market.

Newfoundland is a net importer of goods and services. Despite the fact that consumer prices in the province tend to be higher than in the rest of Canada, retail sales per capita are extremely high as is the rate of personal savings. This is, in part, due to the high volume of transfer payments to the province. A domestic market for finished products exists, but provincially based manufacturing has not grown to meet this demand. Consequently, much of the money injected into the provincial economy, in the form of transfer payments, moves rapidly out, creating relatively few jobs in the process. Similarly, the manufacture of capital stock for primary industry takes place elsewhere and is imported to the province. The domestic market is not large, however it appears that some potential for import substitution does exist. For some of the basic goods consumed in the province, the extra transportation costs which inflate the prices should act as a protective tariff

and offset the loss in scale economies, given the smaller market.

2.2.4 Other Factors

Population and Settlement

The population of Newfoundland for 1971 and 1976, is shown in Table 14, as are projected levels to 1986, in five-year intervals, based on past trends in fertility rates, death rates and rates of migration. The rate of growth of population is expected to increase from 6.4 per cent over 1971-76 to 9.7 per cent over 1981-86.

The 0-14 age group is expected to decline as a proportion of total population. Those aged 65 and over will show only slight increase by 1986. The total dependency ratio (numbers in the two dependent age groups in relation to the numbers in the 15-64 age group) will decline slightly, indicating little easing of the burden on the main working-age group in the forecast period.

The 15-64 age group, from which the bulk of the labour force is drawn, will continue to show modest gains in the immediate future. The expected natural growth in the labour force will continue the pressure for new employment creation within the province.

TABLE 14

DISTRIBUTION OF POPULATION
BY SELECTED AGE GROUPS, NEWFOUNDLAND
(000s)

<u>YEAR</u>	<u>TOTAL</u>	<u>0-14</u>	<u>15-64</u>	<u>65 & Over</u>
1971	522.1	194.6	295.4	32.0
1976	555.5	188.6	330.2	36.7
1981	602.5	200.3	359.2	43.0
1986	660.8	232.7	378.8	49.3

Source: Statistics Canada Catalogue No. 91-514 and Projection A, Catalogue No. 92-715

Since the mid-1950s, Newfoundland has consistently experienced net out-migration. The essentially resource-based provincial economy has been unable to absorb the large influx of young people into the labour force. As a result, these people have been seeking employment elsewhere.

Out-migration from Newfoundland was considerably less during the 1971-76 period than that recorded for the 1966-71

period (Table 15). During three of the five years in the period 1971-76, Newfoundland recorded net interprovincial in-migration; as a result, total out-migration has been reduced. The reasons for this change in the trend are not clearly documented at present. However, coupled with the natural growth in the labour force age group, this new direction is contributing to the high demand for jobs within the province.

TABLE 15
MIGRATION DATA
NEWFOUNDLAND

<u>YEAR</u>	<u>TOTAL NET MIGRATION</u>	<u>INTERNATIONAL MIGRATION</u>	<u>INTERPROVINCIAL MIGRATION</u>
1966-71	-28 923	-9 579	-19 344
1971-72	1 018	108	910
1972-73	- 405	132	- 537
1973-74	- 3 025	291	- 3 316
1974-75	713	218	495
1975-76	946	354	592
1971-76	- 753	1 103	- 1 856
1976-77	- 1 650	- 252	- 1 398
1977-78	- 3 101	1 491	- 2 610

SOURCE: Based on international and interprovincial migration in Canada, Statistics Canada, Catalogue No. 91-208 (April 1979)

The economic history of Newfoundland has dictated a dispersed settlement pattern. St. John's on the east coast, Corner Brook on the west coast, and Happy Valley/Goose Bay and Labrador City/Wabush in Labrador, comprise the four largest centres in the province. A large portion of the population lives in communities with population of under 1 000, scattered along the coast line. The economic base for these small communities is in most cases the fishery, which generally provides seasonal employment only.

The economic link between the larger and smaller centres tends to be one of personal service and consumer goods distribution rather than direct economic support. While there has been some population shift into the major centres in recent years, a large proportion of the population continues to embrace the traditional lifestyle in the smaller communities, creating special problems in the delivery of social services and the fostering of viable economic development opportunities in the smaller communities.

Labour Force

The human element in the factors of production plays an important role in the productivity of an economy. The Economic Council of Canada has constructed a labour quality index which assumes that age, sex and education are the sole determinants of labour quality and that national average wage rates provide a proper measure of the variation in labour quality arising from differences in work experience and educational background. Although by no means ideal, this "measure" tends to reflect Newfoundland's position in comparison to the other provinces, ranking Newfoundland the lowest in Canada.

The educational background of the Newfoundland labour force is below the national level. In January 1979, 24 per cent of the Newfoundland labour force had between 0-8 years of schooling, compared to 17 per cent for Canada. Only 7.9 per cent of the Newfoundland labour force had received post secondary certificates, compared to 11.2 per cent for Canada. While 10.2 per cent of the Canadian labour force has received university degrees, 9.5 per cent of the Newfoundland labour force has.

In summary, while it appears that the Newfoundland labour force is below the national average in terms of educational attainment, it is difficult to get a clear measure of how this affects productivity. Certainly, in Newfoundland, other factors such as plant size, management and seasonality may be more important causes of low productivity.

Investment Patterns

As was noted earlier, both public and private sector investment in Newfoundland since 1971 has been concentrated in the service sector. Comparison of 1971 levels of investment with 1979 investment intentions reveals levels 234.8 per cent higher by trade, finance and commercial services, and 139.2 per cent higher by institutions and government departments. In the goods-producing sectors, 1979 investment intentions are down 44 per cent for manufacturing, down 9.7 per cent for utilities and up 60 per cent for primary and construction, compared to 1971 levels of investment. While investment in the construction sector is up, it is still behind that of the maritime provinces. Overall, investment intentions in the service sector are high, show some improvement in the primary and construction sectors and remain disappointing in the manufacturing sector.

Because the level of investment cannot be equated to capital stock formation, it is necessary to consider the recent provincial performance in adding to its capital stock. This includes all buildings, machinery and equipment and supplies used in the production of other goods. Between 1971 and 1976, capital stock per capita for all Newfoundland industry, measured in constant 1961 dollars, increased by 20.6 per cent, a rate exceeded only by New Brunswick among the Atlantic provinces. The manufacturing sector showed an overall per capita capital stock increase of 16.7 per cent with food and beverages, which includes fish plants, increasing by 19.3 per cent.

In short, while investment growth has been largely in the service sector, growth of capital stock in the manufacturing sector especially, has kept pace at least with the Atlantic Region as a whole.

Financial

The provincial government is currently facing severe financial constraints. Newfoundland now has the lowest financial rating of the 10 Canadian provinces. Borrowing against capital works is therefore both more difficult and more expensive. The increased expense of borrowing will apply serious pressure to an already troubled current account situation.

After subtracting debt retirement, the net annual increase of provincial debt is averaging \$170 million per annum in recent years. This trend will likely continue for the immediate future.

3. DEVELOPMENT PROBLEMS AND ISSUES

3.1 Development Problems

3.1.1 Geography and Demography

Location and Environment

Because of Newfoundland's physical separation from Labrador, small population, large surface area and the scattered nature of the mineral, forest and agricultural areas, economic development depends heavily on transportation and communication links. While the geography of Newfoundland and Labrador makes the provision of land links very costly, climatic and environmental problems such as fog, winds, ice and rough seas make water and air links sometimes unreliable. These factors both discourage new economic development and add to the cost of existing activities.

Newfoundland's remote location vis-à-vis the rest of Canada and North America makes it difficult to compete in these markets for sale of manufactured goods, particularly if the goods are heavy, bulky or require large amounts of non-domestic input.

Transportation

Newfoundland faces special problems in overcoming the constraints to development imposed by present transportation facilities. The physical separation of Newfoundland and Labrador poses additional burdens on the transportation and communication sectors. Internal transportation facilities in Labrador are particularly poorly developed.

Since 1971, extensive federal/provincial highway construction and upgrading programs have been carried out to provide the infrastructure perceived necessary as a prerequisite for long-run sustained growth. Between 1971 and 1978, DREE committed \$170 million of its overall expenditure in Newfoundland to highway developments. These investments, together with other federal/provincial programs designed to upgrade the Trans-Canada Highway, indicate the importance attached to the role of highways in the development process. This high priority is likely to be continued in the future.

Other transportation plans call for an attempt to improve the viability of the rail service on the Island and to examine the feasibility of a year-round port in Labrador.

Population

The province has an area of approximately 37 million hectares and a 1978 population of 570 000. With the exception of a major population concentration in the St. John's metropolitan area (144 300), the population is dispersed with 41 per cent of the people living in rural communities of less than 1 000. Local markets are, therefore, weak and fragmented and the provision of community services and amenities is very costly. While the urban proportion of the population increased by 1.8 per cent between 1971 and 1976, the present population distribution is being reinforced by current policy designed to increase employment opportunities in rural communities. Fragmented domestic markets and high cost of service provision are, therefore, likely to remain problems.

The Newfoundland population is further characterized by a high youth dependency ratio, exceeded only by that of the Northwest Territories. As a result of past fertility and migration rates, approximately one third of the population is under 15 years of age and, therefore, excluded from the work force. Further, this young labour force is going to continue the pressure for new job creation within the province.

3.1.2 Industrial Structure and Output Per Worker

The employment structure of Newfoundland parallels that of Canada as a whole with 7 per cent employed in the primary sector, 32 per cent in the secondary sector and 61 per cent in the tertiary sector. Long-term trends have seen the share of employment in the goods-producing sectors decline relative to that of tertiary sector which, given the narrow economic base of the province, may itself be seen as a problem. Of greater importance, however, is the question of productivity, which typically, is lower per worker per industry than in other provinces. The factors that influence productivity, such as labour quality, capital, and technology, may therefore represent the main problem areas.

Wage Rates and Productivity

As a group, the Atlantic provinces show lower wage rate indices than does the rest of the country. In Newfoundland, however, wage rate indices are above those of productivity, thereby indicating that the labour market is higher priced than that of other provinces, thereby reducing the local demand potential for labour and serving to discourage the entry of new firms or the relocation of others.

Education and Productivity

Labour quality can be argued to be closely correlated to the educational level of the labour force. In spite of the achievements of the 1960s, Newfoundland still had the smallest share of university graduates and the second-lowest level of post-secondary education attainment in the country in 1970.

Technology

In general, new methods of production tend to be adopted later in low-productivity regions, the lag effect contributing to the gap in productivity per worker between regions. In Newfoundland, traditional practices have, in general, only slowly given way to more modern methods. In some sectors of the fishery, adoption of new harvesting and handling methods has been slow, resulting in detrimental impacts on product quality and prices received. Similarly, the traditional push-bench sawmill results in low productivity in the forestry sector. However, given the unique environment in which industry in Newfoundland finds itself, new technology must be appropriate for local conditions and therefore must be adopted only after careful assessment of its overall social and economic impact.

Management and Productivity

Managerial ability influences both the efficiency of day-to-day decision-making and long-term developments, including the pace at which new technology is adopted. General managers probably have the major influence in the private sector and, if educational level is an accurate reflection of managerial capability, Newfoundland, with 18 per cent in 1970, had the lowest provincial proportion of general managers with university degrees and the third-highest percentage (24) of managers who did not complete high school. These values indicate that managerial education levels are low in comparison with the rest of the nation and may well be a significant element in explaining low provincial productivity levels.

Labour-Management Relations

Next to British Columbia, Newfoundland shows the highest incidence of person-days lost due to strikes between 1971 and 1977, a factor which significantly affects productivity.

3.2 Current Issues

3.2.1 Offshore Oil and Gas

The federal and provincial governments have been in dispute with respect to which level of government has jurisdiction and ownership of the 181 million hectares of the continental shelf. This dispute created some confusion with the oil companies and resulted in temporary down time in exploration activity. However, the federal government has recently agreed to turn over control of the offshore resources to the province, thus resolving the issue.

The province has prepared a comprehensive set of licensing regulations which, along with federal regulations, oil and gas exploration companies must meet if they plan drilling and exploration activity. Now that this problem seems to have been overcome, a number of companies are active offshore in 1979. In recent weeks, an exploratory well on a Grand Bank lease has shown oil and the lessee, a consortium of oil firms, has announced intentions to bring in another drilling rig and continue exploration through the winter. This will be the first time that this has been done.

Other issues related to the development of oil and gas involve the social and environmental costs associated with such activities. Experience in other countries has shown that there is considerable disruption in the lifestyles and traditions of the local people affected by oil and gas developments. The marine and terrestrial ecology of northern regions is extremely fragile and the potential threat of oil spills or other environmental damage represents a very real concern.

3.2.2 Hydro-Electric Energy

One of the major constraints to the development of the hydro potential on the Lower Churchill at Gull Island has been the absence of an agreement between Newfoundland and Quebec to transmit the energy across Quebec to customers in Ontario, the United States, or the maritime provinces. Associated with this issue, Newfoundland is continuing its legal action for access to an additional share of Churchill Falls power.

The major hydro-electric energy issue relates to the existing pricing arrangement for power from the massive Churchill Falls project. The contract under which Hydro-Quebec purchases power from the Churchill Falls (Labrador) Corporation is for a term of 40 years, with Hydro-Quebec having the option to renew the contract for a further term of 25 years from the expiry date.

The power contract, signed May 12, 1969, provides for the sale of virtually all of the power from the giant hydro-electric plant at a price of just under 3 mills per kwh in 1977, to just over 2.5 mills per kwh at the end of the first 25 years. This rate is then maintained for the balance of the first 40 years of the contract term. Thereafter, the contract provides for a fixed price of 2 mills per kwh for the final 25 years, should Hydro-Quebec decide to renew the contract.

The exact value to Quebec of this guaranteed supply of low-cost energy is difficult to determine. Already there is a considerable difference between the contract purchase price and the current market value of alternative energy sources and in the years to come the latter will no doubt continue to increase while the former, as stipulated under the power contract, will drop. Estimates of the annual loss of revenue to the provincial government are in the area of \$450 million to \$500 million based on the current power rates. This approximates the value of federal transfer payments to the province.

The provincial government wishes to recapture additional benefits from this hydro development.

3.2.3 Current Provincial Financial Position

As indicated earlier, the province is facing considerable financial burdens. The total provincial debt now stands at over \$2.4 billion. In the 1977-78 fiscal year, the government paid \$157.5 million in interest charges on the direct debt, \$23.5 million in the sinking fund, and \$19.6 million is earmarked for debt redemption. The government will have borrowed \$168.5 million in 1978-79 to meet projected expenditures. The Newfoundland per capita debt was \$3 970 in 1977.

The government's average borrowings in recent years have been in the vicinity of \$170 to \$175 million per annum. This trend is putting an increasing strain on the current account, without a matching increase in revenue. Should a major new government-funded capital project such as Gull Island be initiated, the borrowing requirements could further increase the provincial debt position and further tax the current account position. In short, the province has very little flexibility to expand programs that will constitute any further drain on its current account.

3.2.4 Spruce Budworm Problem

Over the past few years, the spruce budworm has infested the Newfoundland forests. To counteract this problem the government in 1978 initiated a spray program designed to control the spruce budworm. This spray program covered an area of 0.5 million hectares. The impact of the initial spray program is being closely monitored and the results will be analysed to ensure that there are no adverse environmental consequences. A reduction in the level of infestation in 1978 has resulted in a termination of the spray program. However, harvesting efforts will have to be increased in the short term to salvage some economic benefits from the infected stands. This effort may result in short-term wood supply exceeding present processing capacity.

4. FEDERAL AND PROVINCIAL INSTRUMENTS

4.1 Federal Instruments

A major thrust of the federal government's regional economic development policy is being undertaken through the activities of the Department of Regional Economic Expansion (DREE). The development instruments currently administered by the department are as follows.

The General Development Agreements (GDA), with their subsidiary agreements, outline broad objectives and opportunities for development in each province and specific programs for the achievement of these objectives. The GDA approach is discussed more fully in section 4.3.

The Regional Development Incentives Act (RDIA) is designed to encourage business and industry to establish, expand or modernize manufacturing and processing facilities in slow growth areas.

Other programs which have provided assistance to areas requiring special measures include the Agricultural and Rural Development Agreement (ARDA) with Newfoundland, which expired in 1978. Much of the ARDA program has been included in a new rural development subsidiary agreement. Another program is the Newfoundland and Labrador Development Corporation (NLDC) which is discussed more fully in section 4.3.

Beyond the programs administered by DREE, which are explicitly aimed at regional economic development, there are a number of other federal departments which are concerned with economic development throughout the country, but nevertheless aid regional development efforts within Newfoundland. These include the Department of Fisheries and Oceans, the Department of Industry, Trade and Commerce, the Department of Finance, the Federal Business Development Bank, the Canada Employment and Immigration Commission, the National Research Council, the Farm Credit Corporation, the Export Development Corporation and Agriculture Canada.

Programs administered by these departments and agencies include grant, loan and equity financing for new and expanding businesses generally, as well as specific assistance for shipbuilding, fishing and agriculture. Additional programs are designed to provide assistance in the areas of manpower training and mobility, marketing, and research and product development. Furthermore, a variety of technical and professional expertise and assistance to business is available from a number of these departments and agencies. Of particular importance to Newfoundland are a number of transportation

subsidies administered by Transport Canada, as well as federal government support for the Newfoundland railroad. The federal government also supports the Lower Churchill Development Corporation in its efforts to expedite the development of the hydro-electric potential of the Lower Churchill River.

4.2 Provincial Instruments

The Province of Newfoundland has, within recent years, gradually shifted its emphasis with regard to economic development. Overall, less emphasis is being placed on the attraction of large-scale industrial development to particular growth centres and more emphasis is being placed on the balanced development of the resource potentials of the province and the development of secondary industries based on these resources. This renewed emphasis on resources as the key to the future development of Newfoundland was outlined by the provincial government in a 1978 budget supplement entitled "Into the Eighties, Blueprint for Development". While this document clearly singles out fisheries and hydro-electricity as the key sectors in which future growth will occur, it also outlines development initiatives in forestry, mining, tourism, agriculture, small manufacturing and the service sector. These economic development priorities of the provincial government are carried out by the following departments and agencies.

The Department of Mines and Energy has primary responsibility for managing and encouraging the development of the mineral and energy resources of the province so as to provide maximum benefits to the people of Newfoundland. Presently there are three issues, noted earlier, which are of major concern to that department: (1) the renegotiation of the Churchill power agreement with Quebec; (2) regulation and jurisdiction related to offshore oil and gas activities; and (3) development of the power potential of the Lower Churchill through the efforts of Newfoundland and Labrador Hydro Corporation and the Lower Churchill Development Corporation.

The Department of Fisheries administers a variety of programs designed to encourage the adjustments which are required in the capital and technology used in the fishing effort if higher incomes are to be generated and maximum advantage is to be taken of the newly established 200-mile fisheries management zone. The department is also involved in licensing and regulation of fish plants, fisheries research, development and marketing along with providing operational support to the fishing industry through the planning, construction and management of shore-based facilities.

The Department of Industrial Development is responsible for determining the industrial development opportunities that exist in the province and for the development of these opportunities by attracting new industries into the province and by encouraging the development and expansion of existing industries. This is accomplished primarily through industrial promotion activities and the provision of expertise in the areas of marketing, product development, production technology and design, feasibility studies, and so on. The department also has responsibility for direct provincial investment in the Marystown Shipyard, Burgeo Fish Industries, and the Come By Chance Oil Refinery.

The Department of Rural Development's efforts are directed at encouraging local decision-making and the development of local opportunities throughout rural Newfoundland by supporting the activities of regional development associations. The department also has a small loans program for the promotion of rural entrepreneurship and administers an incentive grants program to existing industries and to encourage the establishment of new, small industries. The department has a special responsibility with respect to Labrador development.

The Department of Forestry and Agriculture has the responsibility of providing for, and stimulating the development of, the land, forest and agricultural resources of the province. The major thrust of the province's forest policy is to provide intensive management of the forest resource in order to increase annual allowable cut and reduce harvesting costs to industry. This includes regulation of harvesting, reforestation, road building, and protection from fire, insects and disease. Provincial agriculture policy includes the provision of support services to enable production to be marketed efficiently and effectively; provision of capital assistance for the development of efficient farm units through land clearing, equipment purchase, and new technology transfer; classification of soils and the implementation of land use plans to facilitate full utilization of available land; and human resource development through farm management training.

The Department of Tourism has responsibility for the promotion of tourism within Newfoundland. At present, the department's development efforts are being directed towards encouraging the construction of additional accommodation and attractions throughout the province.

The Department of Transportation and Communication is responsible for the construction and maintenance of the province's highway network. Presently, the department's emphasis is on the Trans-Canada Highway and the road network in

the St. John's urban region. Particular emphasis is placed on the development of transportation infrastructure linked directly to resource development opportunities. Highway construction and improvement has focused on the Burgeo Road, Bonavista North Loop Road, Northern Peninsula Highway, Bay d'Espoir Highway and the Baie Verte - La Scie road.

4.3 Federal-Provincial Instruments

General Development Agreements were a result of DREE's 1972-73 policy review. They became, in fact, the framework for the majority of the department's efforts to encourage coordinated federal and provincial action aimed at the realization of each province's potential for economic development. GDAs cover a period of 10 years and have been signed with each province, except P.E.I. A long-term Comprehensive Development Plan under the FRED legislation had already been put into effect in that province.

The General Development Agreements provide a statement of the objectives and priorities to be pursued and describe the extent of activity to be coordinated, the types of support to be given and the mechanisms for joint decision-making. They also provide for a continuing analysis of provincial economic and social circumstances and for the identification of specific opportunities for development relative to the established objectives and priorities.

The GDAs do not provide for a commitment of resources. This is done by means of specific subsidiary agreements signed with each province to follow-up the GDA. Each subsidiary agreement is for a specific period of time, usually about five years, but can range from one to 10 years. In addition, each has a financial limitation, a fixed cost-sharing arrangement and provision for a management system for monitoring the implementation of programs and projects under the agreement. It also includes appropriate provisions for the evaluation of its operations to ensure efficiency and effectiveness with the objectives and strategies of the GDA.

The Canada-Newfoundland General Development Agreement was signed on February 1, 1974. The principal objectives of this GDA are to increase the number and quality of long-term employment opportunities in the province, to improve access to those opportunities for Newfoundlanders and to increase opportunities for people to live in the area of their choice with improved real standards of living. The GDA strategy assigns priority to achieving a more rational and profitable utilization of the provinces' resources and diversification into other sectors, through the development of a significantly

greater capacity in both the public and private sectors for planning and implementation activities and through the provision of basic industrial and community infrastructure.

From 1974 to April 1, 1979, 16 subsidiary agreements have been signed which involve a total financial commitment of more than \$403 million, including a federal share of over \$346 million. Other federal departments have been involved in some of this activity by sharing in the financial commitments or in management responsibilities with DREE. These other departments are: Energy, Mines and Resources; Industry, Trade and Commerce; Agriculture; Health and Welfare, Fisheries and Oceans and Environment.

Subsidiary agreements contain numerous features and program elements and may be viewed as a vehicle for a package of projects relating to a multiplicity of objectives. Nevertheless, a major focus of subsidiary agreement activity to date has been on developing resource potentials as identified for specific aspects of agriculture, forestry, mining and fishing. Other subsidiary agreements focus on encouraging diversification into manufacturing and processing industries, and to improve transportation and public infrastructure systems. A brief review of subsidiary agreement activity follows.

The forest industries are major contributors to the provincial economy, however they have lacked the necessary capital and modern systems of management required to achieve their full potential. Consequently, one of the first agreements signed under the Newfoundland GDA concerned a major forestry development program involving a total expenditure of \$55 million, with a DREE share of \$48 million. Programs include access road construction, research and development in the harvesting and utilization of the resource, increasing the administrative capabilities of the Newfoundland Forest Service, improving the future yields of forests, intensive forest inventories, acquisition of forest lands, improved protection of the forest resource against fires, insects and disease, and general forest management. These efforts are expected not only to encourage employment and income opportunities in the forestry sector, but also to ensure the preservation of forests for the industrial and recreational use of future generations.

With respect to fishery resources, two recently completed subsidiary agreements have provided for the establishment of marine service centres, including construction of various facilities such as wharves, service-centre buildings, storage areas and haulout equipment, at 14 locations; and the provision of fish plant water systems (DREE expenditure: approximately \$16 million). Under an inshore fisheries

development agreement, which runs to 1981, current efforts involve the provision of multi-purpose facilities, such as community stages, which will enable the production of high-quality and higher value products from the herring resources of the Gulf of St. Lawrence. Provisions have also been made for extensions or improvements to several existing marine service centres and for construction of several new centres (projected DREE expenditure: \$10.5 million).

Other current resource-related subsidiary agreements provide for: mineral exploration, evaluation and management (estimated federal expenditure: \$11.2 million by DREE and EM&R), and the development of tourism potential through specific infrastructure and associated support to communities which could benefit from the development of Gros Morne National Park (DREE commitment: \$20.6 million) as well as through a broader tourism development and support program (DREE commitment: \$11.9 million). In addition, a five-year agricultural development program is designed to increase the output of agricultural products in which the province is competitive (estimated federal expenditure: \$14.7 million by DREE and CDA).

In the important area of public and community infrastructure support, efforts have been focused on: facilitating the continued development of the St. John's urban region as the major centre for administration, transportation and communication, by improving its water supply and road systems (DREE commitment: \$51 million), and on developing major trunk roads to facilitate access to potential resource development opportunities and to reduce constraints to the realization of other socio-economic development opportunities (estimated DREE expenditure: \$120.7 million over the 1974-75 to 1980-81 period).

Remaining current Newfoundland subsidiary agreements deal with: stimulating the development of marine technology within the province and fostering the establishment of marine ice-related industries (DREE commitment: \$4.4 million); improving the province's development planning capacity (DREE commitment: \$4 million); undertaking initial development effort in Labrador, focusing primarily on the improvement of community and industrial infrastructure in the Happy Valley/Goose Bay area (federal commitment: \$16.8 million from DREE and NH&W); and strengthening and revitalizing the rural sector of the province by supporting regional development associations and rural enterprises, and supporting the growth of the craft industries (DREE commitment: \$13.1 million).

The federal and provincial governments jointly fund two Crown corporations engaged in economic development in Newfoundland. The Newfoundland and Labrador Development Corporation (NLDC) was established in 1972 under an agreement between the federal and provincial governments. The corporation was established to provide industrial intelligence, management advisory services, project information, loan financing, equity financing and related services and assistance to small and medium-sized businesses in Newfoundland and Labrador. Under the terms of the agreement, the federal government provides the corporation with the funds used for loan financing while the provincial government provides equity financing. Operating expenses are cost-shared on a 50/50 basis by the federal and provincial governments. The corporation's ownership is split on a 60/40 basis between the provincial and federal governments respectively and is managed by a Board of Directors whose membership is appointed by the two governments in a proportion which reflects each government's ownership. The provincial government, however, at all times appoints a majority of at least one director.

The Newfoundland Ocean Research and Development Corporation (NORDCO) was established in 1975 under a GDA subsidiary agreement signed between the federal and provincial governments. The agreement provides that the federal and provincial governments shall share the cost of NORDCO's deficits on a 90/10 basis respectively over the approximately four years of the agreement.

The objectives of NORDCO are to stimulate the development of marine technology within the province and to foster the establishment of marine-related industries and to ensure that the Newfoundland business community becomes fully involved in marine resource development in adjacent ice-congested waters.

5. ECONOMIC DEVELOPMENT OPPORTUNITIES

5.1 Introduction

With the notable exception of the significant hydro potential and iron ore reserves in Labrador, Newfoundland's known resource base is not unique in a Canadian and Atlantic Region context. While its geographic location gives the province economic access advantages to certain fish stocks and offshore oil and gas potential, the distance from markets is disadvantageous. With the above-noted exceptions, Newfoundland possesses only limited comparative advantages upon which to capitalize for development.

The major opportunity for Newfoundland's development lies in the expansion of its primary resource base to capture a share of continuing expansion of world demand for raw materials and semi-finished products. For fish, forests and most mineral products, the province does not enjoy the position of being a major supplier, consequently, the province finds itself a price taker on world markets. In addition, the distance from certain markets tends to relegate the province to the marginal supply positions. Consequently, when there is a recession in world markets it is often the Newfoundland industries that are first to be hurt. The forest and minerals industries have been historically most susceptible to these cycles.

5.2 Primary Industry: Export Opportunities

5.2.1 Energy

The development of hydro energy in Newfoundland and Labrador is one of the major development opportunities open to the province in the medium term. The total installed capacity of all existing plants on the island is currently 949 megawatts and there is potential development for another 610 megawatts. Table 16 summarizes the potential hydro development opportunities for the island of Newfoundland. Feasibility studies and extensive investigation has been carried out on most of these potential sites and most of the results have been encouraging. The Hinds Lake project is under construction and should be on-stream by 1981.

Labrador holds substantial potential for future hydro development; however, problems concerning the transmission rights-of-way through Quebec, and the ability of the province to undertake financing of these major developments may defer these projects. Labrador has installed hydro-electric capacity of 5 225 megawatts and there is potential for another 4 084 megawatts. Table 16 summarizes the possible development sites

and the estimated costs associated with each project. In 1975 the Province of Newfoundland began plans for the development of a \$2.3-billion project to build an 1 700-megawatt generating station at Gull Island on the Lower Churchill River. However, the project was deferred. The federal and provincial governments have established the Lower Churchill Development Corporation with responsibility for conducting the required engineering studies and to assist in determining the economic viability of the project under ever-changing circumstances. The development of the untapped hydro potential of Newfoundland and Labrador will require detailed examination of the environmental impacts of the various schemes involved. Such studies are presently under way for the proposed Lower Churchill and Upper Salmon projects. The results of these studies will be reflected in the nature and timing of projects that may be supported by governments.

Most of the hydro and offshore resource developments are of a medium- to long-term nature. The hydro developments, once in place, offer assurance of long-term energy supply and could attract energy-intensive industries to the source area, or elsewhere in the province if transmission systems from Labrador can be installed.

The estimated petroleum reserves within the seabed of the Continental Shelf off the coast of Newfoundland and Labrador are very large, with the potential to contribute significantly to the economy of the province. If commercial finds are discovered and developed, the social and economic impact on the province will be immense. To date, four significant natural gas discoveries have been made and it has been estimated that the offshore reserve potential is 556 billion litres of oil and 1.1 trillion cubic metres of gas. The development of this offshore resource could result in a much needed expansion and diversification of the industrial base.

TABLE 16

POTENTIAL HYDRO DEVELOPMENT

<u>Newfoundland</u>	<u>Capacity</u> <u>(mW)</u>
1. Cat Arm	121
2. Upper Salmon	80
3. Terra Nova (Lower)	
(a) Clode Sound	100
(b) Mollyquajeck	44
4. Star Lake	26
5. Bay Du Nord	63
6. Main River	110
7. Red Indian Falls	26
8. Granite Canal	40
NEWFOUNDLAND TOTAL	<u>610</u>

Labrador

1. Gull Island	1 700
2. Muskrat Falls	600
3. Lobstick Project	160
4. Pinware River	70
5. Alexis with St. Lewis Diversion	90
6. Paradise River	81
7. Eagle River	604
8. Minipi River	592
9. Fig River	<u>187</u>
LABRADOR TOTAL	4 084
PROVINCIAL TOTAL	4 694 (mW)

Source: Newfoundland and Labrador Hydro Corporation, 1979

5.2.2 Mining

The value of mineral production has increased tremendously over the past several years and future prospects appear good. Exploration activity has gained momentum and further commercial discoveries are expected in the medium to long term.

The most promising region for development is Labrador. It is known that there is a vast quantity of unexploited iron ore deposits and possibly various other economically exploitable base-metal deposits in this part of the province.

Uranium deposits have been discovered by Brinex Ltd. in the Kaipokok Bay area of Labrador. The company has entered into agreement with private interests to arrange financing of mine and mill construction. Final arrangements are subject to government environmental and regulatory approvals. Total employment from the project could be up to 300. Uranium deposits have also been discovered near Deer Lake on the island portion of the province. This discovery was made in 1978 and is currently under investigation. Recently, gold was discovered in the Port aux Basques area, however, the full potential of the deposit is unknown. Extensive limestone deposits have been found on the Port au Port Peninsula and some form of commercial extraction is anticipated. Most of these latter development opportunities are expected to be long-term in nature.

5.2.3 Fishing

The promise of the fisheries sector as a major growth component in the provincial economy over the next decade arises out of the introduction of the 200-mile limit. Expansion is anticipated as stocks regenerate and foreign fishing fleets are

displaced, thereby allowing the domestic industry to increase its share of the total allowable catch. The province, by virtue of its location and industrial structure, will thus have a comparative advantage in relation to some of the largest fish stocks in Atlantic Canada providing the basis for the re-emergence of a dynamic fishing industry.

Access to an enlarged resource will not in itself guarantee growth and prosperity. Factors including fleet development policy, inshore-offshore allocations, bilateral agreements with foreign fishing nations, access to new and stable markets for fish exports, improved harvesting methods and increased processing sector efficiency are all important components in the process of achieving sustained growth in the fishery sector.

The strategies by which the province hopes to achieve this growth are contained in a provincial government report entitled "Setting A Course: A Regional Strategy for the Development of the Newfoundland Fishing Industry to 1985", the thrust of which is to ensure stability, economic viability and increased prosperity in those communities and regions which depend on fishery-generated employment and income. Harmonization of this strategy with those of the maritime provinces and Quebec, as well as with international arrangements of the federal government, will be necessary if optimum benefits from the fishery are to be obtained.

Harvesting Strategies

A balanced harvesting strategy in which stabilization of the inshore fishery is ensured, together with growth in the mid-shore and offshore fisheries, is consistent both with resource availability and socio-economic considerations and, as such, represent the most appropriate harvesting strategy within the realities of extended jurisdiction.

Landings for each of the fishery sectors are projected to increase substantially over the 1977-85 period with groundfish catches accounting for most of this increase. Landings by the inshore sector (vessels less than 65' in length) are projected to increase from approximately 153 000 metric tons to 221 000 metric tons. Cod trap boat landings, which fall within this total, are projected to increase from 39 600 to 77 800 metric tons in this same period. Given this favourable outlook, it appears that no special stimulus will be required and that no fleet expansion will occur. A major problem of this sector is the "glut" characteristic associated with the trap fishery and effective measures to accommodate peak landings of cod, mackerel and squid will have to be developed.

Strategies which are concerned with increased total output have been dealt with in a previous section of this report. The following section considers those strategies designed to increase the value-added of fish products and the development and strengthening of inter-fishery linkages within the provincial economy as a result of these strategies.

The longliner fleet, which also utilizes the inshore grounds, is projected to increase landings from 93 000 to 325 000 metric tons by 1985. Of this, groundfish landings are projected to increase from 57 000 to 195 000 metric tons. There is considerable scope for increased vessel productivity as presently one third of the vessels produce over two thirds of the sector's landings. Resource projections further suggest that the size of the fleet could increase significantly over the planned period, resulting in vessel construction opportunities for Newfoundland shipyards.

The longliner fishery has the capability to prolong the effective duration of the fishing season in all areas of the province which will have positive implications, particularly for the more effective utilization of processing capacity and the stabilization of employment patterns throughout the processing sector. This is particularly important when one considers that the bulk of cod trap landings, for example, are confined to a four- to six-week period in most areas.

The middle-distance fleet, incorporating vessels between 65 and 120 feet in length, is presently comprised of six mobile seiners and a comparable number of groundfish vessels. It is expected that a number of longliner-type vessels will be developed to take advantage of the middle-distance grounds using techniques such as auto-longlining and gill-netting. In addition, an expanded capelin fishery could provide an expanded resource base for middle-distance vessels. Vessel development and construction to meet the needs of this sector can, therefore, also be expected.

The existing offshore groundfish trawler sector consists of 56 stern trawlers and 26 side trawlers. The average age of the stern trawler is 9 years, whereas that for side trawlers is 16 years. This indicates that many of the latter group will be candidates for replacement in the near future, a development of particular relevance to the Marystown shipyard.

Groundfish landings by the offshore sector are expected to increase from 130 000 to 326 000 metric tons by 1985. Species allocation of this sector is comprised of 205 000 metric tons of redfish, plaice, witch, yellowtail and turbot,

and 121 000 metric tons of cod. Existing fleet capacity is greatly under-utilized, but the expanded resource base suggests that the number of offshore vessels could increase from 80 to 102 over the 1977-85 period. Allowing for side trawler replacement, and measured in stern trawler equivalents, the fleet would effectively increase from 68 to 102 vessels.

The increased fleet clearly has implications for the shipbuilding and equipment industry as well as ship supply operations. The Marystown yard is the only provincial yard capable of building and repairing offshore trawlers and should benefit significantly. The decision to construct a new syncrolift at the dry dock in St. John's will also increase domestic vessel servicing capacity. The new syncrolift, to be completed by 1980 at a cost of \$15 million will, more significantly, provide the capacity to service the larger foreign fleets, particularly those of the Eastern Bloc countries. The facility will create an additional 150 to 160 jobs and ensure the stability of the 330 existing jobs.

Landing and Distribution Strategies

In order to ensure that the offshore development opportunities can be capitalized upon, and to further ensure that the potential benefits arising from an expanded offshore fishery will alleviate raw material shortages encountered by seasonally operated groundfish freezing plants, the concept of a primary landing and distribution centre has been developed by the province.

This centre, proposed for Harbour Grace, Conception Bay, would enable a percentage of total offshore catch to be landed for distribution to inshore plants now operating on a seasonal basis. This would have positive implications for the economic viability and stability of these plants and the communities in which they are located.

The proposed centre, to be built in phases, would include wharf and industrial site facilities, wet fish unloading and storage facilities, refrigerated cold-storage capacity for frozen fish, an ice-making plant and truck distribution, and related industrial site facilities. The province would take the initiative in developing the centre with the objective of turning the facilities over to the private sector in the long run. The setting is potentially an attractive one, particularly for private sector investors involved in processing and marine-oriented industries. Assistance from the Department of Regional Economic Expansion and the Department of Fisheries and Oceans is being sought by the province.

The primary centre is proposed to be operational by 1985, at which time offshore species, primarily northern cod, will be utilized by the facility. To coordinate distribution of landings to the processing plants, the Newfoundland Fish Procurement and Distribution Corporation (NFPDC) has been established.

A number of questions remain to be answered regarding fleet ownership, resource allocations, and operational viability before the concept can be considered to be a firm undertaking by both governments. The provincial government's demand for exclusivity of access to northern cod stocks has not been accepted by the federal government or other Atlantic provinces. Resolution of this issue will help to define the eventual nature and scale of the centre.

5.2.4 Forestry

The forestry sector in Newfoundland is anticipated to remain stable over the next few years. World demand for forest products is growing at an average annual rate of approximately 2 per cent and little change is expected to occur in the near future. International competition for these markets is becoming more severe, requiring serious efforts if Newfoundland production is to be maintained or increased.

In 1976, Newfoundland forest industries represented the fifth-largest goods-producing sector in the province, with a total value of production of \$236 million. The forest industry also contributed 35 per cent of the total manufacturing salaries and wages in 1976.

Income and employment multipliers in the forest industries rank third after fish processing and petroleum refining, the employment multiplier being between 2 and 3. In addition, the forestry sector provides income and employment in rural areas, thus helping to improve the provincial distribution of income and employment.

The outlook for the industry is generally good with existing newsprint mills showing a small (1.5 per cent) annual increase, as the mills are presently working at near capacity. Lumber production should show a 7.5 per cent annual growth rate.

Pulp and paper output represents a promising area of export growth for the province. Of the two mills currently in operation, Bowaters at Corner Brook has five paper-making machines with a capacity of 362 290 metric tons of newsprint per year; the Price mill at Grand Falls can produce 317 000 metric

tons per year from four machines. While both companies have undertaken and, in the case of Bowaters, are undertaking significant modifications to plant and machinery, notably in the area of pollution control, it is unlikely that there will be any significant increase in production in the foreseeable future.

The sale of the Stephenville linerboard mill to Price-Abitibi will result in the creation of a third mill capable of producing 136 000 metric tons by 1982. Capacity could be doubled by 1989. In addition, some possibility exists for the construction of small thermo-mechanical pulping units in areas such as Labrador, the Northern Peninsula and the Bonavista Peninsula.

Developments of the latter and, in fact, the long-term development of the pulp and paper and wood products industries will, in part, be dependent on a rationalization of timber allocations. The result of long tenures held principally by Price and Bowaters has been under-utilized woodlands. This has created problems for other operators and industries who are dependent on marginal resources and has increased transportation costs. It has also created forest management problems.

The 1976 Forest Management and Taxation Act is resulting in improved utilization and/or reallocation of timber rights. The net effect should be to increase opportunities and, ultimately, total output.

5.3 Manufacturing Industry: Export Opportunities

It is unlikely that structural change in Newfoundland will be achieved on any significant scale solely through the attraction of new industry. Most of the emphasis on increased value-added development will have to come from the expansion and diversification of existing industry. Dependence on foreign markets, tariff barrier constraints and high transportation costs of raw material assembly and product distribution mitigate against higher level processing operations being carried out in Newfoundland and Labrador. Sectoral opportunities for increasing revenues from high value-added export goods are concentrated mainly in the fisheries sector which is currently undergoing revitalization. Other export opportunities exist in the pulp and paper industry, oil refining and upgrading of mineral products.

5.3.1 Fishing Industries

Of all activities in the secondary manufacturing sector, the fishery offers the most opportunities to increase

provincial revenues and employment. By 1985, it is estimated that landings will increase by some 155 per cent from those of 1977, from 390 000 metric tons to 996 000 metric tons. Export revenues will be generated from the sale of increased volumes of "first stage" processed fish, e.g. frozen cod blocks, but the main opportunities for the future lie in increasing the value-added to products now being shipped and in diversifying the range of goods produced.

Developments in the processing sector must clearly complement those in the harvesting sector if an appropriate balance between harvesting and processing capacity is to be maintained. The processing sector is the area in which the major opportunities exist for the generation of new employment and income. Those opportunities can only be realized if a competitive processing sector is developed to produce products acceptable to a wider range of export markets.

Although major increases in landings are projected for the 1977-85 period, existing and planned capacity, excluding fish meal (protein) capacity, is anticipated to be sufficient in most regions. It is assumed, however, that for many plants a second shift will be introduced and that measures will be taken to "level" fish landings over a longer period of the year. It is also necessary to recognize that in many plants modernization of facilities will be necessary to ensure that acceptable productivity levels are achieved.

Tariff considerations and a traditional dependence on the United States market demand for frozen groundfish blocks and fillets severely inhibit further processing activity within the province. Increased opportunities, particularly in secondary and tertiary processing, would clearly contribute to an increase in export earnings and would result in additional manpower requirements. Developments of this type depend on aggressive marketing techniques both at home and abroad, as well as on a demonstrated capability to produce top-quality products. Notwithstanding this objective, it is anticipated that fresh frozen fish products in either fillet or block form will remain the dominant processing activity over the 1978-85 period.

Another opportunity in the processing sector relates to increased production of saltfish. The traditional role of this sector has been eroded over the last two decades by developments within the fresh frozen sector. However, in certain regional fisheries the volumes of codfish available for conversion to saltfish should steadily increase. The greater availability of raw material, the inability of existing and new plants to handle landings during peak periods and prospective market developments are all factors contributing to this

projected increase. Flexibility is required of the Canadian Saltfish Corporation such that prompt initiatives can be undertaken regarding the production of special types and qualities of fish required in the high-priced markets, particularly the United States. Second, facilities to achieve this type of production, with emphasis on chill-holding facilities, are required and third, the private sector could play a stronger role within the industry in order to organize production and sales.

Infrastructure provision will continue to represent an important strategy to support the processing sector. Fish handling facilities in particular, cold storage units and chill-holding units together with improved landing facilities will provide job opportunities both in the construction and operational phases but, more significantly, the improved infrastructure will assist in the production of a higher quality product, a larger volume of product resulting from less spoilage, and associated higher prices and revenues.

Newfoundland has traditionally depended on foreign markets for virtually the entire production of fish products. A major objective, must therefore, be to successfully market the anticipated fish product output at satisfactory prices. Markets for exotic species such as salmon, lobster, shrimp and crab, all of which are in short supply, will remain strong. The bulk of Newfoundland fish production consists of frozen groundfish products and to a lesser extent, saltfish. Stable and sophisticated markets will be required to absorb the high unit-price products processed in the province which effectively limits the major potential markets to the industrialized nations such as the United States, Canada and the European Economic Community, Japan and the Eastern Bloc nations.

Competition in these markets, especially for the more lucrative markets that demand premium-quality products, will be intense, with such countries as Norway and Iceland vying with Canada. The major importing countries will therefore maximize their bargaining position against each of the exporting nations by trading tariff concessions for access to surplus catches within the 200-mile zones. Quotas on the volumes of finished and semi-finished products imported from Canada will be tied closely to these negotiations. All of this requires a strong, coordinated marketing approach by the Atlantic Canadian fishing industry to ensure maximum sales volumes and prices over the long term. The present uncoordinated marketing structure will, therefore, have to be consolidated if these objectives are to be achieved. The vehicle for coordination is present in the recently formed Canadian Association of Fish Exporters (CAFE)

which can form the basis for the formulation and implementation of necessary global marketing strategies.

5.3.2 Mining

Few opportunities presently exist for the development of secondary industry based on indigenous minerals. Processing and fabrication of mineral resources tends to be market-oriented, the result of tariff rate differentials between goods and raw materials, and due to the benefits of sites where scale, urbanization and agglomeration economies can be realized. Equally as important are the constraints imposed by ownership of the raw material resource and markets. In Newfoundland many of the mineral resources are controlled by foreign corporations which, in combination with discriminatory foreign trade policies against finished goods, has encouraged the shipment of raw and semi-processed materials elsewhere for the production of finished goods.

One possible exception is the potential of aluminium refining and smelting. Here the primary locational constraint is the availability of very large quantities of low-cost power. In the event that the Churchill Falls contract with Quebec is renegotiated or the Lower Churchill hydro-power potential is developed, there exists the possibility of the development of aluminium processing based on bauxite from exogenous sources such as the West Indies, the Guianas, and Australia.

Other possibilities are limited to the preliminary upgrading or improvement of ores prior to export - unless substantial financial inducements encourage the companies to process some of their primary production in the region.

Some further growth can be expected in manufactured products such as gypsum wallboard where improved transportation methods have reduced damage to the product and permitted sales over a wider area, notably to the eastern seaboard of the United States. Ceramic tiles presently produced in Pennsylvania for the eastern United States market may represent a further industrial opportunity.

5.3.3 Oil Refining

Opportunities for increased export-derived revenue and employment may well lie in the re opening of the Come by Chance oil refinery. An offer by the First Arabian Corporation is presently under consideration by the receivers of the company and the provincial government and a decision on arrangements by which the refinery may be reactivated is expected soon. It is expected that the refinery could be modified and made

operational within two years of an agreement being reached, that production capacity would approximate 100 000 barrels a day and that in the order of 300 employees would be required. Sources of raw material remain unspecified but markets are anticipated to be in the United States. The principal products are likely to be heavy fuel oils but modifications to the existing refinery may well permit the production of higher value-added aviation spirit, the product that the refinery was originally designed to produce.

In the event that a different bid for the refinery is accepted and the original owners regain control of the operation, additional revenues and employment may be generated as plans for expansion of the facility have been publicized.

5.4 Manufacturing Industry: Import Substitution

Import substitution offers two major benefits to the provincial economy. The first is a reduction of funds flowing out of the province from the purchase of "imported" goods and services. The second is the potential of employment creation within the province and the associated multiplier effect. As mentioned earlier in the report, Newfoundland is a net importer of goods and services and compared to other provinces has an extremely high volume of retail sales. Although the provincial market is small it is felt that definite opportunities do exist for the establishment of small-scale industry to utilize local natural and human resources and to reduce the flow of finished goods into the province. The natural barrier of the Gulf of St. Lawrence, transportation across which appreciably increases the landed cost of finished goods, could act as a natural tariff giving local producers a beneficial market edge.

5.4.1 Ocean Industry

In recent times, the potential utilization of Canada's ocean resources has become increasingly important. Newfoundland's economic history has been related to the harvesting of the fish resource and its future may well be tied to the exploitation of its mineral and oil and gas potential. The products of these activities will continue to form a part of the province's primary-resource export base. However, the technology and hardware of prosecuting the fisheries or extracting oil, gas and minerals presents further opportunities for development of indigenous industry.

At present, the provision of fishing gear alone constitutes a multi-million dollar industry very little of which has actually been produced in the province. Likewise, the construction and outfitting of fishing boats has been pursued only on a limited scale within the province. It appears that

there should be some real potential for manufacturing supplies for the fishing industry locally. A trend in this direction by private manufacturers is already evident.

The level of exploration for oil and gas on the continental shelf off the coast of Newfoundland has intensified over the last several years. Through the establishment of the Centre for Cold Ocean Resources Engineering at Memorial University and the Newfoundland Ocean Research and Development Corporation (NORDCO), the federal and provincial governments have moved in concert to capitalize on the opportunities for the development of local knowledge and technology for both exploration and future development. This is an important first step in ensuring maximum provincial participation in the development of the offshore ocean resources. Also, Canadian and international engineering and exploration servicing companies have been establishing offices within the province in expectation of increased activity in this sector. The National Research Council, in line with the "centres of excellence" concept, has planned to locate a cold ocean testing laboratory in St. John's.

Establishment of local knowledge and expertise within the province is only one step in the process. In order to fully maximize potential returns for ocean industry development, the province is endeavouring to ensure that, wherever feasible, industries supplying the development hardware and servicing the development effort be located within Newfoundland. As the pace of exploration increases, and ultimately with the development of the resources, there will be great pressure to attempt to purchase off-the-shelf technology. These external "purchases" should be minimized to the fullest extent possible. To some extent, Newfoundland's location will provide a natural advantage fostering the requisite developments. In other cases, the province will actively pursue opportunities to ensure that they occur in Newfoundland.

5.4.2 Forest Industries

The major growth in forest exports will continue to be in pulp and paper. The opportunities for further manufacturing of pulp and paper are limited. The brightest prospects for increasing value-added within the province lie in the following areas.

Sawmilling

The sawmilling industry has declined considerably from its peak in the immediate post-war period. Current production is approximately 98.7 million cubic metres against an installed capacity of 176 million cubic metres and consumption of 235 million cubic meters. Allowing for some dimensions of lumber

which cannot be locally produced due to tree size, there is room for considerable expansion in the industry, possibly in the order of 75 to 82 million cubic metres.

There are over 1 000 sawmills in the province. Even the three largest, with annual outputs of 4.7 to 14.1 million cubic metres are considered small by national standards. Of the remainder, over 900 produce less than 117 000 cubic metres and are mainly family enterprises operated as secondary sources of income and not commercially viable. Improving wood utilization through the use of wood waste for fibre board and pulp and paper production, requires chipping and debarking equipment which is only justifiable for larger operations. The industry, therefore, requires modernization and more capital-efficient units. Rationalization of land holdings is also necessary to allow sawmill operators access to a larger wood supply, and arrangements need to be made to enable sawmill operators to dispose of wood unsuitable for saw logs to the pulp and paper industry, and vice versa.

Potential for additional sawmilling capacity exists in Labrador and on the island, particularly as integrated operations with the pulp and paper industry. The net result will likely be fewer mills, but a substantial increase in total production.

Hardwood Products

Opportunities may exist for using birch in plywood production and for the use of other hardwoods for panel products, furniture components, boat building, specialty lumber, and so on. At present, there is no real hardwood industry as traditionally hardwoods are not harvested. Instead, they remain a residual product of the softwood harvest, primarily because their wide dispersal makes it uneconomical to harvest the hardwoods alone.

An inventory of hardwoods and integration with established softwood operators may well allow the establishment of a viable hardwood operation.

Panel Board Industry

Panel board falls into three categories; plywood, fibreboard, and particle board. No veneers are presently produced in Newfoundland, though some plywood is constructed locally from imported veneers. One Newfoundland company presently produces 0.3 million square metres of particle board, 92 900 square metres of which is sold to the construction trade

and the remainder used as the core for a veneered panel board, most of which is exported.

The various types of panel board are rapidly replacing other building materials and this trend is likely to continue. Present consumption of panel products is 3.7 million square metres, of which only about 454 500 square metres are produced locally. There would appear to be good potential for further expansion of the industry both for domestic consumption and export.

Other Primary Wood Products

Included in this group are fuel wood, railway ties, poles and piling, fencing material and roundwood used by the inshore fishery. Few opportunities exist to produce poles and piling because of the length of the log required and the small size of the majority of Newfoundland trees. Opportunities do exist for increased production of railway ties and the elimination of the necessity to import supplies. Softwood pitprops did, until recently, represent a sizeable export industry which has since declined. Potential may exist for the revival of the industry.

Wood Waste

Industrial options also exist for the utilization of wood waste and forest biomass. In particular, self-sufficiency within the forest industry in meeting its energy requirements might be achieved, thereby reducing the dependence on oil or electrical energy. With increasing oil prices, it may ultimately become feasible to chemically produce methanol from wood as a gasoline substitute. The technology is available, but at present the product is not cost-competitive.

5.4.3 Agricultural Products

Agriculture presents limited opportunities for import substitution. As mentioned earlier, the natural potential for agriculture is severely limited by soil and climate. However, there is potential for an increase in vegetable production for on-island consumption. One of the obstacles to this has been an inefficient marketing system for local production. Recently the province established a Vegetable Marketing Board which should help remove this barrier. Further, there are a number of federal-provincial programs now in place that are designed specifically to increase the number of hectares under cultivation and the size and efficiency of farms. These initiatives could see an increase in the provincial consumption of its own fresh farm produce as well as the eventual development of a processed-food industry.

Currently, a small amount of sheep and lamb is produced in Newfoundland. This is mainly for local use, although some is exported to St. Pierre. In addition, there exists some opportunity for the production of other meat products on the island. The existing cattle, poultry and hog producing industries are constrained by the inadequate supply of local forage and feed crops. While the potential does exist for some increase in production of grains, it is not likely that sufficient quantities can be produced to completely replace this import. Despite this constraint, however, the volume of livestock production has been increasing annually and presents one opportunity for further import substitution in the future.

Newfoundland growing conditions support the production of large volumes of wild fruit such as blueberries, partridgeberries and, to a lesser extent, bake apples. Blueberries are already a profitable export commodity. At present, the commercial exploitation of the other fruits is on a limited scale and primarily for local consumption. It would appear that a limited opportunity exists for production of high-quality jams made from bake apples and partridgeberries, for export as unique Newfoundland agricultural products.

5.4.4 Services to Primary Industries

Much of the equipment used in extracting the province's primary resources is imported. In a large number of cases, the market is too small to support the establishment of local source of supply. However, there are a number of cases where local industries have been established to service the primary sector activities.

In the fishery, vessel and gear servicing activities will increase in relation to fleet development. Additional marine service centres are also anticipated. The overall increase in fishing activity might also be expected to generate private sector activity in the provision and servicing of fishing equipment, including nets, ropes, wire and electronics equipment. Other employment opportunities will arise on a variety of fronts such as, for example, the continuation of the Lobster Trap Construction Program, which in 1978-79 employed 100 people at seven locations and produced 40 000 pots.

5.5 Tourism

There is some potential for the development of the tourist industry in Newfoundland. The province has many natural scenic attractions, including picturesque fishing communities, the rugged beauty of the west coast, and the unique appeal of

Labrador. The main constraints to tourism development are remoteness from major population centres, high transportation costs, a short summer season and underdeveloped facilities and attractions. At present, the federal-provincial tourism development subsidiary agreement is concentrating on the upgrading and expansion of accommodations and attractions throughout the province. Future development potential may lie in the area of packaged tours or special promotions for sport fishermen and hunters.

6. SUMMARY

Development in Newfoundland has been, and will continue to be, dependent upon the exploitation of primary resources. Hydro power developments at Churchill Falls and iron ore mining in western Labrador have, in recent years, overshadowed the traditional fisheries sector and the forestry industry. In both cases, however, new jurisdictional controls, intensified resource management and improved harvesting capabilities should establish and maintain their important roles in the economy.

The 1971-77 period was characterized by rapid growth in the provincial labour force, though participation rates still remain well below national rates. Increased participation and overall slow growth in the economy were reflected in a doubling of the unemployment rate since 1971. High unemployment was offset only partially by increases in wage levels which have steadily continued to approach their national counterparts. Higher wage levels contributed to increases in per capita personal incomes, but the transfer payment component increased faster than the earned income component and accounts for the larger portion of the rise in per capita incomes.

Newfoundland output grew in both the goods-producing and service sectors over the 1971-77 period, however, growth in the service sectors was considerably greater than in the goods-producing sectors. Utilities and mining were the fastest growing among the goods-producing sectors, while all service sectors grew at approximately the same rate.

The approaches to development in the province have, since the signing of the General Development Agreement in 1974, emphasized the primary resource sectors and sought to ensure that development occurs on several broad fronts throughout the province. Development strategies have emphasized the provision of basic infrastructure as a prerequisite for economic development by the private sector. This has included highway construction, industrial parks, marine service centres and community infrastructure. Concurrently, attention has also been given to the identification of development opportunities in the resource sectors and is reflected in the resource inventory; management and development programs being undertaken on a federal-provincial cost-shared basis and in the technology-oriented program of NORDCO. In addition, there has been an emphasis on the development of long-range planning and resource management capabilities.

Future developments in the province will tend to reflect sub-provincial regional realities and requirements. On

the Island portion of the province, selective development will be instituted to assist the private sector to take advantage of the economic infrastructure that has been put in place in conjunction with the further processing of primary resources. In Labrador, there remains a great need for further exploration and evaluation of the resource base and for the expanded provision of social and economic infrastructure. The continued development of the resource base will clearly remain a priority. It is recognized that the cost and the significance of a number of projects, for example the Gull Island hydro scheme, may be so great that they are more appropriately dealt with in a national perspective rather than depending on provincial capabilities alone. However the resource base is ultimately developed, the objectives will remain that returns to the province and, by proxy, Canada, are maximized while striving to ensure that social, economic and environmental disruptions are minimized.

The range and diversity of development opportunities in the province are defined by its location, the nature of its resource base, its small and fragmented local market and its competitiveness in world markets. Opportunities lie first in expansion of the output of primary products for direct sale to foreign markets. Revenues may be further increased from exports of resources to which further value has been added by conducting preliminary stages of the manufacturing process, and exogenous spending can be reduced and employment increased through further import substitution. Improved productivity from its physical resources, capital and labour components is being sought by both governments to assist in the achievement of these opportunities.

Energy resources represent a major opportunity. Installation of additional generating capacity, including the Lower Churchill and other Labrador sites, will offer the assurance of long-term energy supplies, valuable foreign returns to the provincial treasury if short-term export sales are promoted, and the opportunity to attract domestic energy-intensive industries.

The extent of offshore gas and petroleum resources is presently unknown, but should finds prove to be recoverable and commercially viable, the socio-economic impact on the province will radically alter the financial position of the province over the long term, and could be molded to have major impacts on the present industrial-resource base of the economy.

Labrador with its largely unevaluated resource bounty offers promising long-term opportunities for mineral development, with iron ore and uranium likely to have the

greatest potential over the medium term. Isolation, access costs and local residents ambivalence toward development will influence the rate of exploitation of these opportunities.

In the short term, the fisheries sector shows the greatest growth potential. The extension of jurisdiction to 200 miles and the regeneration of some fish stocks have, in part, led to a revitalization of the industry. In the new spirit of optimism pervading the sector, programmes are being developed by governments and the private sector to improve the capabilities of the fishing fleet, improve harvesting methods, increase processing sector efficiency and improve marketing strategies. In the medium term an expansion of the volume of production, destined primarily for the United States market, is likely. Over the longer term, however, it is anticipated that further processing, product diversification and new markets will increase revenues and ensure the long-term growth and stability of the industry.

Other manufacturing export opportunities are in the pulp and paper industry, notably arising from the conversion of the Stephenville linerboard mill. The potential reactivation of the Come by Chance oil refinery is a further important short-term development opportunity.

Import substitution shows promise, particularly in those areas in which the province enjoys the greatest relative comparative advantages. Opportunities exist for the development of "centres of excellence", particularly in ocean-related industries, and include fishing vessel construction, research, development and production of fishing gear, offshore oil exploration equipment and services and cold ocean technology. Other opportunities exist in forest products, notably lumber and building materials, and in the agricultural and service sectors.

For Newfoundland and Labrador, the 1971-77 period was one of contrasts, beginning and ending on notes of promise with the intervening years reflecting and magnifying the economic uncertainties of the national and international scene. However, development efforts over this period have produced a substantial improvement in the province's development infrastructure and a rationalization and improved management of its primary resource industries. In many cases, the impact of these efforts is only beginning to be felt. Overall, the economy of the province is on a firm footing to take advantage of future opportunities. On this basis, the Newfoundland economy can be expected to improve its position in relation to the Canadian economy over the next decade. However, at the close of the 1970s significant prospects for development, such as offshore oil and gas and Labrador hydro, have been brought closer to reality and may represent a massive stimulus to the Newfoundland economy in the 1980s.

