NEWFOUNDLAND AND LABRADOR

THE ECONOMY 1987

Presented by

The Honourable John F. Collins, F.R.C.P.(E.)
Minister of Finance

COVER:

A logo developed for use by the Tourism Branch of the Department of Development and Tourism in advertising and promotional literature directed to the potential visitor to Newfoundland and Labrador.

The Viking ship is reflective of the L'Anse aux Meadows world historic Viking site — the ocean, our seagoing heritage and the sun, the first sign of dawning in North America.

THE ECONOMY
1987

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Honourable G. R. Ottenheimer, Q.C., M.H.A.
President of the Executive Council

Foreword

THE ECONOMY is an annual publication which reviews the performance of the Newfoundland and Labrador economy in the previous year and assesses the outlook for the current year. The research, writing and co-ordination of an annual publication such as this is always a complex process and while every attempt has been made to include only the most up-to-date information available, the majority of statistical tables, diagrams and analyses contained in this report are based on data which were available as of February 20, 1987.

THE ECONOMY 1987 has been considerably enhanced by the excellent suggestions and willing contributions of a number of individuals. In particular, the staff of Economic Research and Analysis would like to thank: Bill Moyse, Canadian Saltfish Corporation; Percy MacDonald, National Sea Products; Jerome Peddle, Newfoundland Ocean Research Development Corporation Ltd.; Glenda Dawe, Centre for Newfoundland Studies; Judith Whittick, Centre for Cold Ocean Resource Engineering; Richard L. Haedrich, Newfoundland Institute Cold Ocean Science; Susan Pereira, Institute for Marine Dynamics; David Vardy, Marine Institute; Dave Mercer, Coleen Whalen, Newfoundland and Labrador Hydro; Marion Gregory, Rosemary Ommer, Memorial University of Newfoundland; Rick O'Neill, O'Neill Motors; Dick Meyers, Ted O'Keefe, Offshore Petroleum Board; Kenneth Oakley, Canadian Petroleum Association; Eric Patey, Marystown Shipyard Limited; Clarence Dwyer, Easteel Industries 1984 Ltd.; Hunter Rowe, Department of Consumer Affairs and Communications; Gordon Murphy, Ed O'Brien, Department of Transportation; Keith Barry, Len Edwards, Fisheries Loan Board; Denise Ball, Department of Public Works; Denise Oake, Treasury Board; Paul Timmins, ERCO Industries Ltd.; Harold Duffett, Standard Manufacturing; Jill Andrews, Sam McGrath, Department of Education; Clyde Granter, Ron LeDrew, Doug Moody, Matt Shinkle, Terry Courish, Tony Patey, Nick Burggraaf, Tom Strickland, Paul Maher, Sid Blundon, Joan Bragg, Renil Nanayakkara, Juanita Keel-Ryan, Michael Claire, Department of Development and Tourism; Mike Ryan, Phil McCarthy, Department of Rural, Agricultural & Northern Development; Robert Russell, Eric Dunne, Tom Donahue, Merv Collins, Roland Cormier, Dennis Brock, Lois Sullivan, Department of Fisheries and Oceans; Mary Lou Peters, Michael Handrigan, Fishing Industry Advisory Board; Gerry Beresford, Brian MacNamara, Fishery Products International; Les Dean, Cathy O'Neil, Department of Fisheries; Lorne Spracklin, Barry Rodgers, Dave Hawkins, Department of Energy; Hedley Barrett, Office of the Federal Economic Development Co-ordinator; John Scott, Cabinet Secretariat; Eric Seaward, Department of Municipal Affairs; John Flemming, Rex Gibbons, Tony Burgess, Maurice Sheppard, Chris Bonnell, Terry Young, Ken Andrews, Della Stevens, Department of Mines; Robert Peters, Muhammad Nazir, John Middlemiss, Al King, Gerald Davis, Gerald Fleming, Gary Small, George Ross, Barry Garland, Brian Martin, Arch Herridge, Department of Forest Resources and Lands; Bob Davis, Glovertown Shipyard Ltd.; R. Simms, Newfoundland Dockyard. In addition, many individuals contributed to the development of the 'Inventory of Major Projects' which appears in the final pages of this publication. Special thanks is extended to the staff of the Newfoundland Statistics Agency; and finally, to Walter Hudson and the staff of Printing and Micrographic Services Division for the cheerful and patient co-operation which they demonstrated throughout the typesetting and printing process.

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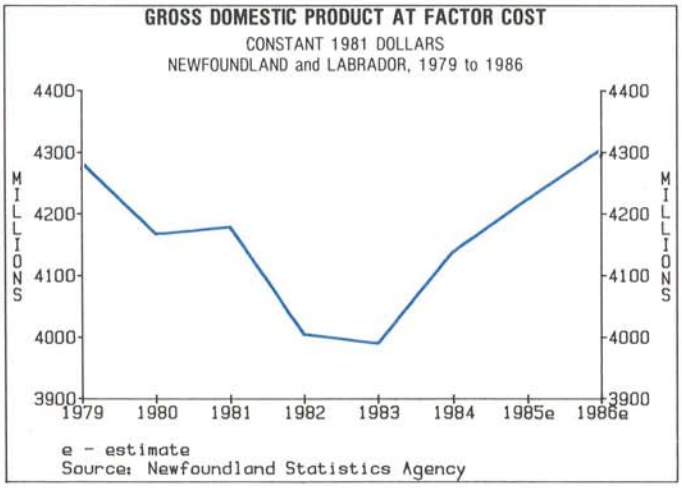
GROSS DOMESTIC PRODUCT AT FACTOR COST
CONSTANT 1981 DOLLARS
NEWFOUNDLAND and LABRADOR, 1979 to 1986
MILLIONS
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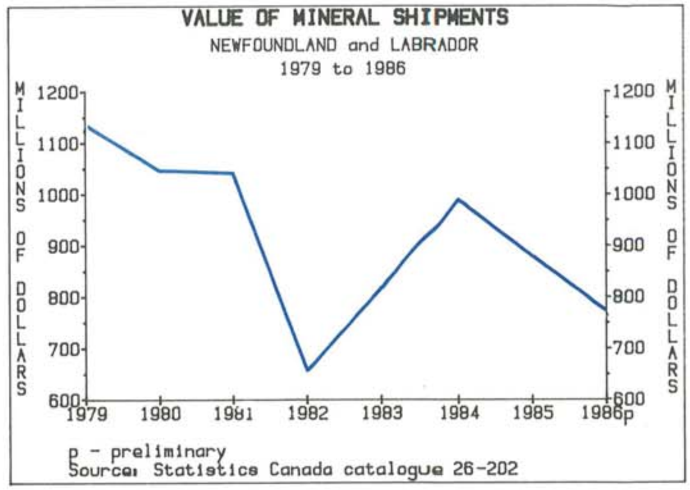
1979 1980 1981 1982 1983 1984 1985e 1986e
e - estimate
Source: Newfoundland Statistics Agency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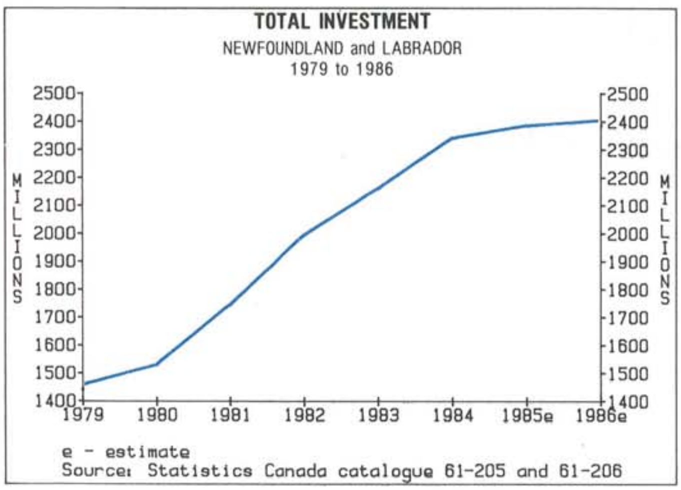
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e - estimate
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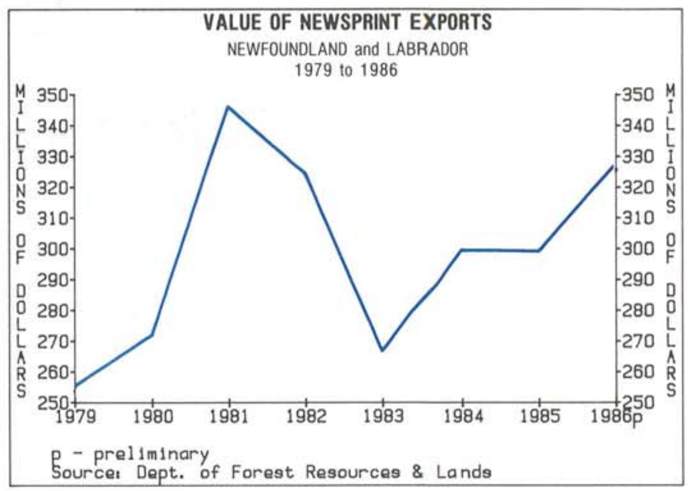
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p - preliminary
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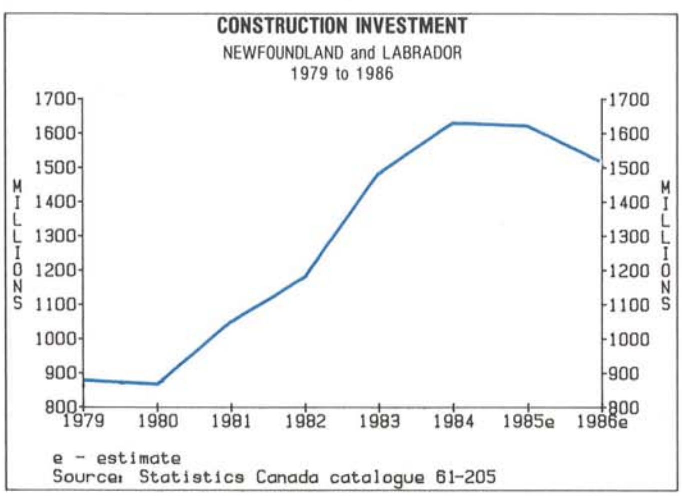
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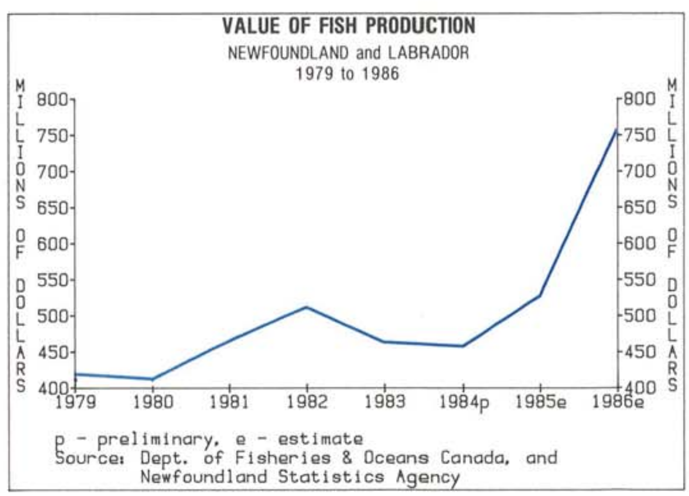
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MILLIONS OF DOLLARS
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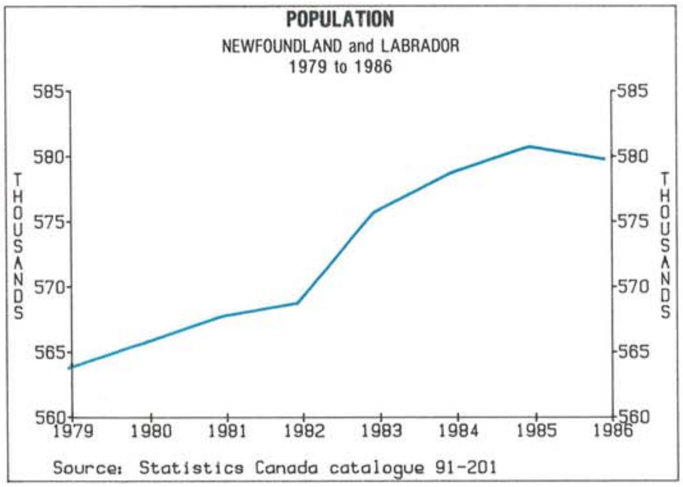
p - preliminary, e - estimate
Source: Dept. of Fisheries & Oceans Canada, and Newfoundland Statistics Agency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580
575
570
565
560
1979 1980 1981 1982 1983 1984 1985 1986
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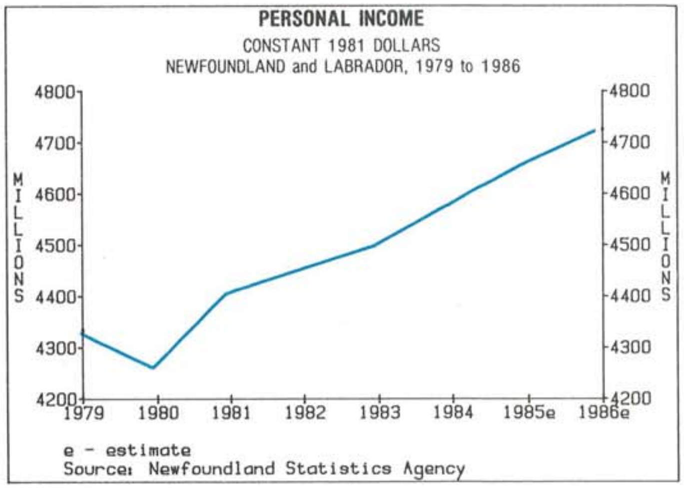
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4500
4400
4300
4200
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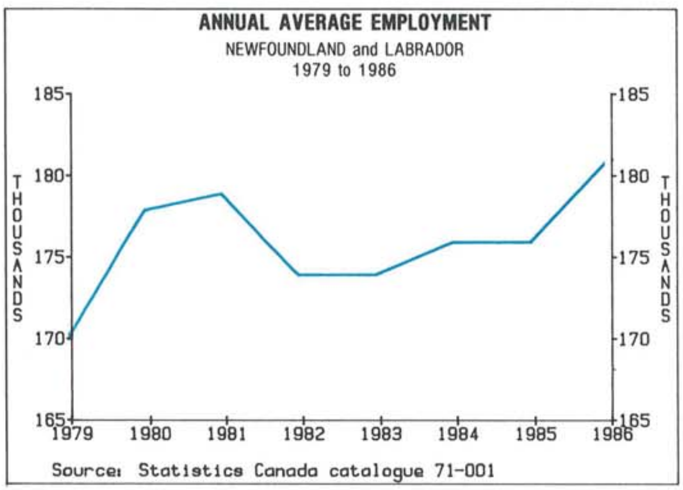
Source: Newfoundland Statistics Agency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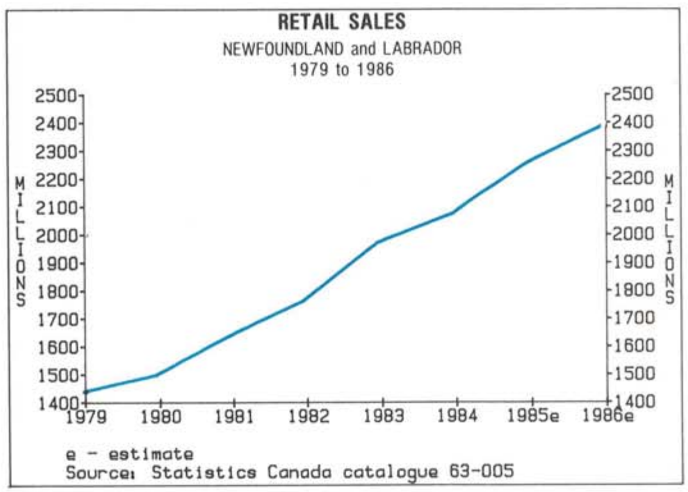
1979 1980 1981 1982 1983 1984 1985 1986
Source: Statistics Canada catalogue 71-001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MILLIONS
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2300
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2100
2000
1900
1800
1700
1600
1500
1400
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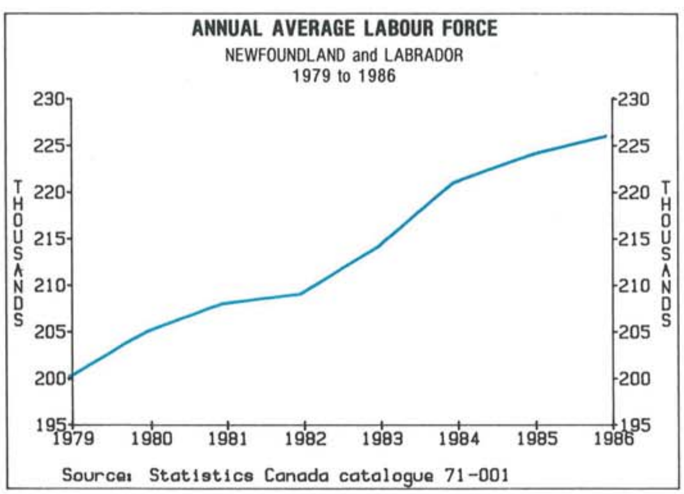
e - estimate
Source: Statistics Canada catalogue 63-005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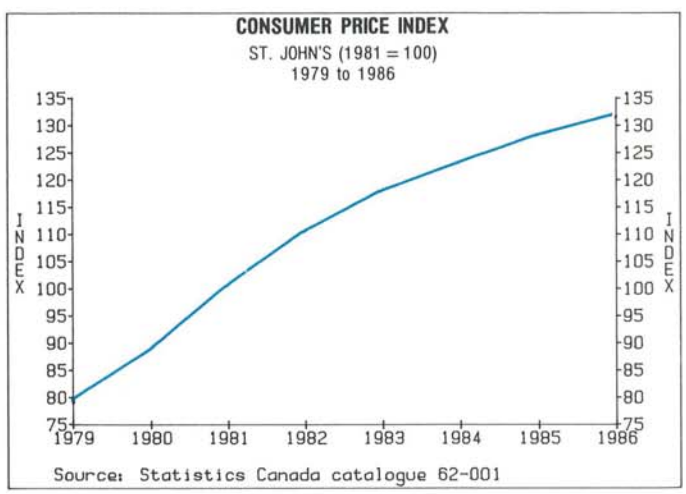
Source: Statistics Canada catalogue 71-001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ST. JOHN'S (1981 = 100)
1979 to 1986
INDEX
135
130
125
120
115
110
105
100
95
90
85
80
75
1979 1980 1981 1982 1983 1984 1985 1986
Source: Statistics Canada catalogue 62-001

I. SUMMARY OF ECONOMIC PERFORMANCE DURING 1986

International and Canadian:

- All major industrialized countries continued to experience economic growth at an average of about 2.5 percent.
- Lower oil prices kept inflation down.
- In the United States real GNP grew by about 2.5 percent.
- In Canada real GDP grew by about 3.3 percent.
- Inflation and interest rates were relatively low; Canada's inflation rate, as measured by the GDP deflator, was about 2.8 percent and the bank rate averaged 9.2 percent.

Newfoundland and Labrador:

- Real GDP attained an all time high in the Province as full recovery from the recession was finally achieved with GDP growth of 1.9 percent; inflation and interest rates were at their lowest levels in years.
- The consumer price index advanced by only 3.0 percent whereas for Canada as a whole it increased by 4.1 percent.
- Employment in Newfoundland increased by 5,000 on an annual average basis. This is a marked improvement over last year's figures, and the first substantial increase recorded since 1981.
- Increased employment boosted total wages and salaries and hence personal income rose by 1.4 percent in real terms.
- The current dollar value of retail trade rose by 6.1 percent. Stores dealing mainly in non-necessities or discretionary items experienced the strongest sales growth, indicating an improvement in consumer confidence.
- The manufacturing industry can be divided into three major components, namely, fish products, pulp and paper products, and 'other' manufacturing:
  - —Strong gains were recorded in the manufacturing industry in 1986 with fish products providing much of the impetus for growth.
  - —The value of newsprint shipments rose by 8.7 percent; the price of newsprint increased late in the year.
  - —Other types of manufactured products benefited from the strength in local consumer spending.
- The value of iron ore shipments was down compared to 1985 and this was a major contributor to the decline of 12.1 percent in total mining industry shipments.
- Activity in both residential and non-residential construction was at about the same level as in 1985. Total housing starts were 2,883.
- Electric power and water utilities experienced growth of about 2 percent.
- Oil and gas exploration was down from 1985.

II. SUMMARY OF ECONOMIC OUTLOOK FOR 1987

International and Canadian:

- Most of the major industrialized countries will experience stronger growth than in 1986.
- Low inflation and interest rates should encourage continued growth in consumption and investment expenditures.
- In the United States, economic growth should accelerate to about 2.8 percent with inflation and interest rates expected to remain low.
- A fifth consecutive year of economic expansion can be expected for Canada. Real GDP should grow by about 2.4 percent and the unemployment rate is expected to decline to 9.3 percent.
- Interest rates in Canada are expected to be lower than in 1986 and the inflation rate is expected to be about 4.5 percent.

Newfoundland and Labrador:

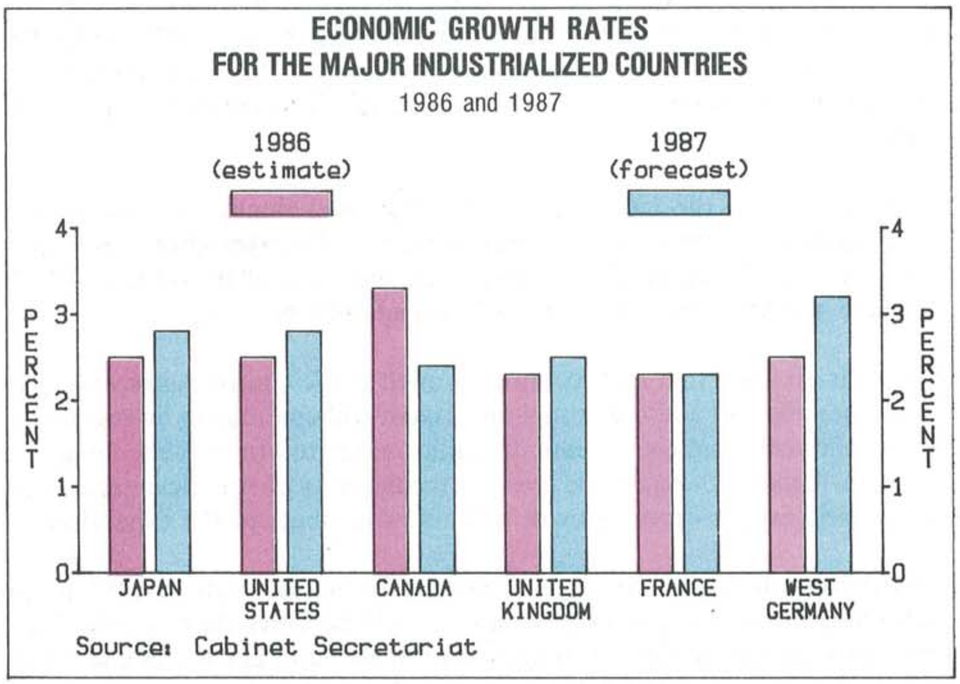
- The Provincial economy will continue to experience a healthy level of growth as the international economy remains strong; GDP is expected to increase by between 2.4 and 2.7 percent.
- Some employment gains are expected and the unemployment rate should fall to about 19.7 percent.
- The outlook for the manufacturing industry is promising:
  - —The pulp and paper products industry is expecting a good year due to newsprint price increases late in 1986 and anticipated increases in the level of capacity and output.
  - —The fish processing industry should continue to prosper as markets and prices are expected to remain strong.
  - —The domestically consumed output of other manufactured products should hold its own as local demand remains strong. Performance will vary by type of product.
- The outlook is generally good for the mining industry although the value of shipments is expected to decline somewhat as the iron ore industry faces uncertain prices and increasing competition.
- The St. Lawrence fluorspar mine will begin partial production.
- Development of the Hope Brook gold mine will continue and partial production will commence this year.
- This is expected to be another excellent year for mineral exploration in the Province.
- Housing starts will increase slightly from 1986 levels.
- The non-residential component of construction would benefit from a start-up of Hibernia development.

- The output of electric power utilities is expected to increase.
- Oil and gas exploration expenditures will be down from 1986 levels but will receive a boost from further delineation of the Terra Nova field by Petro Canada.
- The service sector will be stimulated by growth in the goods producing industries, a start-up of Hibernia development, and gains in personal income.

III. THE INTERNATIONAL AND CANADIAN ECONOMIC ENVIRONMENTS

Real economic growth continued in all major industrialized countries during 1986. As illustrated in Diagram III.1, growth was strongest in Canada. Inflation and interest rates trended lower, and in most industrialized countries consumer demand was the driving force behind economic growth. These countries, with the exception of France, are expected to experience even stronger growth in 1987 than in 1986. This is good news for Newfoundland and Labrador since strong economic growth in these countries usually means buoyant demand in the markets for most of the Province's exports.

Diagram III.1



In the United States, the Province's main export market, 1986 was characterized by healthy growth in domestic demand which translated into a real gain in Gross National Product (GNP) of about 2.5 percent. Monetary policy was fairly accommodative and with inflation falling to the 2 percent range, expectations of future bouts of high inflation diminished. This was at least partially responsible for the drop in United States interest rates. The discount rate (the United States equivalent of Canada's bank rate) averaged about 6.25 percent in 1986, a decline of about 1.4 percentage points from the 1985 average. The strength of domestic demand arose mainly from the consumer side rather than from business investment or government spending. Real personal consumption expenditures rose by about 4.0 percent in 1986 supported by higher real incomes and a decline in the savings rate. Real income gains combined with lower mortgage rates to encourage increased consumer spending on new housing resulting in a real increase of 9.4 percent in residential investment. However, real non-residential investment declined slightly in 1986, mainly because the decline in oil prices was met by a sharp drop in oil and gas investment. Expenditure growth by the federal government was somewhat restrained because of mounting pressure to reduce the budget deficit.

The federal budget deficit in the United States has continued to grow despite attempts by Congress to bring it under control. On a national income accounts basis, the budget deficit was about US$204 billion in 1986, the highest level ever. Since domestic savings have not been sufficient to finance both domestic investment and the budget deficit, increasingly large net inflows of foreign capital have been necessary over the past few years. In other words, the United States has become a net borrower from the rest of the world. The United States trade deficit has risen sharply along with the budget deficit. Preliminary estimates for 1986 place the merchandise trade deficit at US$169.8 billion, the largest in history.

Concerns over the United States trade deficit in 1985 led the group of five (G-5) major industrialized countries to engineer a depreciation of the American dollar on world currency markets. Throughout 1986 the dollar continued to depreciate but this did not have the desired impact on the United States trade deficit. The trade deficit has fostered a great deal of protectionist sentiment in the United States as evidenced by the imposition of tariffs against Canadian salt and fresh fish and the recent dispute over softwood lumber imports from Canada. Thus far, the Province's exports have not been adversely affected by the rise of American trade barriers.

The depreciation of the United States dollar should finally have an impact on the American trade picture in 1987. Strong export growth and weaker import growth will help to reduce the trade deficit slightly in real terms. The sheer size of the trade deficit, however, means that there will likely be little easing of protectionist pressure.

In 1987, it is expected that real economic growth in the United States will be about 2.8 percent. Consumer demand and residential investment will continue to be engines of growth as employment and real earnings increase. In addition, tax reform will encourage consumer spending since it will mean lower income taxes for the majority of Americans and hence higher disposable incomes. Strong export growth will also contribute to the expansion.

Further declines in United States interest rates in the first half of 1987 are predicted by many analysts and, on average, interest rates should be lower than in 1986. The United States dollar is expected to continue its slide against most major currencies and rising import prices due to the depreciation of the dollar are expected to push inflation into the 3 to 4 percent range. This rise in inflation may generate an increase in interest rates in the latter part of 1987.

In Japan, the Province's second most important export market, real GNP grew by about 2.5 percent in 1986. Growth was hampered somewhat by a decline in the volume of exports and an increase in the volume of imports, both of which occurred in response to the appreciation of the yen during 1986. Although the volume of exports fell, the value of exports, in terms of the United States dollar, rose considerably. This is because the demand for Japanese products was relatively unresponsive to the increase in the price. Even if United States demand for Japanese products continues to be relatively unresponsive to increased prices, it is unlikely that the dollar value of Japanese exports will continue rising as the yen cannot continue to appreciate indefinitely against the United States dollar.

Japan's weakened net export performance was offset by healthy growth in domestic consumer spending and in private housebuilding activity. Real wage gains boosted personal incomes, inflation hovered around the zero percent mark and interest rates fell to historic lows. In 1986, the Bank of Japan's official discount rate averaged only 3.6 percent.

Japan's net export position is not expected to improve in 1987, as the yen continued to appreciate in currency markets early in the year. In an apparent attempt to both stimulate domestic demand and discourage further appreciation of the yen, the official discount rate was reduced to 2.5 percent in February. Real GNP is expected to grow by 2.8 percent in 1987 mainly on the strength of a 4.6 percent increase in personal consumption expenditure. Import volumes are expected to rise by about 8 percent and this should open up export opportunities for countries such as Canada which have experienced significant currency depreciation against the yen.

The three major economies of Western Europe (West Germany, France and the United Kingdom) are firmly on an expansionary path. In 1986, real economic growth was in the 2 to 3 percent range and should remain in that range in 1987. Interest rates have been trending lower and growth has been driven largely by domestic demand.

In a February 1987 meeting of Finance Ministers from the United States, Japan, West Germany, the United Kingdom, France and Canada, it was agreed that further substantial declines in the United States dollar could impede world trade. The group pledged to cooperate in an effort to maintain current exchange rate levels. In return for a United States commitment to hold the line on public spending (and thus the federal budget deficit), Japan and West Germany agreed to take measures that would stimulate their economies and raise demand for imports. While these agreements are a sign of greater economic cooperation, they are unlikely to bring about a speedy resolution to trade tensions.

Relative to the other major industrialized countries, Canada's economic performance was outstanding in 1986 as real Gross Domestic Product (GDP) rose by 3.3 percent. Growth stemmed mainly from the private sector as efforts to reduce the rising level of the public debt translated into reduced real growth in total government spending on goods and services, about 1 percent in 1986. For the first time in four years, the federal government actually spent less than it received in tax revenues if interest payments on the public debt are ignored. There was, however, still a budgetary deficit in 1986 because of service costs on the accumulated federal debt, which currently stands at $265 billion.

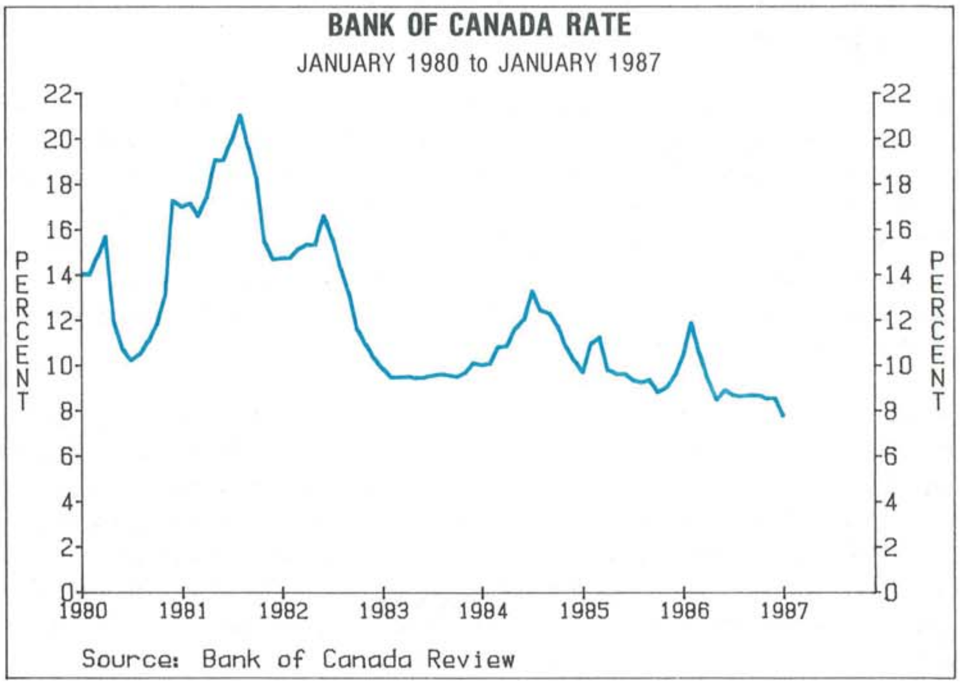
Business non-residential construction investment in Canada declined by about 10 percent, largely due to decreased investment in oil and gas following the collapse of oil prices. However, real expenditures on residential construction increased by 13.7 percent in 1986 and resulted in an overall increase of 2.8 percent in total real investment.

Personal consumption expenditures increased by about 4.0 percent in 1986. The strength in consumer spending resulted from both real income gains and a declining savings rate. Real personal disposable income rose by about 0.8 percent while the savings rate dropped to 9.1 percent in the third quarter of 1986, the lowest level since 1974.

On an industry basis, growth was strongest in the service sector with real gains of about 7.5 percent in the Community, Business, and Personal Services industry and 6.5 percent in the Finance, Insurance, and Real Estate industry. Strong growth was also recorded in the agriculture and forestry industries.

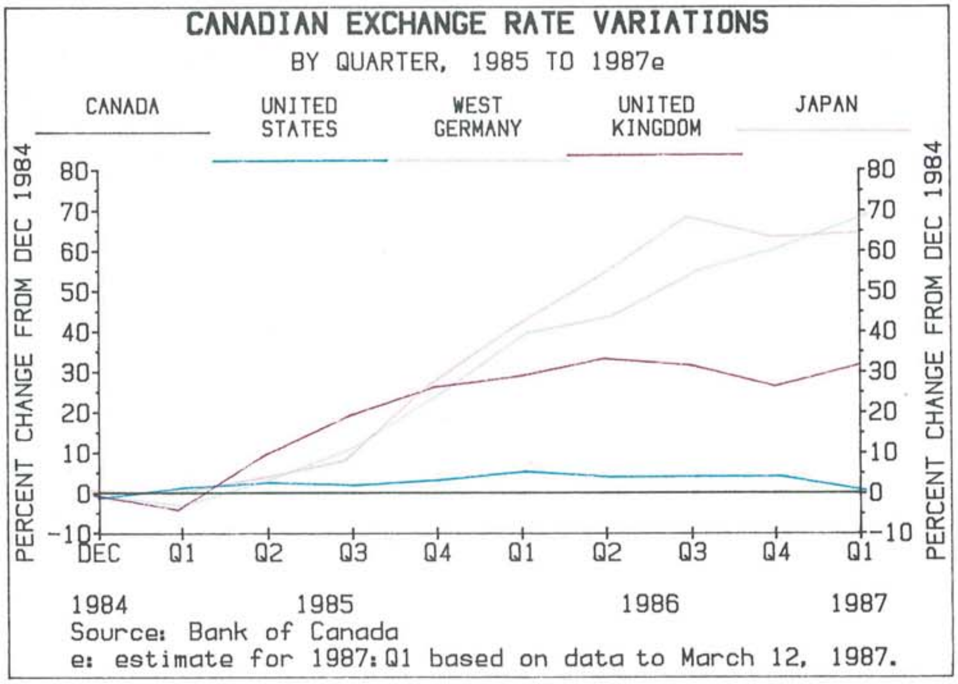
Canada's inflation rate was 4.1 percent in 1986, an increase of 0.1 percentage point over the previous year. Interest rates rose early in the year as the Bank of Canada responded to a speculative attack on the Canadian dollar which fell to a low of US$0.69 in February 1986. As Diagram III.2 illustrates, the Bank of Canada rate peaked early in 1986 and then declined as downward pressure on the Canadian dollar subsided. Interest rates have been on a general downward trend since 1981 mainly because investors have revised downwards their expectations of future inflation rates and are therefore willing to accept lower inflation premiums on interest rates.

Diagram III.2



While the exchange rate between Canada and the United States has varied little over the past two years, the currencies of both countries depreciated substantially against the currencies of other major countries. In the two year period from December 1984 to December 1986,the Canadian dollar depreciated by about 26.7 percent against the British pound, 63.0 percent against the German mark, and 59.7 percent against the Japanese yen. These depreciations, which gave Canadian exports a competitive edge against other foreign suppliers in United States markets and also improved competitiveness in offshore markets, are illustrated in Diagram III.3 below. Despite these depreciations, import growth in merchandise trade exceeded export growth resulting in a sharp decline in net exports in 1986. This, combined with an increase in net investment income paid to non-residents, generated a current account deficit in the neighbourhood of $9 billion compared with $4.9 billion in 1985.

Diagram III.3



Canada recorded strong growth of 2.9 percent in total employment during 1986. This helped to reduce the unemployment rate from its average of 10.5 percent in 1985 to an average of 9.6 percent in 1986. However, regional disparity increased because of the way in which economic growth was distributed across the regions. Most of the growth occurred in southern Ontario as real GDP increased by about 5 percent. Ontario also had the lowest unemployment rate (7.0 percent) in 1986 while only two other provinces, Manitoba and Saskatchewan, had unemployment rates below the national average of 9.6 percent. The remaining provinces, which are largely resource based, had an average unemployment rate of 13.5 percent. This is an indication of the continued divergence in economic performance that has been characteristic of the Canadian provinces.

Canada's economy is expected to experience its fifth consecutive year of growth in 1987 with real GDP increasing by about 2.4 percent. The slowdown in growth from 1986 is largely due to slower growth in consumer spending. Residential construction should remain strong in 1987 although the pace of growth will be lower than in 1986.

Government spending will continue to grow in real terms during 1987 but at a slower pace than the economy as a whole. The federal government's projected budget deficit for the 1987/88 fiscal year is $29.3 billion, about $2.7 billion less than in the previous fiscal year. This reduction has mainly been achieved through tax increases rather than expenditure cuts and also through a new cash management system that will produce one-time revenue gains for the federal government.

Business non-residential construction investment is expected to be lower in 1987 than in 1986 as investment in the oil and gas industry is reduced because of continuing lower oil prices. Investment in machinery and equipment will experience moderate real growth in 1987. Although the Canadian dollar recently appreciated against the United States dollar (breaking over the US$0.75 mark), most forecasters do not expect a significant year-over-year appreciation of the dollar in 1987. Strong export growth is expected this year which, combined with lower import growth, will result in a substantial increase in net exports. This is expected to offset an increase in net investment income paid to non-residents so as to generate a decrease in the country's current account deficit.

Because of the strengthening Canadian dollar, the Bank of Canada allowed interest rates to fall early in 1987. Interest rates should continue to fall slightly in the first six months of this year and, on average should be about one percentage point lower than in 1986. Inflation is expected to average about 4.5 percent in 1987.

Real increases in the level of Canadian production will require additional workers. Employment growth of about 2 percent is expected in 1987 which, combined with a slightly lower rate of increase in the labour force, will bring the unemployment rate down to about 9.3 percent.

IV. AN OVERVIEW OF THE NEWFOUNDLAND AND LABRADOR ECONOMY

The Newfoundland and Labrador economy may be best described as a primary resource based economy. Today, as in the past, the harvesting of fish and timber along with the extraction of minerals comprise the cornerstone of the Province's economy.

The output of the goods producing sector accounted for 35 percent of total Gross Domestic Product in the Province during 1985. Table IV.1 outlines the composition of the goods producing sector and the distribution of Gross Domestic Product (GDP) attributed to the Province's goods industries in 1985.

As illustrated in Table IV.1, the harvesting and processing of fish and timber along with the extraction of minerals gives rise to over 50 percent of the output of the goods producing sector. The linkages between the Province's natural resources and the manufacturing industry are also demonstrated in this table. The processing of fish and the production of newsprint accounted for 73.4 percent of total manufacturing GDP in 1985.

Table IV.1

THE NEWFOUNDLAND AND LABRADOR GOODS PRODUCING SECTOR
1985 GROSS DOMESTIC PRODUCT BY INDUSTRY
AT FACTOR COST (constant 1981 dollars)

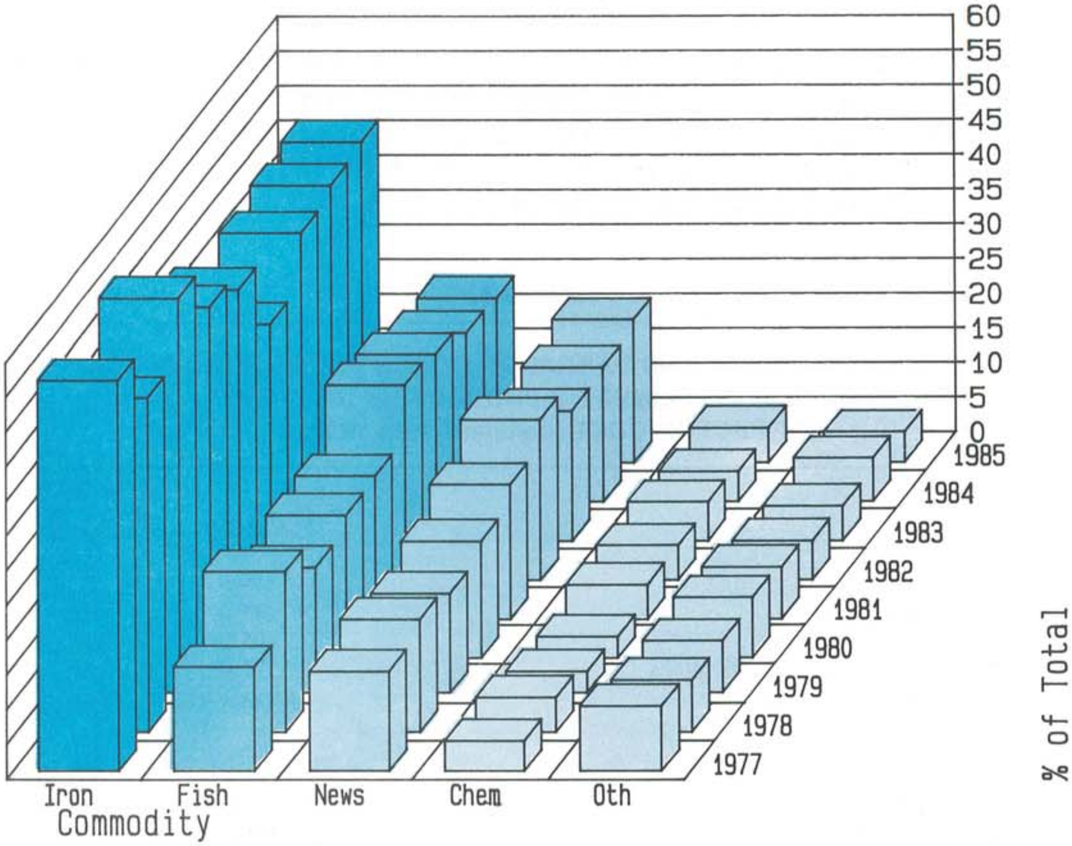
	$ Millions	Percent of Total
Primary:		
Agriculture	19.5	1.3
Forestry	45.0	3.0
Fishing and Trapping	105.0	6.9
Mining, Quarries and Oil Wells	375.0	24.7
Total Primary	544.5	35.9
Manufacturing:		
Fish Products	125.0	8.3
Pulp and Paper Products	165.0	10.9
Other Manufactured Products	105.0	6.9
Manufacturing	395.0	26.1
Construction	350.0	23.1
Total Electric Power & Water Utilities	226.0	14.9
TOTAL GOODS PRODUCING SECTOR	1,515.0	100.0

Source: Newfoundland Statistics Agency and Economic Research and Analysis Division, Cabinet Secretariat.

Almost all the newsprint, minerals, fish and fish products produced by Newfoundland and Labrador industries are exported. Diagram IV.1 highlights the relative distribution of the Province's total exports in each year from 1977 to 1985. For example, in 1985 iron ore contributed 45 percent of the total value of exports, fish products and newsprint contributed about 23 and 20 percent respectively, while the balance was made up of chemicals and other exports. It is clear that in each year, of the total value of goods shipped outside the Province, iron ore, fish, and newsprint account for the highest proportion of exports.

Diagram IV.1

DISTRIBUTION OF NEWFOUNDLAND & LABRADOR EXPORTS TO FOREIGN COUNTRIES BY COMMODITY, 1977-1985



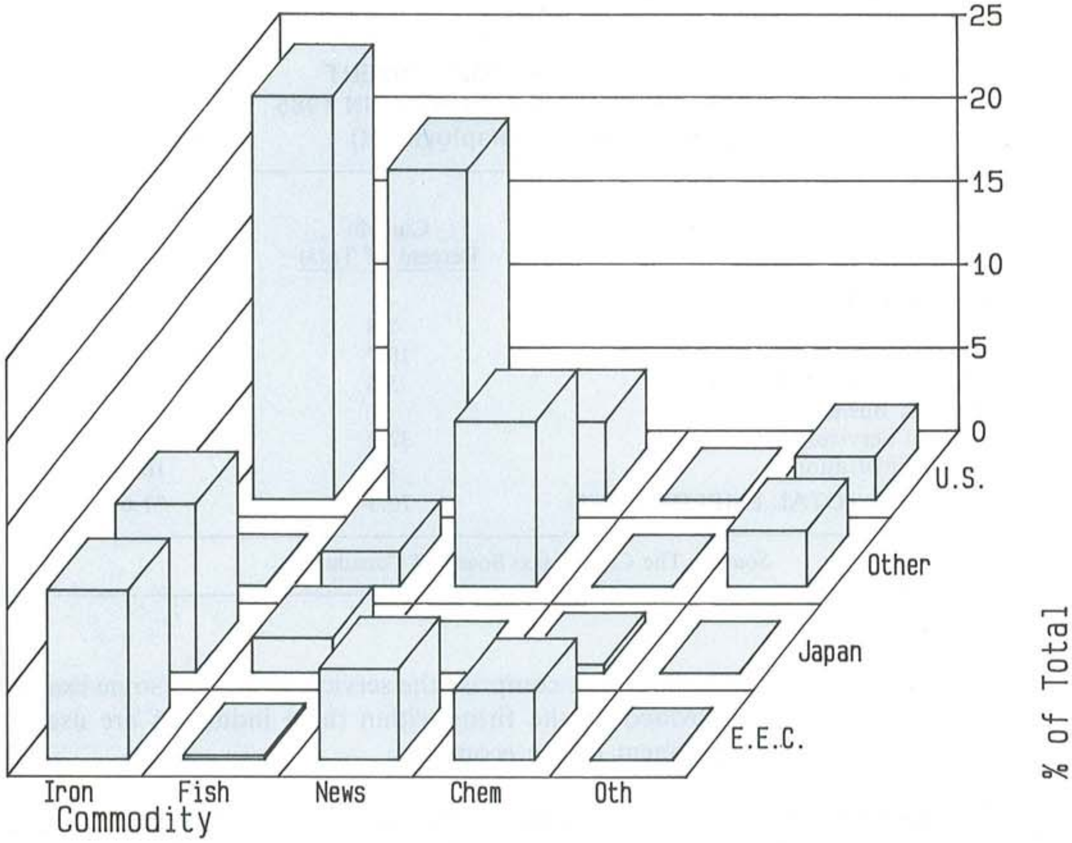
Source: Based on Statistics prepared by Newfoundland Statistics Agency from Statistics Canada Special Tabulations; Department of Energy, Mines and Resources Canada, Mineral Policy Sector, Internal Report; Canadian Iron Ore Industry Statistics, 1982, 1983.

The Newfoundland and Labrador economy is linked to the economies of other countries as a result of its natural resource based exports. Diagram IV.2 highlights some of the Province's most important export markets in 1984, and illustrates the proportion of total exports shipped by country. For example, about 40 percent of total exports in 1984 were iron ore, whereas iron ore shipped to Japan accounted for about 8 percent of total exports. At the same time, about 50 percent of total exports were shipped to markets in the United States. The most important export to the United States was iron ore at about 23 percent of all exports followed by fish products at about 18 percent of total exports. Exports of other products to the United States (about 8 or 10 percent of total exports in 1984) included newsprint and other products.

The United States, Japan, and the European Economic Community (EEC) were important markets for iron ore, fish and newsprint in 1984. Exports to other markets in 1984 included shipments of newsprint to China and shipments of non-metallic minerals to India. While the relative importance of these export markets varies from year to year, the United States has been our most important customer for many years. The ties between the economy of Newfoundland and Labrador and foreign economies through our exports has caused the economic performance of the Province to rise and fall in unison with that of foreign economies.

Diagram IV.2

MAJOR EXPORT MARKETS OF NEWFOUNDLAND & LABRADOR BY COMMODITY AND VALUE, 1984



Source: Based on Statistics Tabulated by the Newfoundland Statistics Agency from Statistics Canada Special Tabulations.

Approximately 45 percent of the output of the goods producing sector is accounted for by the agriculture, construction, and electric power and water utilities industries as well as the 'other' manufacturing component of the manufacturing industry. The output of these industries is primarily for consumption within the Province. The construction industry meets the housing and capital infrastructure requirements of the economy. The electric power and water utilities provide electricity and water supplies. Goods such as beverages, food stuffs, ship building and concrete are provided by the 'other' manufacturing industries. Agriculture is not large in Newfoundland and Labrador but the food it produces is largely for consumption within the Province.

In 1985, the proportion of GDP accounted for by the service sector was approximately 65 percent at the national level. The proportion varied across provinces, from a low of 51.2 percent in Alberta to a high of 73.5 percent in Prince Edward Island. Newfoundland and Labrador fell almost midway between the lowest and the highest at 60.3 percent.

The distribution of employment within the service sector of the Province and of Canada is also similar, as illustrated in the table below.

Table IV.2

DISTRIBUTION OF EMPLOYMENT BY SERVICE SECTOR INDUSTRY IN 1985 (percent of total employment)

	Canada Percent of Total	Newfoundland & Labrador Percent of Total
Transportation, Communication & Other Utilities	7.8	8.5
Wholesale & Retail Trade	18.7	18.0
Finance, Insurance & Real Estate	5.6	2.8
Community, Business & Personal Services	32.2	31.8
Public Administration	7.1	10.2
PERCENT OF TOTAL EMPLOYMENT	70.3	71.6

Source: The Conference Board of Canada.

An examination of the industries that comprise the service sector and some examples of the services and products provided by the firms within these industries are useful in understanding this essential component of the economy.

Table IV.3 reveals that the types of services offered by the Transportation, Communication and Other Utilities industry include transportation by air, road, water and rail. This industry is dominated by the transportation component and in 1986 it was estimated that approximately 16,000 persons were employed in this industry on an annual average basis. The size of the workforce in this industry is not surprising given the number of workers required to handle the large volume of goods that move to, from and within the Province by truck, rail and ship. In addition, many workers are required to facilitate the movement of people by air and land transport in a modern economy.

The Wholesale and Retail Trade industry is the second largest component of the service sector in terms of employment. Firms within this industry provide consumer goods, food, clothing and many other products essential in Newfoundland and Labrador.

Table IV.3

SERVICE SECTOR INDUSTRIES AND THE SERVICES AND PRODUCTS PRODUCED

Industry Division	Illustrative Types of Services	1986 Annual Average Employment
Transportation, Communication & Other Utilities	Air, Railway, Road and Water Transportation Broadcasting, Telephone, Electric Power	16,000
Wholesale & Retail Trade	Selling of Consumer Goods, Products, Food, Clothing, Appliances, Building Supplies, Automobiles, etc.	32,000
Finance, Insurance & Real Estate	Banking, Insurance & Real Estate Services	5,000
Community, Business & Personal Services	Lawyers, Accountants, Teachers, Doctors Nurses, Social Workers, Hospital Workers	56,000
Public Administration	Municipal, Provincial and Federal Levels of Government	20,000

Source: Standard Industrial Classification (1980) and Statistics Canada, Catalogue 71-001.

The performance of both the Transportation, Communication and Other Utilities industry and the Wholesale and Retail Trade industry are closely related to the level of economic activity in the goods producing sector. For example, an increase in fish landings will cause an increase in the number of persons required to process and ship the product. Furthermore, additional supplies will be required by fishermen, processors and transport companies to support the increased level of activity. This increased demand for services by the goods sector, along with the additional income generated in both sectors, will stimulate an increase in the output of the Transportation, Communication and Other Utilities and the Wholesale and Retail Trade industries. These elements of the service sector tend to move in harmony with the goods producing sector.

Examples of the types of services provided by the Community, Business and Personal Services and Public Administration industries are also provided in Table IV.3. Increases in the output of these industries are less directly related to the performance of the goods producing sector. For example, the number of teachers and doctors employed by institutions within the Community, Business and Personal Service industry, or the number of police officers employed by agencies within Public Administration will vary little from one year to the next since these services are required on an ongoing basis and are primarily related to demographic and social factors.

These insights into the structure of the economy of Newfoundland and Labrador provide a context within which changes in performance from year to year can be understood. An understanding of the current structure of the Provincial economy provides a useful framework for reviewing the performance of the economy in 1986 and the outlook for 1987.

V.0 PRIMARY AGRICULTURE

The agriculture industry accounted for 1.3 percent of Gross Domestic Product (GDP) in the Province's goods producing sector in 1985 and 0.5 percent of total GDP. Although this industry makes a relatively small contribution to the Province's GDP, it makes a significant contribution to the rural economy and reduces the Province's dependence on imported agricultural products. The output of this industry is mainly for domestic consumption, however, a small proportion of agricultural output, such as blueberries, is exported to markets outside the Province. Employment in agriculture has been fairly stable over the past few years providing about 1,500 person years of employment. Since this industry has a large seasonal component, annual average statistics underestimate the number of **jobs** supported by this industry.

The agriculture industry is linked to the Province's manufacturing industry through the provision of raw material inputs for food industries such as abattoirs, meat packing and dairy products. These secondary processing activities are discussed in Section V.4.3 of this report.

In 1983, the most recent year for which data are available, there were 380 farms in the Province. Approximately 23 percent of these farms had sales in excess of $100,000. As illustrated in Table V.0.1 below, livestock and livestock products are much more important to farmers in the Province, in terms of cash receipts, than are field crops. The main agricultural products in the Province are poultry, eggs, dairy products and hogs which together accounted for about 82 percent of total farm cash receipts in 1986.

Table V.0.1

NEWFOUNDLAND AND LABRADOR
FARM CASH RECEIPTS 1985-1986
(thousands of dollars)

	1985	1986p	Percentage Change
Crops	**5,594**	**5,346**	**-4.4**
Potatoes	830	..	..
Fruit	611	..	..
Vegetables	1,931	..	..
Floriculture & Nursery	2,039	..	..
Other Crops	182	..	..
Crop Insurance Payments	1	..	..
Livestock and Products	**36,864**	**38,611**	**4.7**
Cattle	1,381	1,181	-14.5
Calves	62	97	56.5
Hogs	4,178	4,536	8.6
Sheep, Lambs & Wool	65	88	35.4
Dairy Products	9,449	11,108	17.6
Poultry	11,842	12,026	1.6
Eggs	9,050	8,686	-4.0
Fur	474	507	7.0
Other Livestock	363	382	5.2
Other receipts and Supplementary Payments	688	432	-36.2
Total Cash Receipts	43,146	44,389	2.9

p = preliminary .. Not available. *Source:* Statistics Canada.

In 1986, total farm cash receipts increased by 2.9 percent to $44.4 million. A decline in crop receipts was offset by increased receipts for livestock and livestock products. Dairy products, one of the larger components of the industry, experienced a strong gain of 17.6 percent in total receipts and hog producers benefited from higher prices which saw cash receipts increase by 8.6 percent in 1986. The blueberry industry had a good year in 1986 due, in part, to production problems in other parts of Canada and Europe.

Farm cash receipts are expected to increase moderately in 1987. Production of chicken, eggs and hogs should remain at 1986 levels. An expected increase in the breeding stock of hogs in the United States, however, may result in a decline in hog prices received by the Province's farmers. Nevertheless, prices for feed grain, the largest single cost item for livestock producers, are expected to remain near 1986 levels.

V.1 MINING

The most important minerals produced by the Province's mining industry during 1986 in order of the value of shipments are listed in the table below. Historically, iron ore has been the most important mineral extracted and last year it comprised about 92 percent of the total value of shipments. Estimated annual average employment in the mining industry during 1986 was in excess of 3,200 persons. The Province's two iron ore companies, the Iron Ore Company of Canada (IOCC) in Labrador City and Wabush Mines in Wabush, Labrador, accounted for about 65 percent of total industry employment.

Table V.1

MINERALS EXTRACTED IN NEWFOUNDLAND AND LABRADOR DURING 1986 IN ORDER OF CONTRIBUTION TO TOTAL SHIPMENTS

Mineral	Mine Location	Value of Shipments (millions)
1. Iron Ore	Labrador City, Wabush	702.5
2. Asbestos	Baie Verte	18.0
3. Zinc	Daniel's Harbour	8.7
4. Gypsum	Flat Bay	5.5
5. Silica	Dunville	1.6
6. Pyrophyllite	Manuels	1.3
7. Other		27.0
TOTAL Value of Shipments		$764.2

Source: Economic Research & Analysis Division, Cabinet Secretariat; based on data provided by the Provincial Department of Mines.

Note: Value of shipments are preliminary.

The total value of shipments fell last year from $869.5 million in 1985 to $764.2 million, a decrease of 12.1 percent. This was attributable mainly to a decrease of 9.3 percent in the value of iron ore shipments and the closure of the zinc mine in Daniel's Harbour.

The IOCC operated all year and employed about 1,500 persons. Efforts to improve productivity continued and the installation of two wet grinding mills was completed at a cost of $20 million. The new technology will reduce the cost of producing iron ore pellets, mainly due to a reduction in energy requirements. This more efficient process will assist the industry in remaining competitive and viable in the future.

Production by IOCC in 1986 included a new product called fluxed pellets. A supply of dolomite and limestone is required as an input to the production of this product. The dolomite was supplied by a new quarry at Albert Lake which is close to the IOCC plant. About 30 people were employed at the quarry and approximately 100,000 tonnes of the material were mined during the summer.

Wabush Mines was closed for 10 weeks between July and September and recorded a decline in the value of shipments of approximately 22 percent. The primary reason for closure was that two of the company's co-owners, LTV Steel and Wheeling-Pittsburgh were unable to take their share of production in 1986. This fall in output contributed significantly to the decline in total industry output. Nonetheless, 570 persons were employed at Wabush Mines, down from 617 in 1985. Recovery of iron ore from the material mined is presently about 62 percent. Research under the Mineral Development Agreement is currently being carried out to improve the iron recovery from the Wabush ore. It is hoped that this work will improve recoveries to about 75 percent in the near future.

Baie Verte Mines Inc., a wholly owned subsidiary of Transpacific Resources Limited of Toronto, is the sole producer of asbestos in the Province. After an extended Christmas shutdown, milling operations started on March 10, 1986. The company operated for 10 weeks before closing again for inventory adjustment. Production resumed on July 20 and the operation continued throughout the year although markets were limited and prices weak. The product was shipped mainly to Asia with India being the largest single customer in 1986. The value of shipments in 1986 was virtually unchanged from 1985, however, employment increased slightly from 301 in 1985 to 331 persons in 1986. To ensure the continued viability of the asbestos mine, the Provincial Government decided to provide $12 million over two years, by way of an equity investment, to facilitate the removal of overburden on the West pit. Of this amount, $6 million was provided in 1986 and the remainder will be provided by mid-1987. This investment should place Baie Verte Mines in a very cost competitive position relative to the rest of the Canadian industry.

Newfoundland Minerals in Manuels produces pyrophyllite which is used in making high quality ceramic tiles. The company supplies a plant in Lansdale, Pennsylvania which further processes the product. This mine has deposits sufficient to operate at least to the year 2000. No downtime was incurred in 1986, and all 17 workers were employed throughout the year.

Dunville Mining Company extracts silica which is used as a flux by the ERCO phosphorous plant in Long Harbour. The value of shipments in 1986 was unchanged from 1985 and eight people were employed during the production period, which usually runs from April to November.

ERCO began operating a crushing plant in 1985 which crushes waste material from its phosphorous furnaces to produce slag aggregate for export. In 1986, approximately 160,000 tonnes of crushed slag were produced and shipped, and 240,000 tonnes is forecast for 1987. The product is transported in the same ships which bring phosphate rock to the plant from Florida. This reduces the cost of transporting the slag as these ships might otherwise return to Florida empty.

Flintkote Holdings in Flat Bay extracts gypsum, most of which is exported to wallboard manufacturers in the United States. A small percentage of the product is supplied to Atlantic Gypsum Limited and North Star Cement Limited in Corner Brook for use in the manufacture of wallboard and cement respectively. In 1986, the value of shipments declined by about 10 percent from 1985 due to reduced demand in the United States market. This provides a distorted basis of comparison, however, as 1985 was an exceptionally good year in which the value of shipments increased by 34 percent. If we compare 1986 to 1984, which is considered to be an average year, the value of shipments increased by 21 percent. Annual average employment was 76 persons, down slightly from that recorded in 1984 and 1985 when 82 persons were employed in both years.

On August 22, 1984, BP-Selco announced the discovery of gold near Cinq Cerf Brook on the South Coast of the Province. In 1986 a decision was taken to develop a gold mining and milling complex five kilometres inland from Couteau Bay. Construction of the Hope Brook mine began in September 1986 and capital expenditures amounted to approximately $43 million. This was about 30 percent of the $143.9 million required to complete the pre-production phase. The Provincial Government's direct contribution to the project will be $20 million which includes $6 million in the form of a non-repayable grant, a $4 million development loan, and $10 million towards the construction of the main power line. The Federal Government's contribution included a $14 million injection under the Industrial Regional Development program which will be utilized over a three year period starting in 1987. A total of 160 people will find employment in construction related activities by year end.

Production of gold will begin in 1987. It is anticipated that 341,000 tonnes of ore will be processed, producing nearly 28,000 ounces of gold. When the mill becomes fully operational in 1988, 120,000 ounces of gold will be produced annually. By the end of 1987 approximately 126 persons will be employed, 22 of whom will be at the company's head office in Corner Brook. Full employment of 275 will be attained by late 1988.

In 1983 efforts to redevelop the fluorspar deposits at St. Lawrence, which had been inactive since February 1978, began and attracted the interest of Minworth Ltd. of the United Kingdom. In 1984 St. Lawrence Fluorspar Limited was incorporated as a subsidiary of Minworth to redevelop the mine. During 1986, the company completed construction of its mill and development of the mine at the Blue Beach North vein. Milling operations began in early 1987. At peak capacity the plant will be able to process 180,000 tonnes of raw material, producing about 75,000 tonnes of fluorspar annually. In 1987, the company expects to produce about 60,000 tonnes, reaching full capacity in 1988. Most of the product is exported to the United States and Canada, with smaller amounts going to Britain and elsewhere in Europe.

Mineral exploration in Newfoundland and Labrador continued to accelerate, and 1986 was the best year ever, both in terms of claims in good standing and exploration dollars spent. Table V.2 below shows the increasing numbers of claims being established since 1981. In 1985, $12.6 million was invested, including exploration at Hope Brook. In 1986, about $15 million was spent excluding exploration at Hope Brook. Excitement over the prospects of new precious metal finds have intensified with several mining companies indicating significant gold deposits and intentions to resume exploration work early in 1987.

Westfield Minerals Limited have confirmed the existence of significant gold mineralization near Bay D'Espoir. While the size of the deposits is uncertain, results to date are encouraging and further exploration is planned for 1987. Dolphin Exploration Limited has also confirmed the presence of significant gold deposits near Cape Ray. Results to date have been very encouraging and further exploration work and testing will be carried out in 1987.

Interest in other areas of the Province has also been expressed by a variety of mining companies. Several companies have been exploring for precious metals on the West side of White Bay. On the Baie Verte Peninsula, Noranda Mines has been a major player in the search for potential gold deposits. Work to date has been encouraging and further work is expected to continue in all areas.

Table V.2

CLAIMS STAKED AND CLAIMS IN GOOD STANDING NEWFOUNDLAND AND LABRADOR: 1981 to 1986

Year	New Claims Staked	Total Claims in Good Standing December 31
1981	13,661	25,012
1982	4,670	18,517
1983	4,522	15,288
1984	11,048	19,662
1985	15,162	28,461
1986	14,594	31,126

Source: Provincial Department of Mines.

New developments are also a possibility, in particular, the development of limestone deposits on the Port-au-Port Peninsula. Newfoundland Resources and Mining Company is currently examining the possibility of exporting limestone, mainly to the Northeastern United States, to be used as construction material. Another company is exploring the possibility of supplying limestone to IOCC's operations in Labrador for use in the production of fluxed pellets.

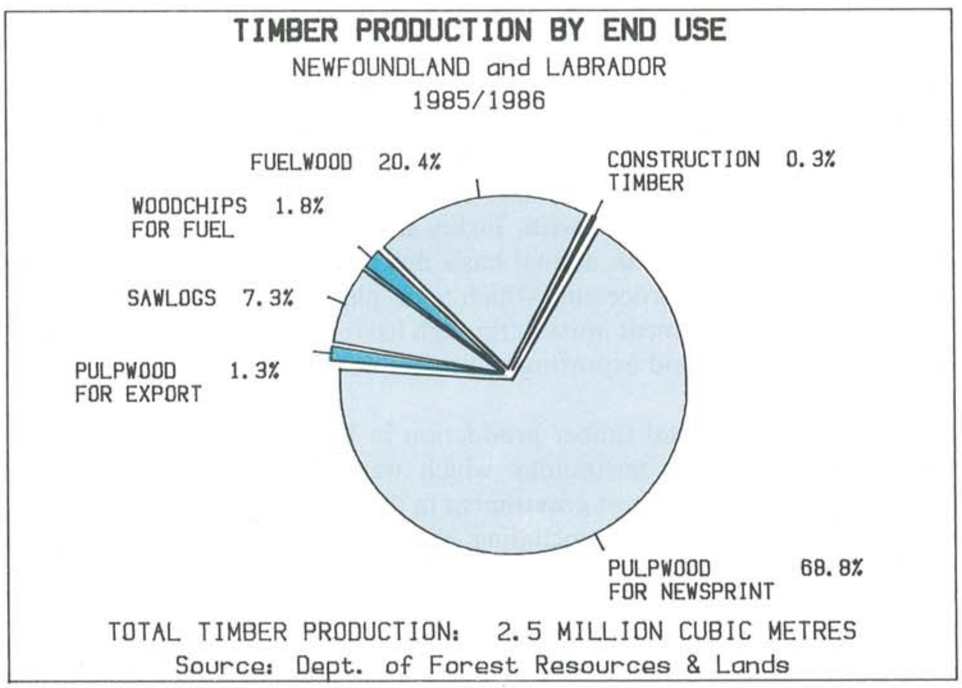
The outlook for the mining industry in 1987 is for a moderate decrease from 1986. The iron ore industry faces uncertain prices and increasing competition in key markets which will result in a fall in the value of shipments. This may be offset somewhat by shipments of gold from Hope Brook and fluorspar from St. Lawrence. Asbestos production is expected to remain stable. All other producers expect an improved year in 1987.

V.2 PRIMARY FORESTRY

Activities in the primary forestry industry, which includes both harvesting and management of the Province's forests, accounted for 3.0 percent of Gross Domestic Product (GDP) in the goods producing sector in 1985 and 1.1 percent of total GDP. Of the approximately 400 municipalities (a municipality may encompass more than one community) in Newfoundland and Labrador, about 80 have a significant number of people employed in primary forestry. Timber harvesting provided an estimated annual average of 1,400 person years of employment in 1986, unchanged from 1985. Since this is largely seasonal employment, annual average employment estimates would understate the number of **jobs** supported by this industry. In addition, this estimate does not include people who harvest wood for their own domestic consumption or those employed in forest management activities.

There were 2.5 million cubic metres of timber harvested throughout the Province during 1985/86. Timber production can be classified by end use (i.e., final product) as illustrated in Diagram V.2.1. Pulpwood, used in the production of pulp and paper, is by far the dominant timber harvesting activity (68.8 percent) followed by domestic fuelwood (20.4 percent). Overall, 76.5 percent of the total timber produced was used as raw material in secondary processing such as pulp and paper, sawmilling and construction timber. The remaining 23.6 percent was burned locally as fuel except for a small amount (1.3 percent) which was exported.

Diagram V.2.1



The majority of all pulpwood harvested in the Province is for secondary manufacturing of newsprint by the Province's three pulp and paper mills. These companies meet their pulpwood requirements through a combination of company logging operations and purchases from private contractors. Production of pulpwood declined by 8.1 percent to 1.7 million cubic metres in 1986 as a result of reduced newsprint production and a pulpwood inventory adjustment by the pulp and paper companies during 1986.

Sawlogs, also used in secondary manufacturing, accounted for 7.9 percent of all timber harvested in 1985/86. The harvesting of sawlogs is concentrated on the Bonavista Peninsula, and in the Central region of the Island from Gambo to Springdale; this is consistent with the concentration of sawmills. The sawlog operations make an important contribution to economic activity in rural areas of the Province, both as a full time and seasonal source of employment and income.

The final category of timber produced for secondary processing is construction timber, representing about 0.3 percent of total timber production in 1985/86. This timber is generally larger dimension and tends to require less processing than sawn lumber. Construction timber is sometimes harvested by fishermen in the off season for wharf construction, and by commercial operators in general.

The remaining 24 percent of timber produced is consumed with little, if any, secondary processing. Timber harvested for fuelwood accounted for 20.4 percent of total timber production in 1985/86. Harvesting is concentrated near population centres and the wood is usually burned domestically by those who harvest it. There are, however, commercial operators who harvest and transport volumes of wood, particularly white birch, to major population centres and sell it to home owners. Domestic fuelwood harvesting and burning represents an important source of economic activity in the Province since it displaces imported fuel oil or other energy. Although little money changes hands relative to the volume of fuelwood harvested, a positive contribution is made through self-employment and household **income-in-kind.**

Pulpwood harvested for export represented 1.3 percent of Provincial timber cutting in 1985/86. Harvesting contractors supply pulpwood to a broker, usually in its debarked form, delivered to an ocean port such as Roddickton, Main Brook, Botwood, Lewisporte, Carmanville, and Bay D'Espoir. Harvesting generally takes place in close proximity to the ports of export. Markets for pulpwood include Italy, Spain, Turkey and Yugoslavia. The volume of pulpwood exported varies considerably on an annual basis due to both wood availability and market requirements. While the only processing which takes place in the Province is the debarking of the pulpwood, local employment impacts through harvesting, processing and transportation are important. A new pulpwood exporting operation was established at Goose Bay in 1986.

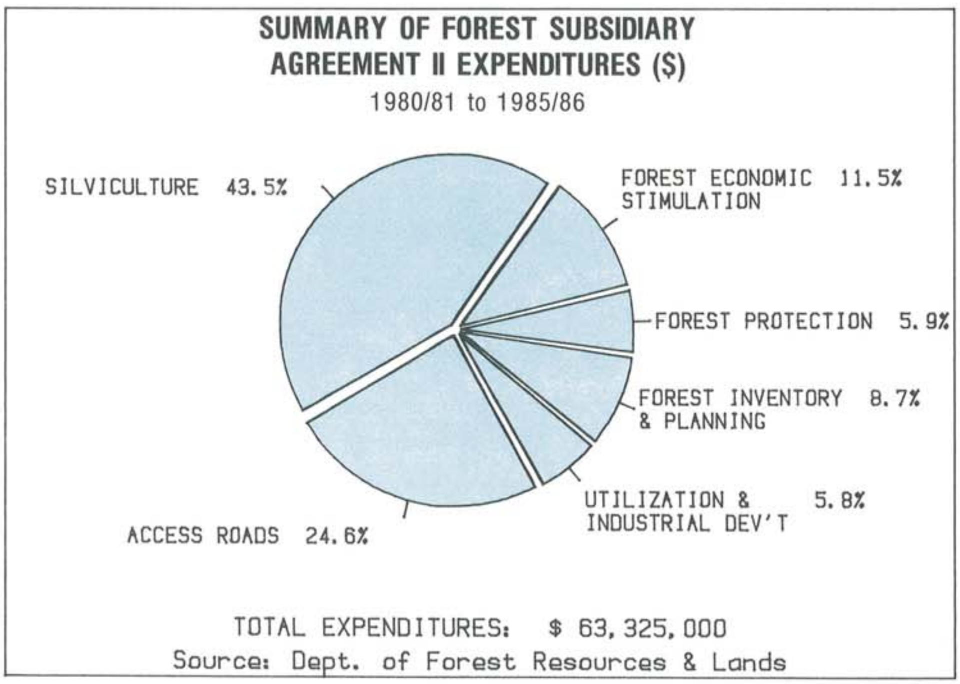
About 1.8 percent of total timber production in 1985/86 was used as woodchips for fuel. This is a relatively new technology which was introduced to the Province on a demonstration basis by both levels of government in the late 1970's. This technology has been adopted by four users in the Province including Abitibi-Price in Grand Falls, the James Paton Memorial Hospital in Gander, the Newfoundland Hardwoods plant in Clarenville, and the Clarenville Vocational School. As the economic viability of woodchips for fuel is closely related to the cost of alternate energy sources, the recent slump in world oil prices has had a negative impact on expansion of this industry, and as such, on related harvesting activities. Nevertheless, for the longer term there is potential for increased use of biomass as fuel.

While there appears to be little room for expansion of timber harvesting based on the existing forest resource, improved utilization techniques and an increased silviculture effort will enhance long term timber supply on the Island. Furthermore, should economic conditions prove favourable, a major new industrial wood user could be established in Labrador in the near future, thus increasing the level of harvesting in the Province substantially.

Forest management is the responsibility of the Province and some of the required funding is provided through Federal-Provincial Economic Regional Development Agreements. There have been three consecutive forestry agreements since 1974 providing for total expenditures of $175 million.

The forestry agreement which expired March 31, 1986 provided $63.3 million which was allocated between six major programs as indicated in Diagram V.2.2. Some 55 percent of the total was spent on a silviculture and a Forest Economic Stimulation Program. These programs provided for activities such as seedling production, tree planting, pre-commercial thinning, and the rehabilitation of non-productive timber stands. These activities were designed to enhance the productivity of the resource through accelerated forest growth. The silviculture program was concentrated in areas important to the pulp and paper and sawmilling industries. The pulp and paper industry contributed an additional $6.2 million towards the program on their land. The labour intensive Forest Economic Stimulation Program was more widely spread across the Province.

Diagram V.2.2



The Access Road Program, which accounted for 24.6 percent of total expenditures, provided for the construction of 690 kilometres of forest access roads. These roads were built into areas which required immediate timber harvesting and silviculture operations. The remaining 20.4 percent of expenditures were used for planning the management, protection, utilization and development of the forest resource.

The agreement generated a total of 12,230 person months of employment, and up to 2,700 jobs annually. The experience gained by both Government and the pulp and paper industry in delivering a large scale forest management program will be invaluable in the future.

The latest Forest Resource Development Agreement signed in March 1986 provides $48 million to continue many of the initiatives carried out under the previous agreement. This agreement covers the period 1986 to 1990, and the majority of funds will be allocated to direct resource management activities.

The outlook for the primary forestry sector for 1987 is positive. The newsprint industry is expected to increase production and, since the pulpwood inventory adjustment in 1986 is completed, there should be a corresponding increase in pulpwood production. Growth in the level of domestic fuelwood consumption may be slightly tempered by continued low oil prices, but production should at least equal 1986 levels. Demand for sawn lumber is expected to remain stable and contracts to supply export pulpwood should be firm. The level of forest management activities will increase next year in response to increased seedling availability. Overall, the primary forest industry should have a good year in 1987 with real growth in the order of six percent.

V.3 PRIMARY FISHING

The Newfoundland and Labrador coastline is bordered by some of the richest fishing grounds in the world. It is this resource that led to the initial settlement of the Island in the seventeenth century. Today, as in the past, the fishery forms the economic mainstay of the Province's economy.

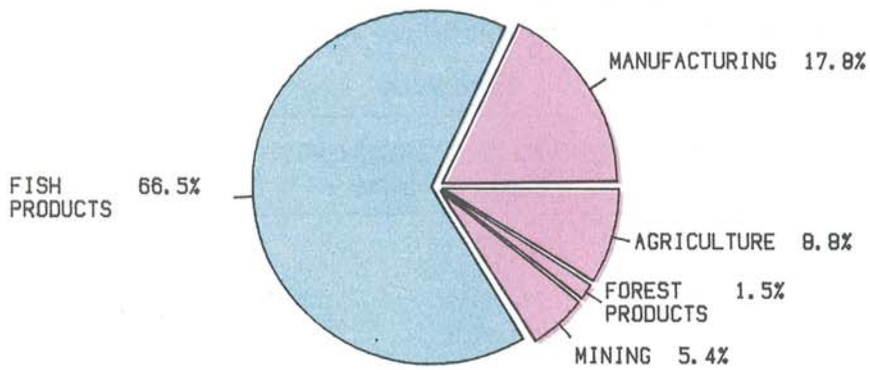
The prominence of the fishery in earlier years is demonstrated in Diagram V.3.1. In 1884 the most important fish product was salt cured fish and the fishing industry accounted for 66.5 percent of the Dominion's economy.

Since the turn of the century, the development and creation of new industries led to economic diversification in the Province. Early in the 1900's pulp and paper production began, expanding both the forestry and manufacturing industries. The extraction of iron ore and the discovery of other minerals increased the importance of the mining industry. As these industries expanded and the economic base of the economy grew, the relative size of the fishery declined. In 1984, 100 years later, the fishery accounted for 20.1 percent of a much larger and much more well developed economy. Diagrams V.3.1 and V.3.2 compare the output of the primary resource industries in 1884 and 1984 and reflect the structural shifts which have occurred within the resource industries of the economy. Although the relative size of the fishery has diminished with time, the fishing industry remains one of the principal generators of employment and incomes, both directly and indirectly.

Diagram V.3.1

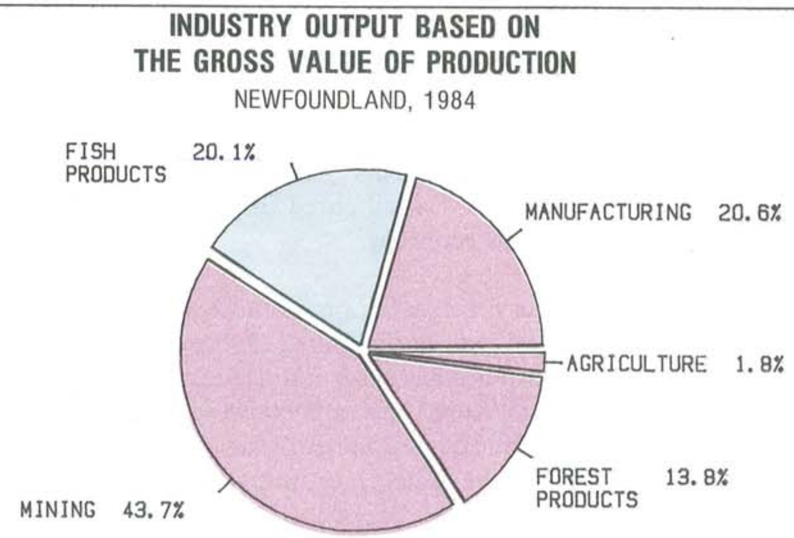
INDUSTRY OUTPUT BASED ON THE GROSS VALUE OF PRODUCTION

NEWFOUNDLAND, 1884



Source: Based on David Alexander, Atlantic Canada and Confederation: Essays in Canadian Political Economy, E.W. Sager, L.R. Fischer, and S.O. Pierson (compliers), University of Toronto Press, 1983, Table 3, p. 58

Diagram V.3.2



Note: Manufacturing excludes Fish Products, Pulp & Paper, and Lumber.
Source: Statistics Canada catalogue 21-603, 26-202, 31-201, 36-204 and Department of Fisheries and Oceans Canada

The contribution to regional and national landings of fish by the Newfoundland and Labrador fishing industry is considerable as illustrated in Table V.3.1 below. In 1985, cod landed in Newfoundland and Labrador accounted for 56.8 percent of the total in the Atlantic Region and 56.5 percent of the total in Canada. In Canada, the total landed value of all cod during 1985 was over $188 million. Furthermore, the Province accounted for 50.6 percent of all groundfish landings in the Atlantic region and 46.9 percent of all groundfish landings in Canada. The total landed value of all groundfish in Canada during 1985 was over $339 million. In addition, a substantial portion of all cod and groundfish landed in other Canadian provinces is caught in waters off the coast of Newfoundland and Labrador.

Table V.3.1

LANDINGS OF COD AND GROUNDFISH IN 1985*
(metric tonnes)

	Newfoundland and Labrador	Percent of Total Regional Landings	Atlantic Region	Percent of Total Canadian Landings	Canada
Total Cod Landings	271,380	56.8%	478,000	56.5%	480,350
Total Groundfish Landings	387,129	50.6%	765,000	46.9%	826,150

**All figures are preliminary.*

Source: Canadian Fisheries, Statistical Highlights, 1985. FS 66-2/1985. Department of Fisheries & Oceans. Economic Research and Analysis, Cabinet Secretariat.

The importance of the fishery to Gross Domestic Product in the goods producing sector of the Newfoundland and Labrador economy is summarized in Table V.3.2 below. In 1985 primary fishing and fish processing made a combined contribution of 15.2 percent to Gross Domestic Product in the Province's goods producing sector and 2.4 percent of total GDP in the Province.

Table V.3.2

THE NEWFOUNDLAND AND LABRADOR GOODS PRODUCING SECTOR 1985 GROSS DOMESTIC PRODUCT BY INDUSTRY AT FACTOR COST (constant 1981 dollars)

	$ Millions	Percent of Total
Primary:		
Agriculture	19.5	1.3
Forestry	45.0	3.0
Fishing and Trapping	105.0	6.9
Mining, Quarries and Oil Wells	375.0	24.7
Total Primary	544.5	35.9
Manufacturing:		
Fish Products	125.0	8.3
Pulp and Paper Products	165.0	10.9
Other Manufactured Products	105.0	6.9
Total Manufacturing	395.0	26.1
Construction	350.0	23.1
Electric Power & Water Utilities	226.0	14.9
TOTAL GOODS SECTOR	1,515.0	100.0

Source: Newfoundland Statistics Agency and Economic Research and Analysis Division, Cabinet Secretariat.

The primary fishery is one of the largest employers in the Province providing approximately 13,000 person years of employment in 1986. In 1985, the most recent year for which data are available, there were 13,000 registered full-time fishermen of which approximately 2,000 were offshore fishermen. In addition, there were in excess of 13,000 registered part-time fishermen who derived a portion of their annual income from the fisheries. Therefore, annual average employment figures understate the importance of this industry to the Province in terms of the number of jobs it supports. When primary fishing and fish products manufacturing are considered together, the fishing industry accounted for 43.5 percent of annual average employment in the goods producing sector in 1986 and a **significantly greater percentage of jobs.** (The limitations of annual average employment statistics are discussed in Section VII of this report).

Approximately 800 communities in Newfoundland and Labrador depend to some extent on the fishery. For the most part, inshore fishermen provide fish to seasonally operated inshore plants whereas the offshore trawler fleets supply integrated fish companies with raw material on a year round basis. The inshore harvesting patterns largely reflect the migration behaviour of codfish which come inshore to feed on capelin and other fish species during the summer and move offshore during the fall. This is especially true of the large Northern Cod Stock (2J+3KL) and the St. Pierre Bank cod stock (3PS).

In 1984, the most recent year for which data by statistical area are available, there were in excess of 16,000 fishing vessels registered in the Province. Of these, there were in excess of 14,600 vessels of 0-34 feet in length, the majority being in the 17-21 foot category and used primarily by fishermen operating near the coastline. In addition, there were over 1,300 vessels of 35-64 feet in length which operate primarily in the nearshore. In 1984 there were 90 vessels registered in the Province of 100 feet and greater in length. In 1985, following the restructuring of the deepsea fishery, the Province's two largest fish companies, Fishery Products International and National Sea Products operated 82 licensed vessels of 100 feet and greater in length; these companies own and operate both processing and harvesting capabilities. While most of the fish processed by these two companies is supplied by the offshore sector, both companies also own processing plants which are supplied by the inshore, nearshore and midshore sectors; the bulk would be supplied by the inshore fishery.

There were 271,380 metric tonnes of codfish landed in the Province during 1985. Of this, approximately 59 percent was harvested from the North West Atlantic Fisheries Organization (NAFO) division 2J+3KL, commonly referred to as the Northern Cod Stock. Approximately 39 percent of the harvest from the Northern Cod Stock was accounted for by the inshore fishery, approximately 49 percent by the offshore fishery and the remaining 12 percent was accounted for by the nearshore and midshore sectors.

There are fifteen 'statistical' areas around the Province's coastline and these are indicated by the singular, upper case letters on Map V.3.1 below. The NAFO divisions are indicated by the numeric and alphabetic combinations such as 3K and 3L which are part of the Northern Cod Stock. The spatial distribution and concentration of fishing effort and catch are illustrated in Tables V.3.3, V.3.4 and V.3.5 in the most recent year for which these data are available. Table V.3.6 consolidates these statistics and draws on information from Section V.4.2 pertaining to processing capability in order to highlight significant areas of concentration.

MAP V.3.1

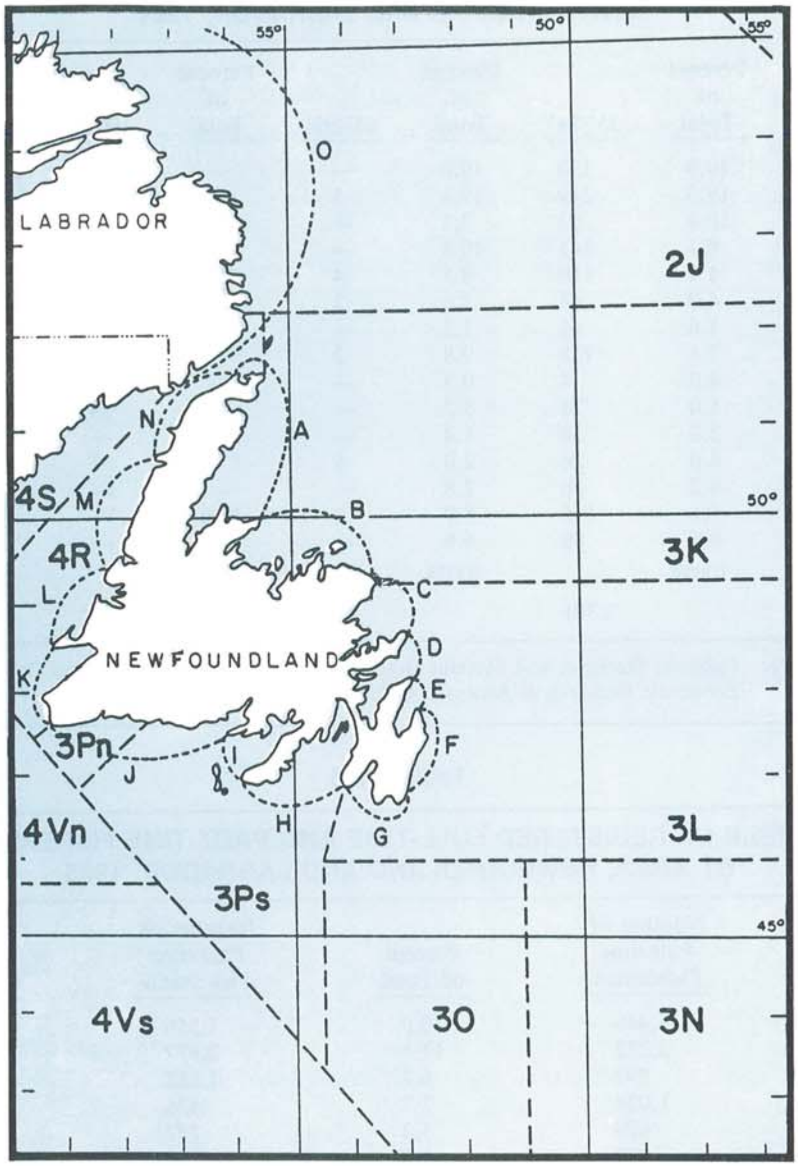


Table V.3.3 below reveals a heavy concentration of vessels in the 0-34 foot range along the Northeast Coast of the Province (statistical areas A, B, C and D), Placentia Bay (area H), the Great Northern Peninsula (area N) and the Labrador Coast (area 0). Vessels of this length primarily operate near the coastline and form the basis of the inshore fishery. The high concentration of full-time fishermen in these same areas is illustrated in Table V.3.4 below. Some concentration of vessels 35-64 feet in length is also evident in the table. Vessels greater than 100 feet are registered primarily in areas G and J along the South Coast. In the case of trawlers, however, the area of vessel registration is not a good indicator of concentration of fishing effort.

Table V.3.3

FISHING VESSEL REGISTRATION BY AREA, NEWFOUNDLAND AND LABRADOR, 1984

Area	0'-34'	Percent of Total	35'-64'	Percent of Total	65'-99'	Percent of Total	100'+	Percent of Total	Total
A	1,554	10.6	130	10.0	—	—	—	—	1,684
B	2,860	19.5	249	19.1	3	17.6	2	2.2	3,114
C	1,589	10.9	93	7.1	—	—	3	3.3	1,685
D	891	6.1	141	10.8	—	—	—	—	1,032
E	784	5.4	110	8.5	4	23.6	1	1.1	899
F	581	4.0	47	3.6	2	11.8	6	6.6	636
G	232	1.6	41	3.2	—	—	39	43.3	312
H	1,034	7.1	128	9.8	2	11.8	4	4.4	1,168
I	722	4.9	4	0.3	—	—	5	5.5	731
J	732	5.0	74	5.7	—	—	29	32.2	835
K	412	2.8	18	1.4	—	—	—	—	430
L	582	4.0	26	2.0	3	17.6	1	1.1	612
M	608	4.2	36	2.8	—	—	—	—	644
N	754	5.1	116	8.9	3	17.6	—	—	873
O	1,288	8.8	88	6.8	—	—	—	—	1,376
		100%		100%		100%		100%	
TOTAL	14,623		1,301		17		90		16,031

Source: Fisheries Statistics and Systems Branch, Department of Fisheries and Oceans. Economic Research & Analysis, Cabinet Secretariat.

Table V.3.4

NUMBER OF REGISTERED FULL-TIME AND PART-TIME FISHERMEN BY AREA, NEWFOUNDLAND AND LABRADOR, 1985

Area	Number of Full-time Fishermen	Percent of Total	Number of Part-time Fishermen	Percent of Total
A	1,446	10.9	1,556	11.7
B	2,272	17.1	2,977	22.4
C	897	6.7	1,112	8.4
D	1,024	7.7	836	6.3
E	699	5.2	707	5.3
F	699	5.2	454	3.4
G	353	2.6	189	1.4
H	1,069	8.0	867	6.5
I	776	5.9	650	4.9
J	741	5.6	503	3.8
K	329	2.5	346	2.6
L	448	3.4	595	4.5
M	461	3.5	745	5.6
N	932	7.0	1,018	7.7
O	1,178	8.8	736	5.5
		100%		100%
TOTAL	13,324		13,291	

Source: Fisheries Statistics and Systems Branch, Department of Fisheries and Oceans and Economic Research and Analysis, Cabinet Secretariat.

Table V.3.5 below, which is consistent with previous trends in the fishery, demonstrates that groundfish landings as a percentage of total landings are heavily concentrated along the Northeast Coast, Placentia Bay in particular, and the Southwest Coast of the Island.

Pelagic and estuarial species, such as capelin and mackerel, are concentrated along the Northeast Coast, Trinity and Conception Bays in particular, and the Southwest portion of the Island. Landings of Molluscs and Crustaceans, such as shrimp and crab, are heavily concentrated along the Northeast and Northwest Coasts.

Table V.3.5

FISH LANDINGS BY SPECIES AND AREA
NEWFOUNDLAND AND LABRADOR: 1985
(metric tonnes - round weight)

Area	Groundfish	Percent of Total Groundfish Landings	Pelagic	Percent of Total Pelagic Landings	Molluscs and Crustaceans	Percent of Total Molluscs & Crustaceans Landings
A	20,916.9	5.4	3,453.6	7.1	4,482.9	24.5
B	35,124.5	9.0	4,999.1	10.2	3,032.8	16.6
C	14,902.5	3.8	3,682.6	7.5	1,628.6	8.9
D	56,404.0	14.5	12,089.1	24.8	223.3	1.2
E	12,384.8	3.2	12,165.7	24.9	1,713.1	9.4
F	32,531.8	8.4	58.2	0.1	2,450.0	13.4
G	22,356.6	5.8	1,054.2	2.2	457.4	2.5
H	60,183.8	15.5	230.6	0.5	366.1	2.0
I	27,633.2	7.1	41.5	0.1	367.1	2.0
J	46,516.8	12.0	179.8	0.4	75.7	0.4
K	3,085.6	0.8	1,470.1	3.0	186.3	1.0
L	3,645.3	0.9	5,484.7	11.2	417.6	2.3
M	9,500.1	2.4	885.3	1.8	1,318.8	7.2
N	25,180.3	6.5	2,143.9	4.4	1,427.4	7.8
O	18,308.6	4.7	900.8	1.8	167.1	0.9
		100.0%		100.0%		100.0%
TOTAL	388,674.8		48,839.2		18,314.2	

Note: These figures include offshore trawler catches which are landed in these statistical areas but which may have been harvested from a different area.

Source: Fisheries Statistics and Systems Branch, Department of Fisheries and Oceans and Economic Research and Analysis, Cabinet Secretariat.

Table V.3.6 below summarizes the location of fish processing plants and the registration of inshore boats and full-time fishermen in terms of significant concentrations by statistical area. The table also highlights their importance to the Northeast Coast (areas A, B, C and D), Placentia Bay (area H), the Great Northern Peninsula (area N) and the Labrador Coast (area 0). The concentration of catch by type of species is also highlighted in Table V.3.6. The significance chosen was essentially the median percentage of totals.

Table V.3.6

CONSOLIDATED STATISTICS

Area	Processing Plants (1986) 6.5% + of Total	Inshore Boats (1984) 7% + of Total	Full-Time Fishermen (1985) 6.5% + of Total	Catch (1983) Groundfish 6% + of Total	Catch (1983) Molluscs 7% + of Total	Catch (1983) Pelagics 7% + of Total
A	7.0	10.6	10.9	—	24.5	7.1
B	13.5	19.5	17.1	9.0	16.6	10.2
C	8.0	10.9	6.7	—	8.9	7.5
D	8.5	—	7.7	14.5	—	24.8
E	12.0	—	—	—	9.4	24.9
F	9.0	—	—	8.4	13.4	—
G	—	—	—	—	—	—
H	6.5	7.1	8.0	15.5	—	—
I	—	—	—	7.1	—	—
J	—	—	—	12.0	—	—
L	—	—	—	—	—	11.2
M	—	—	—	—	7.2	—
N	7.0	—	7.0	6.5	7.8	—
0	10.0	8.8	8.8	—	—	—
% of Total	81.5	56.9	66.2	73.0	87.8	85.7

Source: Economic Research and Analysis Division, Cabinet Secretariat.

Although cod landings were down along the Northeast Coast, an improved midshore and offshore sector resulted in an overall improvement in total cod landings during 1986. Both the value and the volume of fish landings increased significantly in 1986 compared with 1985 and this is summarized in Table V.3.7 below. Total groundfish landings also increased in 1986.

Table V.3.7

LANDINGS AND LANDED VALUE OF COMMERCIAL SEAFISH NEWFOUNDLAND & LABRADOR TO DECEMBER 31, 1986

	Quantity to Date (metric tonnes)		Value to Date (thousands)	
	1985	1986	1985	1986
Cod	271,380	282,330	91,916	122,592
Groundfish — Total	387,129	401,416	121,805	163,660
Capelin	35,412	64,788	6,016	20,867
Pelagic & Other Fish — Total	64,114	92,335	13,311	29,658
Molluscs & Crustaceans — Total	17,941	17,380	32,477	29,817
GRAND TOTAL	469,184	511,131	167,593	223,135

Note: Figures for 1986 are preliminary and have been adjusted to reflect as yet untabulated landings for the West Coast. Figures for block and fillet production indicate substantial gains for the region. Adjustments were made in consultation with officials of the Department of Fisheries and Oceans.

Source: Department of Fisheries and Oceans, Newfoundland Statistics Agency and Economic Research and Analysis, Cabinet Secretariat.

Box V.3.1. THE INTRODUCTION OF THE ENTERPRISE ALLOCATION SYSTEM AND ITS EFFECT ON THE FISHING INDUSTRY: *AN INDUSTRY PERSPECTIVE*

Prior to 1982, an aggregate annual Canadian allocation for all participants in the offshore sector was established for each fish stock. Since there were no specific company quotas, participants attempted to maximize their own share of industry allocations early in the harvesting year, resulting in periods of oversupply in the marketplace and leaving substantial harvesting and processing capacity idle during the remainder of the year.

To rationalize the harvesting, processing and marketing of the offshore resource, the Department of Fisheries and Oceans in 1982, in consultation with offshore sector participants, divided the aggregate Canadian offshore allocation for each stock into specific company quotas known as Enterprise Allocations. These quotas are set as percentages of the Total Allowable Catch for each stock. Normally these percentages remain fixed so that the Enterprise Allocations vary from year to year according to changes in the Total Allowable Catches. Since the Total Allowable Catches are set before the beginning of each year, companies are able to establish integrated harvesting, processing and marketing strategies. The Enterprise Allocation system has had a major impact on three major areas of the companies operations:

1. Balanced Operations: The existing system has eliminated the need to "race" to the fishing grounds. Consequently, companies are able to streamline production and avoid overcapitalization that would otherwise be necessary in order to meet peak harvesting efforts. Matching the harvesting effort with production scheduling not only permits an orderly production process (including normalization of work schedules), but it also enhances the ability of the companies to deliver high quality raw material to their plants and subsequently to the marketplace. This is accomplished by the fleet's ability to emphasize production requirements rather than rapid harvesting.

2. Strategic Long Term Marketing: Company quotas create a "floating inventory" of raw material that can be harvested in a manner that enables the companies to meet market demand. Environment and biological considerations do not permit stocks to be harvested at will but the overall marketing plan is greatly enhanced by the ability of companies to match harvesting and production capacity with market demand. Long-term marketing strategies are facilitated by the existing system in that scientific information regarding the long-term stock projections are used to predict raw material supply.

3. Capital Expenditure Program: Following the declaration of the 200 mile limit in 1977, many participants in the Atlantic Canadian fishing industry embarked upon a period of expansion financed almost entirely by debt. Overexpansion and unfavorable market conditions in the early 1980's caused profits to decline. These conditions, combined with the extraordinarily high interest rates, resulted in a financial crisis in the industry and led, in part, to the appointment of the Task Force on Atlantic Fisheries in January 1982 by the Government of Canada. The Task Force acknowledged the success of the Enterprise Allocation system and recommended that it be permanently incorporated. This system has enabled the companies not only to optimize harvesting, processing and marketing operations, but also to efficiently plan its long-term fleet replacement and plant modernization programs.

Many observers have heralded the introduction of the 200 mile limit as the most significant event in the recent history of the fishing industry. While few would argue with this statement, it must also be recognized that the Enterprise Allocation system will continue to be a major contributor in ensuring the long-term viability of the fishing industry in Newfoundland and Labrador.

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Pelagic species recorded substantial increases, both in terms of the volume and value of landings. This was due mainly to an improved capelin fishery with 1986 capelin prices having increased dramatically. The total landed weight nearly doubled but the total value tripled because of strong market prices.

The volume and value of both crab and shrimp landings increased in 1986 compared to 1985, although the total volume and value of molluscs and crustaceans were down slightly.

The 1987 Canadian Atlantic Groundfish Management Plan indicates that the Total Allowable Catch (TAC) for East Coast Canadian Enterprises will be reduced by nearly 19,000 tonnes to 511,555 metric tonnes. This will entail a 10,000 metric tonne reduction in the TAC from the Northern Cod Stock to 256,000 metric tonnes in 1987. The offshore companies which fish the Northern Cod Stock will absorb the greater part of the reduction with the Resource Short Plant program absorbing the remainder. The companies will absorb a portion of the reduction which reflects their share of the TAC. The effect, on the Province's fishery, of the reduced TAC may be minimized as companies have indicated their intention to pursue formerly underutilized species such as redfish and shrimp. Fishery Products International has recently acquired a new freezer trawler to increase its capability to harvest these species.

Fishermen along the Northeast Coast harvested only about 60 percent of their 115,000 metric tonne inshore allowance from the Northern Cod Stock in 1986. The total allowance for these fishermen has not been affected by the reduced TAC. Therefore, as prices are expected to remain strong in 1987, any increase over last year in the volume of fish landed will certainly boost fisheries output in 1987.

The recent announcement by the Federal and Provincial Governments of their intention to put in place a multi-million dollar Economic Regional Development Agreement respecting the inshore fishery enhances the outlook for the primary fishery in 1987 and beyond.

V.4. MANUFACTURING

The Province's manufacturing industry is quite diverse and can be divided into three major components, namely, fish products, pulp and paper products, and other manufactured products. In 1985 this industry accounted for 26.1 percent of GDP in the goods producing sector and 9.2 percent of total GDP. The relative importance of each component of the manufacturing industry, and its respective contribution to manufacturing GDP in 1985, is outlined in the table below.

Table V.4.1

GROSS DOMESTIC PRODUCT BY COMPONENT: NEWFOUNDLAND AND LABRADOR MANUFACTURING INDUSTRY, 1985

Industry	GDP ($ Millions)	Percent of Total Manufacturing
Fish Products	125.0	32
Pulp and Paper Products	165.0	42
Other Manufactured Products	105.0	26
TOTAL	395.0	100

Source: Statistics Canada Catalogue 13-213 and Newfoundland Statistics Agency.

The output of the fish products and pulp and paper products industries is linked to the Province's primary resource industries. The majority of the inputs to these production processes are provided locally and this generates substantial indirect benefits within the Province in terms of employment and incomes. Virtually all fish products and newsprint products are exported, primarily to the United States, the European Economic Community and Japan. Other manufactured products, on the other hand, are sold in both local markets and export markets. Many of the inputs required for other manufactured products must be imported from outside the Province.

Details of the 1986 performance and outlook for 1987 of each component of the manufacturing industry are provided in the following pages. In summary, strong gains were recorded in the manufacturing industry in 1986 with fish products providing much of the impetus for growth. Positive gains were also recorded for pulp and paper products as a result of an increase in the price of newsprint. Other types of manufactured products benefited from the strength in local consumer spending.

The trend towards expansion of the manufacturing industry was confirmed by Statistics Canada surveys of investment intentions. These surveys were carried out twice during 1986 and it is interesting to note that the second survey indicated either unchanged intentions or upward revisions to earlier manufacturing investment intentions.

The outlook for the manufacturing industry in 1987 is promising for several reasons. The pulp and paper products industry is expecting a good year due to newsprint price increases late in 1986 and anticipated increases in the level of capacity and output. The fish processing industry should continue to prosper as markets and prices are expected to remain strong. The domestically consumed output of the other manufacturing component should hold its own as local demand remains steady.

V.4.1. PULP AND PAPER PRODUCTS

Production of newsprint in the pulp and paper industry accounts for more than one-third of manufacturing GDP in the Province and employs approximately 2,400 people. With the exception of a small amount of kraft pulp, which is used as a strengthening agent and is imported from Quebec, the pulpwood requirements of the industry are met locally. Harvesting of this pulpwood generates additional income and employment in the Province resulting in a high value final product with a relatively significant Newfoundland content. While some of the newsprint produced by the industry is consumed within the Province, the majority of production is exported to markets world wide.

The industry consists of three pulp and paper mills located in Corner Brook, Grand Falls and Stephenville. The Corner Brook mill is owned by Kruger Inc. while the other two are owned by Abitibi-Price. The Stephenville mill, formerly the Labrador Linerboard Mill, was purchased by Abitibi-Price in 1979 and converted to a single-machine newsprint mill. This mill, the Province's newest, produces high quality newsprint which has enabled it to compete in even the most quality conscious markets. The other two mills are currently undergoing modernization programs which have substantially improved paper quality and productivity.

The Corner Brook mill, formerly Bowater Pulp & Paper, was purchased by Kruger Inc. late in 1984. There are five newsprint machines at this mill and the extensive modernization program underway is consistent with Kruger's history of taking older mills, revitalizing them, and turning them into profitable operations. Productivity improvements have already been realized in several areas at the Corner Brook mill, most notably in a reduced labour requirement per tonne of newsprint.

The pulp and paper modernization program commenced in 1985 and represents an investment of $261 million in the Province's newsprint industry (See Table V.4.1.1). The program is cost-shared with the Province contributing 2 percent of the total cost and the federal government contributing 18 percent. The remaining 80 percent was contributed by the companies themselves indicating a substantial degree of optimism concerning the future of the Province's newsprint industry. Under the program, four of the five machines at the Corner Brook mill and one of the three machines at the Grand Falls mill will be upgraded. The other two machines in Grand Falls will be upgraded at a cost of $16 million. The federal government will provide $4 million of this under the Industrial Regional Development Program. The balance will be funded by the company.

Table V.4.1.1

PULP & PAPER MILL MODERNIZATION PROGRAM

	Expenditures (millions of $'s)				
Company	Total	1986e	To Date(e)	% Complete(e)	1987e
Corner Brook Pulp and Paper	$ 230.0	$ 88.6	$ 118.8	51.7%	$ 45.8
Abitibi-Price, Grand Falls*	$ 31.0	$ 9.0	$ 28.9	93.2%	$ 1.0
TOTAL	$ 261.0	$ 97.6	$ 147.8	56.6%	$ 46.8

*The Abitibi-Price program will be completed for less than originally estimated.

e: Estimate

Source: Department of Development.

The Abitibi-Price modernization program in Grand Falls is substantially completed as indicated in Table V.4.1.1 and the remaining work should be finished by April 1987. In Corner Brook, modernization of three of the smaller machines is completed and most of the remaining work on the largest machine, which was permanently taken out of production by Bowaters in 1982, will be carried out during the summer of 1987. The entire program will be completed by 1989/90.

The Abitibi-Price mill in Stephenville produces top quality newsprint utilizing large volumes of budworm-damaged pulpwood. This mill turned in an excellent performance in 1986 with both production and shipments reaching their highest level ever. Production slightly exceeded previously established operating capacity suggesting some improvement in productivity during 1986. Newsprint shipments increased by 5 percent while the value of shipments increased by 3.2 percent.

The Abitibi-Price mill in Grand Falls experienced some downtime in 1986 in connection with the ongoing modernization program. Although production declined slightly from 1985 levels, inventory accumulations allowed newsprint shipments to rise by 1.1 percent and the value of shipments rose by 2.7 percent. As the modernization program at the Grand Falls mill is nearing completion, production should not be impeded further by this source. Furthermore, newsprint quality has been substantially improved through the modernization of all three paper machines and this will enhance the company's ability to compete in the marketplace.

The Corner Brook mill operated at the maximum capacity which was possible while undertaking their modernization program. Newsprint shipments increased by 1.2 percent, and the value of shipments improved by more than 15 percent. The modernization program is proceeding ahead of schedule and the completion of work on the mill's largest paper machine will significantly increase production capacity. However, full capacity utilization will be constrained by shortfalls in pulping capacity, which are being addressed through the modernization program.

The total operating capacity of the newsprint industry in 1986 was 628,000 tonnes and production totalled 593,000 tonnes (See Table V.4.1.2). Even though the mill modernization program constrained production in 1986, the industry experienced a good year and employment was stable. Total shipments increased by 2.1 percent and the value of shipments improved by 8.7 percent indicating some improvement in newsprint prices.

Table V.4.1.2

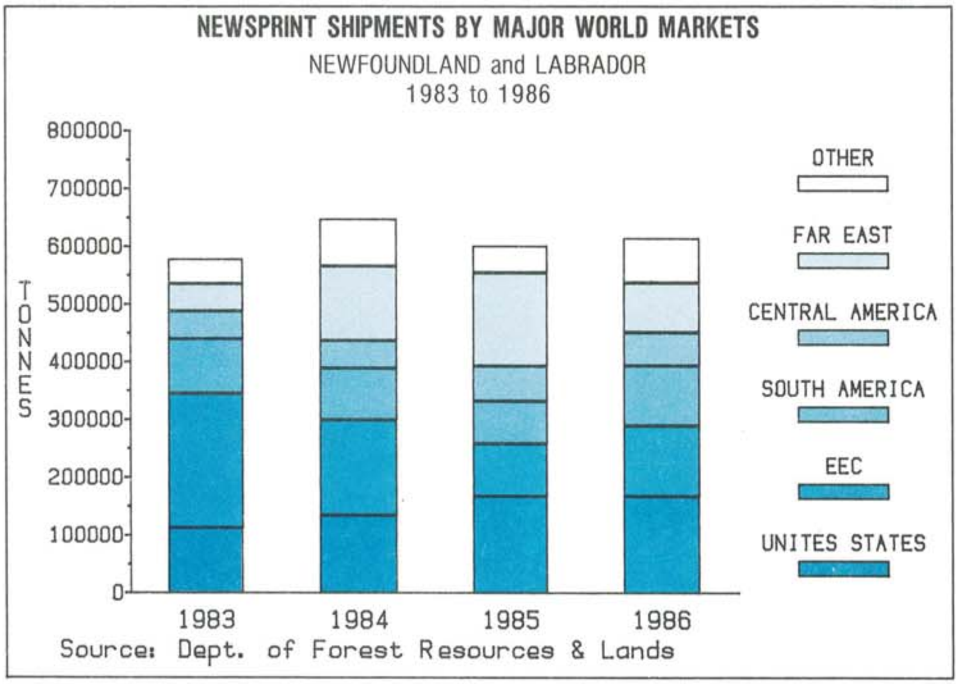
NEWSPRINT PRODUCTION STATISTICS
NEWFOUNDLAND AND LABRADOR, 1985 AND 1986

	1985	1986	Percent Change
Operating Capacity (tonnes)	688,563	628,061	−8.8%
Newsprint:			
Production	620,185	593,182	−4.4%
Shipments	599,701	612,425	+2.1%
Value of Shipments (millions)	$ 301.9	$ 328.3	+8.7%

Source: Department of Forest Resources & Lands.

Demand for newsprint has recently improved significantly and major Canadian producers announced a price increase of US$40 per tonne effective November 1, 1986, the first such increase in over two years. From September 1985 to December 1986, major international currencies appreciated against the U.S. dollar while the Canadian dollar depreciated slightly. This resulted in an improved competitive position for Provincial producers vis a vis Scandinavian producers. Shipments to European markets increased by 34.2 percent in 1986 as the industry regained some of the market share lost during the recession (see Diagram V.4.1.1).

Diagram V.4.1.1



Shipments to the United States remained steady at about 165,000 tonnes. The volume of shipments to the Far East declined by more than 50 percent as producers moved into more profitable European and South American markets. Both the high cost of shipping newsprint halfway around the world and the generally lower quality requirements of these customers reflected in lower product prices make the Far East a less profitable market for the Province's newsprint industry.

Prospects for the Province's newsprint industry in 1987 are bright as the companies are forecasting production of 690,000 tonnes, an increase of 16 percent over 1986. Each of the companies has firm contracts for much of 1987's projected output, and should the Canadian dollar maintain its current position against the United States and Scandinavian currencies, demand could strengthen further. Product price should remain firm at US$570 per tonne throughout 1987 and, combined with strong demand, little price discounting is expected. Employment should remain stable in 1987 and by the end of the mill modernization program, capacity will increase by 23 percent to 773,000 tonnes. The improved quality of newsprint as a result of this program is strengthening the competitive position of the industry helping to ensure the long term viability of these mills.

Prospects for any further expansion of the pulp and paper industry lie in the development of the Labrador forest resources as total timber demand on the Island is approaching the upper limit that the forests can sustain. Interest has been expressed in establishing a forest products processing facility in Labrador and a feasibility study may be carried out in 1987. The forest in the Happy Valley/Goose Bay area is one of the last continuous blocks of unexploited, high quality black spruce forests available anywhere in the world. As black spruce is a preferred input to newsprint production, development in the near future is a distinct possibility.

V.4.2. FISH PRODUCTS

During 1985, the fish products manufacturing industry contributed $125 million to Gross Domestic Product, in constant 1981 dollars, representing approximately 8.3 percent of GDP in the goods producing industries and 3 percent of total GDP. The total value of seafood production in the Province during 1986 approximated $750 million compared with $520 million in 1985. More than 90 percent of all seafood produced was exported; the value of seafood exports approximated $700 million in 1986.

Fish processing provided approximately 9,600 person years of employment in 1986 on an annual average basis. While this is an improvement over 1985 employment levels, it is not a good indication of the number of **jobs** in the Province supported by the fish processing industry. For example, in excess of 25,000 people were listed on the payroll of fish processing plants in Newfoundland and Labrador during 1986. While many of these people would not have been employed for a full year, it is nevertheless indicative of the extent to which people rely on the fish processing industry for employment and incomes. (The limitations of annual average employment statistics are discussed in Section VII of this report).

In 1986 there were 200 registered processing plants active in Newfoundland and Labrador which provided employment to approximately 186 communities. The bulk of these 200 plants (approximately 187) are supplied with raw material by the inshore fishery and, to a smaller extent, by the nearshore and midshore fishery. Of the remaining plants, ten are supplied almost exclusively by the offshore fleets while three depended on fish supplied by both the offshore and the inshore fishery.

Not all of these plants are individually owned and operated. In 1986, 29 different companies collectively owned approximately 118 plants or 60 percent of all facilities in operation. An examination of Map V.3.1 provided in Section V.3 (Primary Fishery) and the table below illustrates the spatial distribution and concentration of processing facilities around the Province.

Table V.4.2.1

NUMBER OF FISH PROCESSING FACILITIES BY AREA

Statistical Area	Number of plants active in 1986	Percentage of total plants
A	14	7.0
B	27	13.5
C	16	8.0
D	17	8.5
E	24	12.0
F	18	9.0
G	5	2.5
H	13	6.5
I	5	2.5
J	10	5.0
K	3	1.5
L	9	4.5
M	5	2.5
N	14	7.0
O	20	10.0
TOTAL	200	100%

Note: The 'statistical areas' are explained in Section V.3 of this report.
Source: Provincial Department of Fisheries
Economic Research and Analysis, Cabinet Secretariat.

The two largest fish companies in the Province, Fishery Products International and National Sea Products own and operate both processing and harvesting facilities. Both of these companies reported an excellent year in 1986.

Fishery Products International (FPI) had an after tax income estimated at $46.6 million in 1986. This is of particular significance since the company lost $35 million in the previous two years. The company anticipates being in a position to set aside ten percent of their pre-tax profits for the benefit of employees through a profit sharing arrangement related to last year's success. FPI employs nearly 8,000 people in the Province and buys fish directly from approximately 2,500 fishermen.

Over the past two years FPI has made efforts to rationalize its processing sector and improve productivity throughout its operations. FPI was most successful in its divestiture of a number of inshore plants around the Province. It has sold 14 of 15 inshore plants slated for sale and is currently finalizing the sale of the remaining plant at Charleston, Bonavista Bay. The company is continuing to upgrade its trawler fleet and processing facilities with a view to increasing productivity, diversifying product lines and increasing market shares in both domestic and international markets.

The corporate objectives of FPI are reflected in a capital expenditure program of $40 million in 1986 which will be the same in 1987. Further changes are expected in 1987 with respect to the company's ownership. The shareholders of FPI have approved a strategy to achieve the return of that company to the private sector, several years ahead of projected schedules. A preliminary prospectus has been filed with the Ontario Securities Commission and other security regulators throughout Canada. Pending approval of the prospectus, FPI will seek to sell common shares to potential investors.

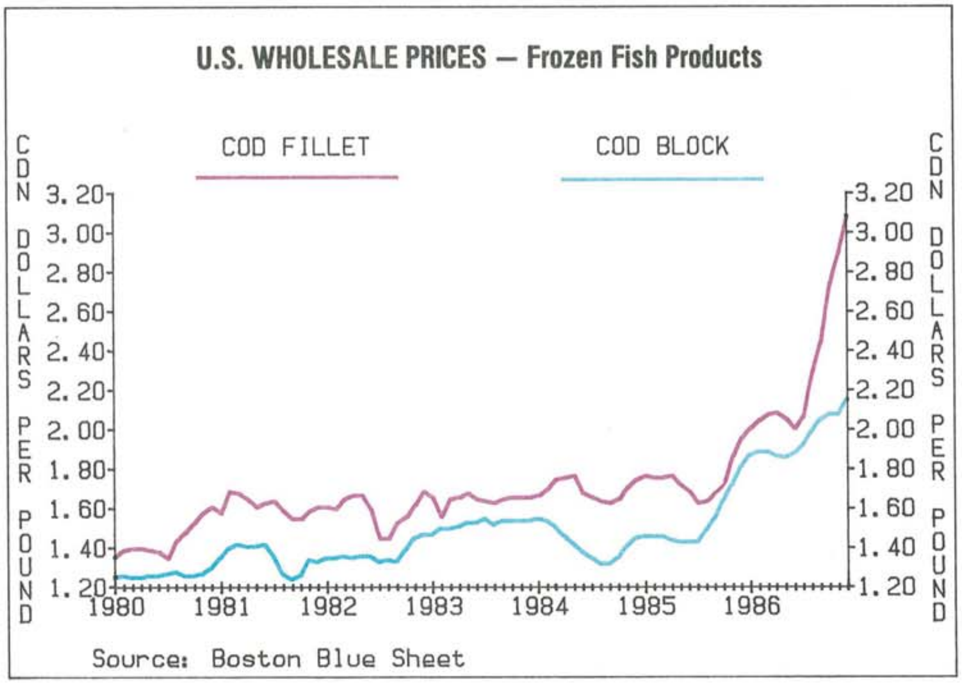
National Sea Products Limited is also a significant contributor to fisheries activity in Newfoundland and Labrador. The company employs 2,000 plant workers and trawlermen in the Province and also purchases fish directly from between 1,000 and 1,500 fishermen. During 1986, the company had an after tax income of approximately $36.1 million for its entire operation. National Sea is also striving to diversify its product lines and improve its position in the marketplace. This will enhance the competitiveness of the firm in the future.

The salt fish trade, while very important to many individual fishermen and plant workers, has diminished in overall importance to the fishery over the years. The marketing and distribution of this product to consuming countries is handled solely by the Canadian Saltfish Corporation. This Corporation recorded a very profitable year in 1986 and has announced its intention to pay a half-million dollars in bonuses to fishermen. Quality considerations will play an important role in determining the size of individual bonuses.

Overall, fish processors in the Province had a most successful year in 1986. The increase in landings of groundfish in 1986 translated into increased production in the Province's fish processing industry. As of 31 December 1986, the Newfoundland and Labrador region recorded increases of 9.7 percent and 24.8 percent in frozen groundfish fillet and block production respectively, compared to levels recorded in 1985. The United States continues to be the Province's most important market for fish products.

Prices of fish in 1986 rose to historically high levels and most processors benefited from the higher prices. As indicated in the diagram below, the price of cod fillet and cod block escalated dramatically beginning in June 1986. By year end, the price of frozen cod fillet and block was \$3.08 and \$2.15 per pound respectively. Analysts attribute the price increase to a shift in demand related to factors such as gains in personal income and favourable exchange rates, and, more importantly, to a significant increase in per capita fish consumption.

Diagram V.4.2.1



There is every indication that fish prices during the remainder of 1987 will remain strong. Cod fillet and block are the two biggest fish commodities produced in the Province and there are a number of factors which will influence the price of these products.

Prices of cod have reached historically high levels and there are indications in the marketplace that some substitution for other white fleshed species, primarily Alaskan pollock, is occurring. This substitution effect may put some downward pressure on groundfish prices. On the other hand, existing shortages of groundfish are not expected to be reversed in the short term. Furthermore, the 1987 total allowable catch for Canadian codfish has been reduced compared to 1986. Both of these factors should put some upward pressure on prices. In addition, Norway and Iceland, who are major competitors in the United States market, have been diverting more of their fish products to the European Economic Community as exchange rate realignments have improved the profitability of that market compared with the United States. Moreover, market demand has been strong in the European Economic Community and this has resulted in some price improvements unrelated to currency adjustments. As a result, Canadian producers are expected to ship more product there as well. Some market analysts are convinced that cod has finally come of age and is now considered a **white tablecloth item,** thus improving the prospects for strong prices.

Clearly, there are opposing forces in the marketplace which make it difficult to predict exactly where prices will finally settle. If these forces balance out leaving prices near current levels, then the Province's fishery should have another successful year. Higher average prices than in 1986 would offset the negative effects of reduced TAC's from the Northern Cod Stocks and adjustments within the Enterprise Allocation system so that real growth of about 1.5 percent can be expected in the fish products manufacturing industry in 1987.

V.4.3. OTHER MANUFACTURED PRODUCTS

The manufacture of products other than fish and newsprint accounted for 26.4 percent of total Gross Domestic Product in the Province's manufacturing industry during 1985 and 2.5 percent of total GDP. In the same year, annual average employment in this portion of the manufacturing industry was estimated at 4,500 person years. Due to the seasonal nature of some manufacturing activities, however, the number of **jobs** supported by these manufacturers is understated by annual average employment statistics.

Table V.4.3.1 below highlights some of the key manufacturing industries in the Province. Although most of the products manufactured are consumed within the Province, certain products are exported to national and international markets. Some of these manufacturing industries offer significant potential for future economic growth, particularly in relation to the development and production of offshore oil and gas.

Table V.4.3.1

SELECTED INDUSTRIES IN OTHER MANUFACTURING NEWFOUNDLAND & LABRADOR, 1984

Fabricated Metal Products	**Food & Beverage Industries**
Wood Industries	Meat & Poultry Products
Sawmills, Planing & Shingle Mills	Dairy Products
Sash, Door and Other Millwork	Bakery Products
Furniture and Fixtures	Soft Drinks
Veneer and Plywoods	Breweries
Transportation Equipment Industries	**Non-Metallic Mineral Products**
Shipbuilding & Repair	Cement
Boatbuilding & Repair	Ready Mix Concrete
Chemical and Chemical Products	**Leather & Allied Products**
Industrial Inorganic Chemical Industries	Footwear Industry
Paint and Varnish **(Coatings)** Industry	**Textile Products**
	Clothing
	Refined Petroleum & Coal Products (1)

Source: Statistics Canada Catalogue 31-211.

(1) Includes the Come-by-Chance oil refinery, being re-activated in 1987.

Fabricated Metal Products

There are 23 firms in the Province which fabricate and erect steel and metal. Several of these firms, however, provide only metal fabrication services which are incidental to their main industrial activity. For example, Marystown Shipyard Limited fabricates steel for use in new vessel construction.

The largest metal fabricator in the Province is Easteel Industries (1984) Ltd., located just outside St. John's. The company manufactures and distributes a range of metal fabricated products for local use including tanks and pressure vessels, erects structural steel in non-residential construction projects, and provides general machine shop services. Easteel has a 7,710 square metre shop facility with a 56,658 square metre yard for assembly and storage and employs between 40 and 100 persons depending on the workload. Nearly all steel used by the company is imported from steel mills in Hamilton, Ontario.

The company enjoyed a moderate level of activity in 1986. The largest contract was with the Department of National Defense for steel fabrication and erection at the Cartwright radar station. Easteel also held contracts for structural steel fabrication and erection at the Hotel-Convention Centre in St. John's and the Fishery Products International plant in Burin.

The outlook for 1987 is cautiously optimistic with some improvement in sales anticipated. The largest contract for 1987 is for work which will start sometime in March at the Hope Brook Gold Mine. In addition, the company was recently awarded a $2 million contract to build 200 containers for Terra Transport. Other smaller, institutional contracts have been signed for projects located around the Province and the company will submit contract bids on other industrial projects during the year.

This company, along with other smaller companies, could be in a position to access substantial work related to offshore oil and gas development should the Hibernia project be released. While Easteel has not formally entered into a joint venture or formal partnership, discussions with several interested parties are ongoing.

Wood Industries

This industry includes a large number of firms engaged in the manufacture of lumber, doors and other millwork, furniture and fixtures, kitchen cabinets, and veneer and plywoods The products of this industry are primarily for consumption within the Province.

The largest component is the sawmill industry which produced 44.3 million board feet of lumber during 1985/86, an increase of 16 percent from 1984/85. Although there were 1,600 licensed sawmills in the Province, only five mills produced more than 500,000 board feet of lumber each annually while the majority produced less than 50,000 board feet. Many of the sawmills are one-person operations which operate for only short periods during the year. As such, sawmilling is often referred to as a 'cottage industry' in Newfoundland and Labrador.

There are sawmills located throughout the Province with the largest concentrations of commercial operators on the Bonavista Peninsula, and in the central region of the Island from Gambo to Springdale. The industry produces lumber for local markets in the form of small dimension building materials including 2x3 and 2x4 studs. Sawmill production typically meets 40 percent of total Provincial lumber requirements.

Prospects for the sawmilling industry are positive particularly as the recently established Provincial lumber grading service has ensured that locally produced lumber meets the same quality standards as imported lumber. Improved quality standards should be reflected in lumber prices and in increased market accessibility.

Local lumber demand is expected to remain strong in 1987 as the residential construction industry should be stable. Specialty lumber such as kiln dried white birch from Central Newfoundland has recently been used successfully by local furniture makers and this could represent a new product line for a few Provincial sawmills. Employment should remain stable in 1987 at an annual average of about 300 person years. The number of jobs supported by the industry, however, would be considerably greater than this.

The recent United States countervail action has resulted in the imposition of a 15 percent export tariff on Canadian lumber destined for the United States. Since the Province does not export lumber to the United States, domestic producers will not be directly affected by this action, although there is some concern that mainland producers may find the Newfoundland and Labrador market more attractive.

Transportation Equipment Industries

The shipbuilding and repair industry (as distinct from the boatbuilding industry) consists of two companies engaged in new vessel construction and repair, and another two companies engaged in repair work only. The industry supports about 1,000 jobs, some of which are seasonal. Shipbuilding involves the construction of steel ships while the repair yards work on a variety of vessels ranging from fishing trawlers to offshore oil and gas drilling rigs.

The largest shipyard in the Province is Marystown Shipyard Limited located on the Burin Peninsula. This shipyard has the latest in technology and constructs vessels of up to 200 feet in length. To date, some 38 new vessels have been constructed at the Yard including fishing trawlers, small vehicle ferries, offshore supply boats, search and rescue boats and various patrol ships. Employment at the Yard varies from 400 to 600 people, depending on the workload.

The Yard completed the construction of Hull 38, a 20-car vehicle and passenger ferry in 1986-1987, and commenced work on Hull 39, a middle distance trawler being built for the Province. The Government of Canada also announced the purchase of Hull 37 in 1986 for use as a Coast Guard patrol vessel. A high level of ship repair work was performed by Marystown Shipyard in 1986. The level of repair activity should, however, return to normal levels in 1987.

In February 1986, the company opened the Cow Head Oil Rig Repair Facility at Mortier Bay. Contracts for rig repair work, however, have been limited by the decline in offshore drilling activities and future work will continue to depend on the level of offshore exploration activity. The recent announcement by Petro Canada of its intention to further delineate and develop the Terra Nova field may improve future prospects for this new facility.

Prospects for new vessel construction in 1987 are positive based on the scheduled completion of Hull 39, the start of a second middle distance trawler (Hull 40) for the Province, and the Fishery Products International contract for 6 to 7 stern trawlers. The Federal and Provincial Governments have recently reached an agreement to provide Marystown Shipyard Limited with assistance of up to $21 million to permit the Yard to compete with heavily subsidized offshore yards. This contract is scheduled to start in 1987, continue for 3 years and provide about 515 person years of employment.

Marystown Shipyard Limited, through the formation of Vinland Industries, has entered into a joint venture with Moss Rosenberg, a Norwegian company acknowledged as a world leader in the construction of offshore oil and gas production facilities. Upon release of the Hibernia project, Vinland will pursue contracts relating to module fabrication and the mechanical outfitting of the gravity-based structure. Marystown Shipyard Limited has completed a training program in which engineers, management and production personnel were trained in the construction of such systems at Moss Rosenberg's facilities in Norway. These actions will ensure that the Yard is well positioned to take advantage of offshore oil and gas development and the Fishery Products International contract will enable the company to retain these skilled personnel pending the release of the Hibernia project.

A $20 million Offshore Fabrication Enhancement Program for Marystown Shipyard Limited was recently approved under the Canada/Newfoundland Offshore Development Fund in recognition of upgrading required to enable the Yard to compete for offshore steel fabrication contracts. The amount of $2 million is being made available immediately to assist the Yard in upgrading its engineering and managerial capabilities. In addition, engineering studies will be carried out in order to identify specific areas in which physical facilities require improvement. The balance of $18 million for physical expansion and upgrading of the shipyard's facilities has been approved-in-principle pending the results of the engineering studies and a decision to proceed with the development of Hibernia.

The major player in the ship repair industry is the Newfoundland Dockyard. Established in 1884, the dockyard's facilities now include a graving dock and syncrolift. The syncrolift is 300 feet long and 50 feet wide and is used to raise ships out of the water so that work may be performed on three ships simultaneously. The Newfoundland Dockyard provides complete ship repair services including hull repairs, machine shop work and sandblasting and painting. Employment at the dockyard has typically been about 300 although at present only about 150 people are employed because of a shortage of work. Competition in the repair segment of the industry has intensified mainly due to the low level of activity in new vessel construction in Canada; this has prompted many shipbuilders to compete more vigorously for repair work. Nevertheless, the Newfoundland Dockyard recently negotiated a contract with the Soviet Union to perform repairs on 22 Russian trawlers over the next six months.

Glovertown Shipyards Ltd., formerly owned by Burry Marine, is a smaller scale shipbuilding and repair operation and has a permanent staff of about 20 with another 50 seasonal employees. While 1986 was a poor year with no work until November, the Yard now has enough work to last until sometime in 1988. In operation since 1977, the firm recently completed Hull 37.

The Province's boatbuilding industry is smaller in scale than the shipbuilding industry and consists of a number of small firms around the Province which construct fiberglass and wooden boats. The boats vary in length from small dories to longliners of up to 65 feet in length and are primarily built for use in the inshore and nearshore fishery. Construction of pleasure craft represents only a small component of industry output. Markets for these boats are exclusively domestic.

Coatings Industry

Standard Manufacturing Company Limited, located in St. John's, is the only firm in the Province engaged in the manufacture of coatings. The company, which is Newfoundland and Labrador owned and operated, has been in business for 85 years. This company is one of few in the Province which successfully weathered the 1930's depression and survived the competition from outside companies which Confederation brought in 1949. The company has employed unionized labour for 35 years and the absence of any labour disputes during this time is evidence of the company's excellent employee-management relations.

The company's manufactured products include a variety of paints, varnishes and protective coatings for use in domestic and industrial applications and about 120 people are employed. All manufacturing is carried on at a 48,000 square foot plant and laboratory on a three-acre site in St. John's and the products are marketed under the **Matchless** brand name to customers located throughout Canada. With the exception of labour, all required inputs to the production process are imported. All goods and services related to the plant facility, however, are purchased locally and include all cartons, printed labels for paint cans and plant maintenance services. The company operates two modern automated warehouse and distribution centres, one of 800,000 cubic feet located on a 35-acre site in St. John's and one of 200,000 cubic feet located in Halifax; the quality of these facilities is equal to any in the world.

Future prospects for this company are bright due to strong markets, particularly in Eastern Canada. An expansion of the company's industrial plant is being considered on the strength of these markets and also on the strength of a license which the company has obtained to manufacture and distribute DEVOE industrial product; production of DEVOE high performance marine coatings has already taken place. DEVOE is a world leader in the development of marine and industrial coatings used in offshore oil and gas production.

Industrial Inorganic Chemical Products

This industry consists of seven firms engaged in the manufacture of products such as phosphorus, compressed gases, windshield washer fluid, liquid dish detergent, soaps, waxes, and oil absorbants. These products are marketed locally, nationally and internationally. Manufacturing plants are located in St. John's, Long Harbour, Bishop's Falls and Lewisporte and provide employment for approximately 370 people.

The largest firm in the industry is ERCO, a division of TENNECO Canada Inc. This company, located at Long Harbour, employs 300 people and manufactures phosphorus, ferro phosphorus, silica slag aggregates and coke fines which are shipped to markets around the world. The phosphorus product is converted, by chemical processing industries located mainly in the United Kingdom and Japan, into industrial and specialty phosphates which are sold primarily to the detergent and food industries.

The required inputs for the plant include phosphate rock, carbon electrodes and coke which are imported from Europe and the United States. The company purchases about 150,000 tonnes of silica from the Dunville Mining Company at Villa Marie, Placentia Bay. As the conversion process is very energy intensive, ERCO is the third largest individual industrial user of electricity in the Province. The company spends between $20 and $25 million annually in the Province in the form of wages and salaries, electricity purchases and other items such as silica which are purchased from local suppliers.

Despite intense foreign competition and reduced world demand for phosphorus products, the company experienced a good year in 1986. Production included 50,000 tonnes of phosphorus, 2,000 tonnes of ferro-phosphate, 8,000 tonnes of coke fines, and 250,000 tonnes of slag aggregates. The slag aggregate is produced from a plant which crushes waste material from ERCO's phosphorus furnaces; this plant began operation in 1985. These slag aggregates are produced in five different sizes and are used for ashphalt mixes and drainage systems. The product is transported in the same ships which bring phosphate rock from Florida to the ERCO plant. This reduces the cost of transporting the slag aggregate as these ships would otherwise return empty. The outlook for 1987 is for output at about the 1986 levels.

Food and Beverage Industry

Firms in this industry include those engaged in the manufacture and preparation of meat and poultry products, dairy products, baked goods and beverages. The export oriented fish products industry, which is the subject of Section V.4.2 of this report, is the single largest contributor to this industry. The other firms in the food industry primarily serve markets in Newfoundland and Labrador and make an important contribution to the local economy. Exclusive of fish products, the food and beverage industry employed an estimated 1,400 people in 1986.

The two largest meat and poultry firms in the Province employed a combined total of 265 people in 1985. These companies supply products such as chicken, pork, and salt beef for consumption within the Province and for export to Canadian markets. The two largest dairy companies in the Province employed a total of 250 people in 1985 and produced products such as fresh milk, ice-cream and a variety of juices for local markets. There are a number of bakeries located throughout the Province which produce a wide range of baked goods. The beverage industry includes breweries and soft drink manufacturers who produce products for local consumption. The brewing industry consists of three national brewing companies which employed in excess of 300 people during 1986. The soft drink industry employed in excess of 200 people in 1986 and consisted of two of the largest national soft drink manufacturers.

Since the majority of output from the food and beverage industry is for local consumption, the anticipated increase of 0.5 percent in real personal income in the Province during 1987 should translate into increased local demand for many of these products.

Non-metallic Mineral Products

Non-metallic manufacturing industries shipped products valued at an estimated $37.9 million in 1985, the most recent year for which data are available. During the past two years employment in this industry has remained stable at 400. Some of the larger firms include North Star Cement Limited, Trinity Brick Products Limited, Atlantic Gypsum Limited and the Newfoundland Tile and Slate Company.

North Star Cement, which is located in Corner Brook, is one of the largest firms in this industry and has been in business since 1951. Last year 75,000 metric tonnes of cement were sold and employment during the production period was 98 people in addition to several casual employees. A modernization program costing $4.6 million was carried out during 1986; this will enable the Company to produce special cements in addition to the usual portland cement produced in the past. Markets for North Star cement are primarily within the Province. Production and employment are expected to remain stable in 1987, however, the Company is well positioned to benefit significantly from Hibernia development.

Trinity Brick Products Limited is located on Random Island, Trinity Bay. With the exception of intermittent shutdowns, this plant has been in operation since 1886. Production in 1986 totalled about 4 million bricks and employment reached a high of 33 plant workers. The company began manufacturing a new and very popular 'antique style' brick during 1986 which is aimed at the residential market. Production is forecast at between 4 and 5 million bricks in 1987 and employment should be unchanged. The bricks produced are marketed primarily throughout the Island although some are shipped to Labrador.

Atlantic Gypsum Limited, which is located in Corner Brook on the West Coast of the Province, produces gyproc wallboard. In 1986 production totalled 60,000 tonnes, the largest level ever and an increase of 9 percent over 1985. Employment was stable at 110 persons. About 47 percent of the wallboard was sold in the Province and an additional 47 percent in the Maritime provinces; the remainder was shipped to the United States. The company anticipates a full production schedule in 1987 and output is expected to increase by about 5 percent.

The Newfoundland Tile and Slate Company at Bourgoyne's Cove began operation in 1986 producing red, green, and purple slate which has a variety of applications including roofing and flooring. The company employed 18 persons and shipped its output to the United States. The producer hopes to develop additional markets within the Province and in Canada.

Little statistical information is available on the other non-metallic product manufacturers in the Province. Of the remaining firms in this industry, however, the largest are pre-mix concrete firms. There were a total of 12 companies operating in Newfoundland and Labrador during 1984 producing pre-mix concrete for local markets. For the industry as a whole, the prospects look encouraging as most firms expect to maintain or expand existing production levels in 1987.

Leather & Allied Products

There are several small firms located around the Province which produce a variety of leather products including gloves and handbags. The largest firm, Terra Nova Shoes, is a manufacturer of safety footwear located in Harbour Grace. The plant employs approximately 140 people.

The Harbour Grace plant was initially built in the 1960's and has been quite successful. This manufacturer currently commands a 30 percent share of the safety footwear market in Canada and has made inroads into United States, European and Caribbean markets.

The company has acquired a reputation for the development and utilization of the latest technology in the production of safety footwear. The company was recently awarded a contract to develop a new, lightweight boot for the Canadian military. Such new advances will enhance the competitiveness of the firm in the international marketplace.

Textile Products

The clothing industry consists mainly of a number of small firms which produce a variety of handcrafted products such as knitted goods and winter parkas for sale within the Province. The only major clothing firm, United Cotton Mills, is located in St. John's. This firm employs 50 permanent staff and seasonally adds about another 15 to its workforce. Its products are mainly uniforms, industrial workwear and other 'made to measure' apparel for sale within the Province.

Refined Petroleum Products

The refurbishing and reactivation of the Come-By-Chance oil refinery will be completed in 1987. The new owners, Newfoundland Energy Limited, will spend approximately $27 million and employ 170 people in order to bring the facility back into production.

The refinery could be operational by this summer and in full production by the end of the year. The refinery will be capable of processing 100,000 barrels of oil a day using crude oil imported from West Africa. Products will include gasoline, jet and diesel fuel, kerosene, and some heavy oil for sale in the United States.

The reactivation of the refinery will make a significant contribution to the local economy and approximately 200 people will be employed during full production.

V.5. CONSTRUCTION

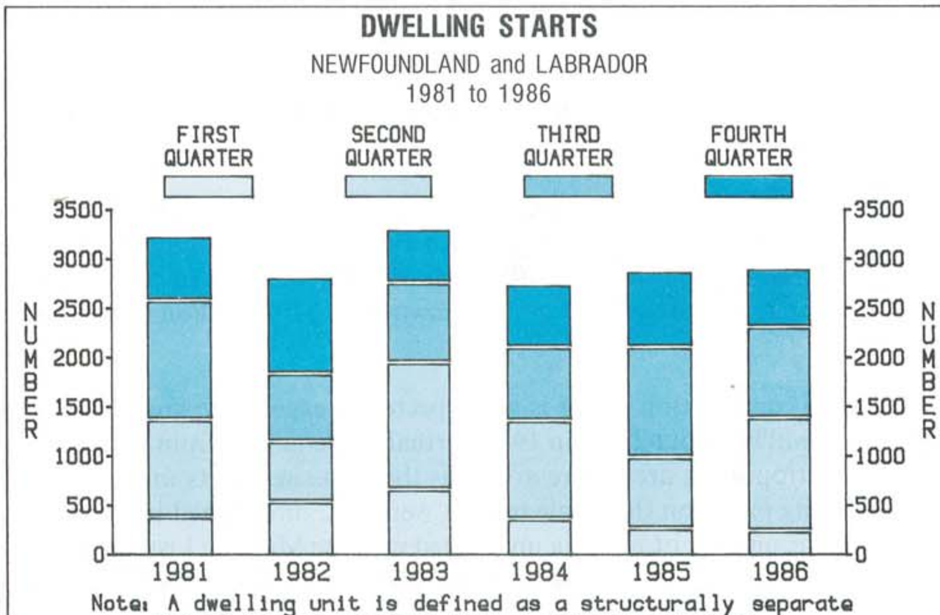
The construction industry is a major component of the Province's goods producing sector. In 1985, this industry accounted for 23.1 percent of Gross Domestic Product (GDP) in the goods producing sector and about 8.2 percent of total GDP. This industry provided approximately 10,000 person years of employment in 1986 on an annual average basis. As the industry has a high seasonal component, however, due to climatic conditions in the Province, annual average figures understate the number of **jobs** supported by the construction industry. Employment is typically highest in June or July and lowest in December or January.

According to the Statistics Canada Business Register, there were over 1,800 firms in the construction industry as of March 1986. About 85 percent of these firms are small businesses which employ less than 20 people. The majority are special-trade contractors, including plumbing and electrical contractors, or are involved in building construction rather than engineering construction.

Both the residential and non-residential components of the construction industry were fairly stable in 1986 and total activity as measured by real GDP was at about the same level achieved in 1985.

Residential construction activity rose slightly in 1986 as total dwelling (or housing) starts increased by 1.0 percent to 2,883. As illustrated in Diagram V.5.1, the number of housing starts varies over time and is primarily related to household formation. Housing activity also varies considerably within a year. In the first quarter of 1986, housing starts fell from the level achieved in the first quarter of 1985. Then in the second quarter, housing starts jumped 58.6 percent over the same period a year earlier. In the second half of 1986, starts fell sharply.

Diagram V.5.1



Note: A dwelling unit is defined as a structurally separate set of living premises with a private entrance.
Source: CMHC Housing Statistics

Housing starts declined by 3.8 percent to 1,406 in communities with populations of less than 10,000 in 1986. Urban centres with populations over 10,000 recorded 1,477 housing starts, a 6.1 percent increase from the 1985 level. The St. John's and Corner Brook areas experienced increases of 2.6 percent and 48.8 percent respectively while starts in the Grand Falls area declined by 27.1 percent.

Other indicators in 1986 point to a larger increase in the level of residential construction activity than is suggested by housing starts. For example, the number of completions rose by 29.6 percent to 2,400 and the average number of units under construction increased by 24.7 percent. As well, the survey of investment intentions discussed in Section X reveals a 15.3 percent increase in the total value of planned capital and repair expenditures on housing construction for 1986.

The non-residential component of the construction industry fared as well in 1986 as it did in 1985. There were a number of sizeable projects under construction during the year. These included work related to the development of the Hope Brook gold mine, the mill modernizations at Grand Falls and Corner Brook, as well as road and school construction. Appendix 2 provides a summary of 1986 construction activity for five of the largest municipalities indicating total construction expenditures of $180.1 million in 1986. About one-third of this expenditure was for new commercial construction.

Activity in the non-residential construction sector this year is expected to be on a par with 1986. A list of major construction projects which are expected to start in 1987, or are carried over from previous years is contained in Appendix 1. These include ongoing work on the reactivation of the Come-By-Chance oil refinery, the Centre for Earth Resources Research at Memorial University, and modernization work at the paper mills in Grand Falls and Corner Brook. Construction of the Hotel-Convention Centre and the Bank of Nova Scotia building in downtown St. John's should be completed in 1987.

Total construction spending in the City of St. John's amounted to $122.5 million in 1986 with about $55 million being spent on new commercial buildings. The major projects in the city included the Hotel-Convention Centre, the Bank of Nova Scotia Building, First Newfoundland Place, an office building for Manufacturer's Life Insurance Co., and the School for Deaf Children.

There is currently a surplus of commercial space in the city in terms of vacant office, retail and warehouse space. This would suggest a reduced level of commercial construction activity in 1987. Furthermore, during the last quarter of 1986, the value of commercial building permits issued by the city was about $4.5 million down from $20.1 million in the same quarter of 1985.

The residential construction sector is not expected to experience much growth in 1987. Total housing starts will be about 2,900 in 1987, virtually unchanged from last year. However, in the St. John's metropolitan area there are signs that housing starts may actually decline in 1987. Some housing prices on the resale market were flat, or declined in real terms during 1986. Furthermore, the number of housing units listed with the Multiple Listings Service (MLS) in the St. John's area rose by 8.2 percent in 1986 while the number of units sold increased at a lower rate of 3.3 percent. These two factors seem to point towards a 'buyers' market which may well depress new housing construction in the St. John's area, at least in the first half of 1987.

An early release of the Hibernia project would provide substantial growth potential for the construction industry in 1987 and lead to real growth of about four percent. In recent weeks, negotiations between the Federal and Provincial Governments and the partners in the Hibernia project have proceeded well and a decision is expected soon on whether or not the fiscal arrangements are such as to permit project release at this time. The impact of Hibernia development on the construction industry would be enormous. Much of the development related construction activity would take place within the Province and create substantial employment benefits over the life of the project.

V.6. ELECTRIC POWER AND WATER UTILITIES

This sector is dominated by the electric power industry which accounts for over 97 percent of the GDP generated. The water utilities are establishments primarily engaged in the treatment and distribution of water for the end user. Historically, their contribution to GDP, though small, has been quite stable and has grown very slowly over time.

The electric power industry encompasses not only the production of electrical energy but also its distribution to the end user. Most of the electrical output of the Province is generated by Newfoundland and Labrador Hydro, a Provincial Crown Corporation. The Corporation sells power directly to the Province's large industrial power users and to two retailers, the Power Distribution District of Newfoundland and Labrador (a Crown agency whose affairs are administered by Newfoundland and Labrador Hydro), and a private corporation, Newfoundland Light and Power Company Limited.

Since electricity is used as an input into the productive activities of all industries, the performance of this sector is closely linked to that of the overall economy. Electricity demand depends to a large extent on the productive activities of the manufacturing and mining industries, the stock of residential and non-residential dwellings and the trend towards increasing reliance on electricity for heating purposes.

In 1986, total provincial load (i.e., total electrical generation on the interconnected power grid, excluding exports) increased by about 2 percent. This was accompanied by virtually no change in electricity prices to either residential or non-residential customers. Furthermore, to stabilize the effective price charged to its customers, Newfoundland and Labrador Hydro implemented a rate stabilization plan with effect from January 1, 1986. This replaced the fuel adjustment charge which had caused short run variations in electricity prices due to fluctuations in fuel costs and in the use of thermal generating capacity.

Continued growth in the electric power industry is expected in 1987. Newfoundland and Labrador Hydro projects about a 4 percent increase in the total provincial load (in terms of gigawatt hours) which stems largely from projected increases in industrial and residential usage. The startup of Hibernia development would lead to even more electrical demand and would push the growth in provincial load above 4 percent.

With no new electrical generation facilities under construction, capital expenditures remained at relatively low levels in the industry in 1986. The industry's capital expenditures are expected to rise this year due to construction work on the interconnection of Burgeo, Fogo and Change Islands to the main electrical power grid. The power line to the Hope Brook gold mine should also be completed this year.

Due to growing demand for electricity, the Island will require additional generating capacity by 1991. Investment decisions will have to be made this year to avoid future power and energy shortages. Island energy source options include the addition of a fourth oil-fired unit to the Holyrood complex; an upgrading of the capacity of the existing thermal units at Holyrood; the development of small hydro sites on the Island; or some combination of these projects.

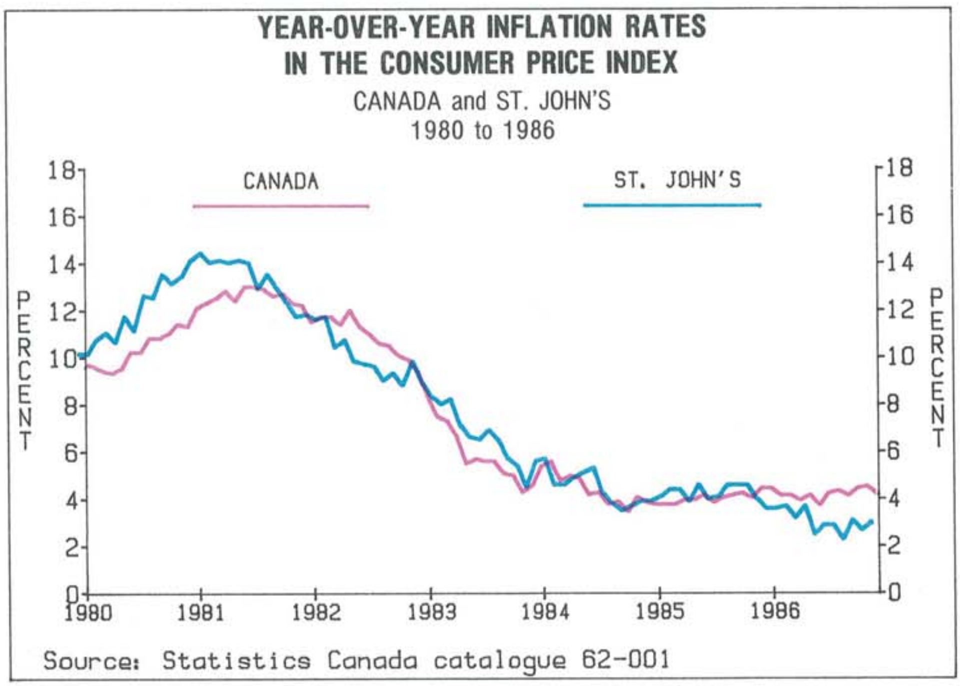
An alternative option, and the most cost effective method of meeting the Province's long term energy needs, would be an interconnection of the Island's electrical grid with Churchill Falls. However, under conditions of a long term contract signed in 1969, the bulk of the power from this source is sold to Hydro-Quebec. The Province has held discussions with Quebec in an effort to secure additional power from Churchill Falls but to date no agreement has been reached on this matter.

The Province would also like to develop the full hydro-electric potential of the Lower Churchill River but this would involve the production of power that is surplus to the Province's needs. The marketing of surplus power to or through Quebec and the ability to acquire power from Churchill Falls therefore remain as unresolved issues.

VI. INFLATION

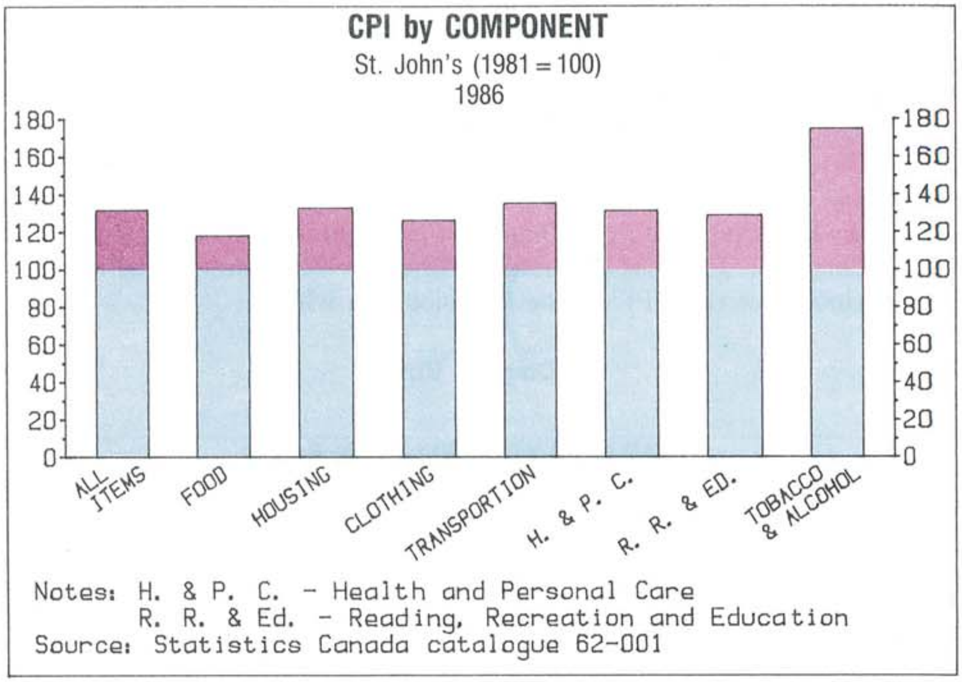
The inflation rate in Canada has fallen considerably from the pre-recessionary highs recorded in the early 1980's. Much of this decline can be attributed to the Bank of Canada's monetary policy which contributed to the recession in 1981-1982. With the onset of the recession, and the subsequent recovery, expectations of high rates of inflation in the future subsided. This is illustrated by falling interest rates and by the narrowing gap between interest rates for short term loans (i.e., one year) and those for long term loans. Reduced inflationary expectations have led to smaller increases in the wage gains sought by workers and in the prices charged by firms. The path of inflation, as given by the Consumer Price Index (CPI), for both Canada and St. John's is illustrated in Diagram VI.1 below. Statistics Canada does not provide estimates of the CPI for the Province as a whole.

Diagram VI.1



The CPI, or rather changes in the CPI, is the most commonly used indicator of inflation rates. The CPI has seven main components which reflect the pattern of consumer expenditures. For Newfoundland and Labrador, the distribution of consumer expenditures among commodity groups for a 'representative' family is provided in Section IX of this report. The components of the CPI are illustrated in Diagram VI.2 below. Prices for these seven groups of commodities do not all change at the same rate, and the factors which influence price changes may differ for different commodity groups. The impact of a price change in an individual commodity group on the total CPI depends upon the importance of the commodity in total consumer expenditure. If, for example, tobacco and alcohol accounted for 5 percent of total consumer expenditures, then 5 percent of any price change would be reflected in the change in the **all items** CPI.

Diagram VI.2



Overall, during 1986 the Canadian CPI advanced by 4.1 percent. Of the seven main components of the CPI, the largest price increases in 1986 were for tobacco products and alcoholic beverages (up by 11.9 percent) and food (up by 5.0 percent). A significant factor contributing to the rise in prices were increases in indirect taxes at the federal level; the manufacturers sales tax was raised twice during 1986 and higher taxes were also levied on tobacco and alcohol. At the same time, however, the precipitous decline in oil prices helped to keep the inflation rate down.

In 1986 the rate of inflation in St. John's (commonly referred to as the Newfoundland and Labrador CPI) averaged 3.0 percent, 1.1 percentage points below the national rate. Much of the difference was accounted for by a lower increase in housing costs than was recorded at the national level. Also, the tobacco and alcohol component of the CPI did not advance as much in St. John's as it did in the country as a whole.

In 1987, Canada's inflation rate is expected to increase to about 4.5 percent. While increases in federal indirect taxes are not expected to have a major impact on price inflation, the firming of oil prices means that falling energy prices will no longer dampen inflation as it did in 1986.

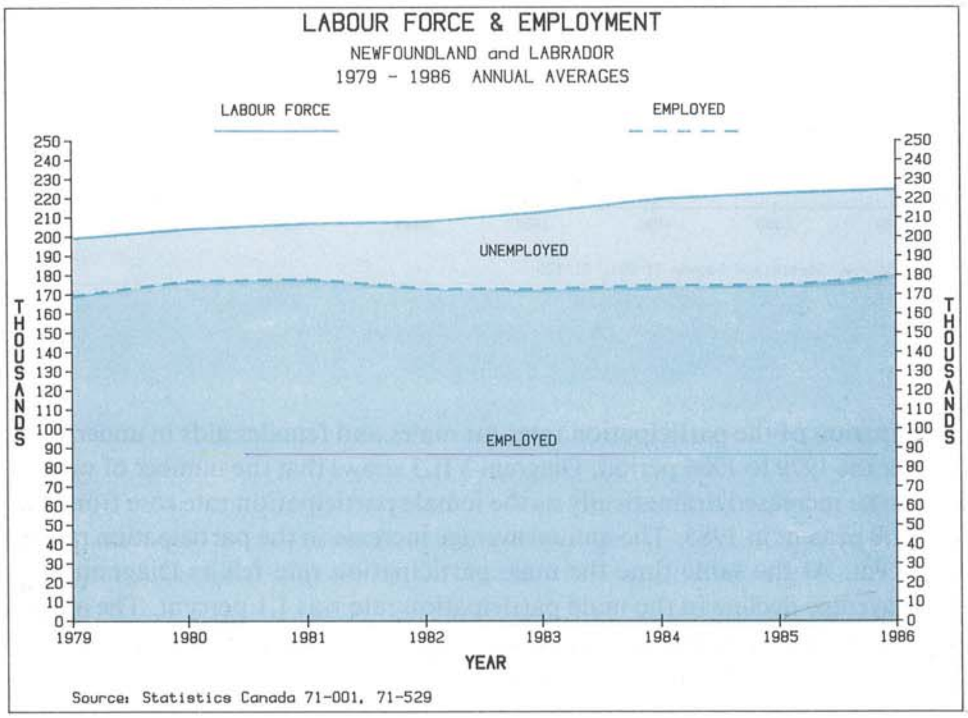
The rate of inflation in St. John's will be affected by the same factors as the Canadian inflation rate. The St. John's inflation rate is expected to rise to about 3.8 percent in 1987, still slightly lower than the rate of inflation at the national level. This difference can largely be attributed to a booming housing market in central Canada that continues to put upward pressure on housing prices and hence on the Canadian CPI. At the same time, housing prices in St. John's have been flat and are not expected to experience much of an increase in 1987.

VII. EMPLOYMENT AND THE LABOUR FORCE

Employment in Newfoundland and Labrador increased by 5,000 in 1986 on an annual average basis. This is a marked improvement over the previous year's figures and the first substantial increase recorded since 1981 when employment stood at 179,000.

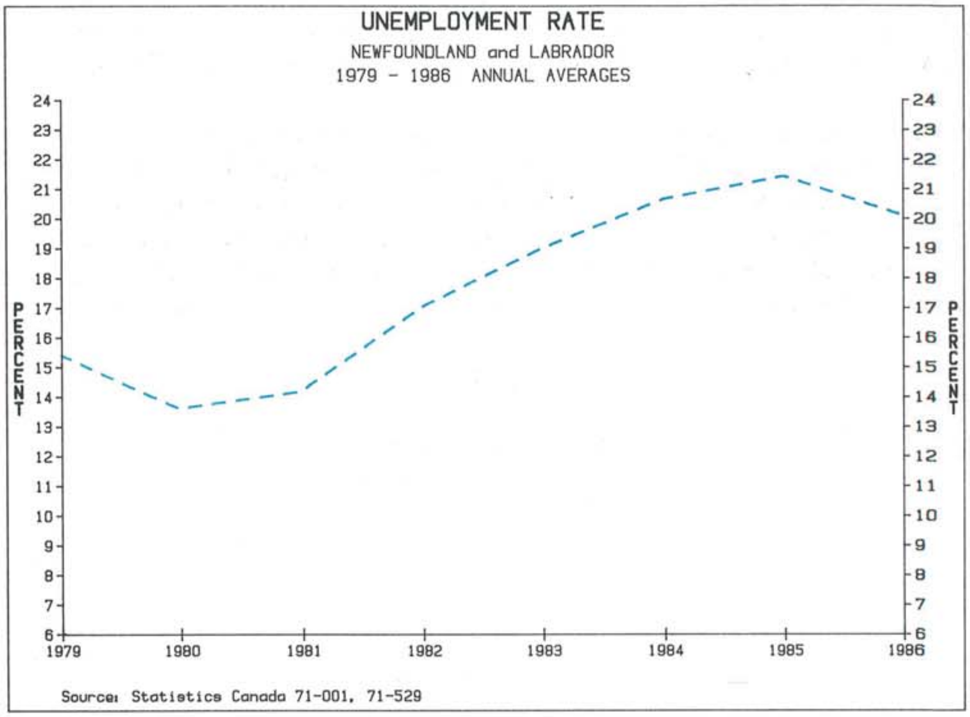
As illustrated in Diagram VII.1, employment grew over the period from 1979 to 1981 and then fell in 1982. Since 1982 growth has been slow but steady. The annual average growth of employment from 1979 to 1985 was 0.6 percent. During the same period the labour force grew steadily at an annual average rate of 1.9 percent, outstripping employment growth and causing the unemployment rate to rise as Diagram VII.2 demonstrates. In 1979 the unemployment rate was 15.1 percent, fell to 13.3 percent in 1980 and increased to 21.3 percent in 1985.

Diagram VII.1



Diagrams VII.1 and V11.2 illustrate that for the first time in six years, growth in employment exceeded growth in the labour force during 1986 and subsequently the unemployment rate fell 1.3 percentage points to 20.0 percent. The unemployment rate, which represents the percentage of those in the labour force who are unemployed, would have decreased much more had the labour force remained stable in 1986. As it was, increased participation rates prevented a greater fall in the unemployment rate.

Diagram VII.2



Examination of the participation rates for males and females aids in understanding what occurred over the 1979 to 1986 period. Diagram VII.3 shows that the number of women entering the labour force increased dramatically as the female participation rate rose from 35.9 percent in 1979 to 41.8 percent in 1985. The annual average increase in the participation rate for women was 2.6 percent. At the same time the male participation rate fell as Diagram VII.4 shows. The annual average decline in the male participation rate was 1.1 percent. The annual average size of the labour force increased by 25,000 between 1979 and 1985; there were 4,000 more men and 21,000 more women in the labour force.

Diagram VII.3

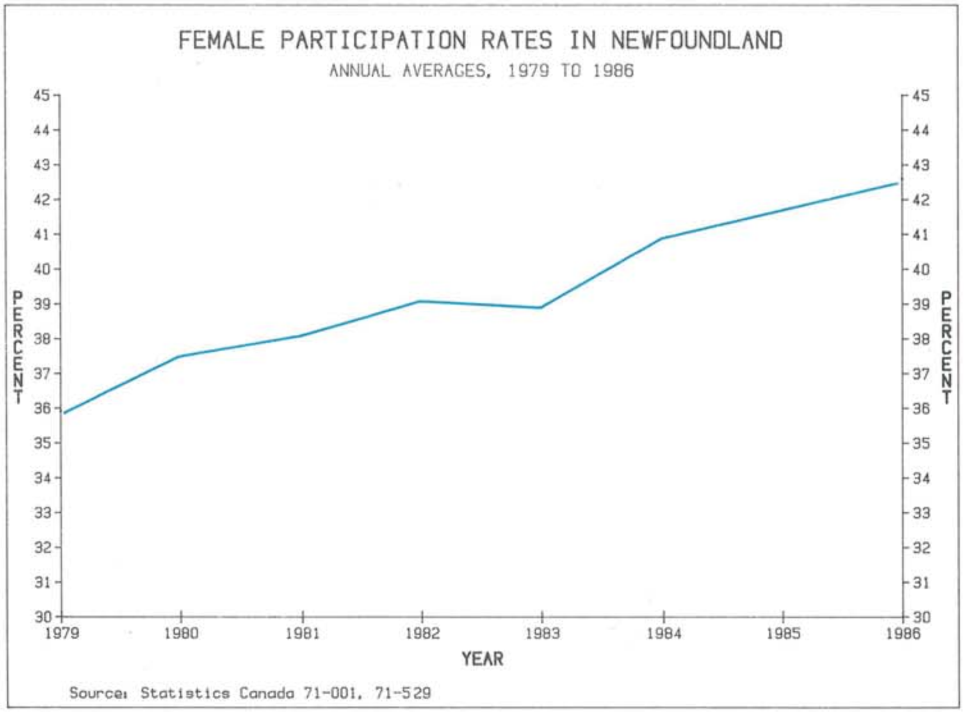


Diagram VII.4

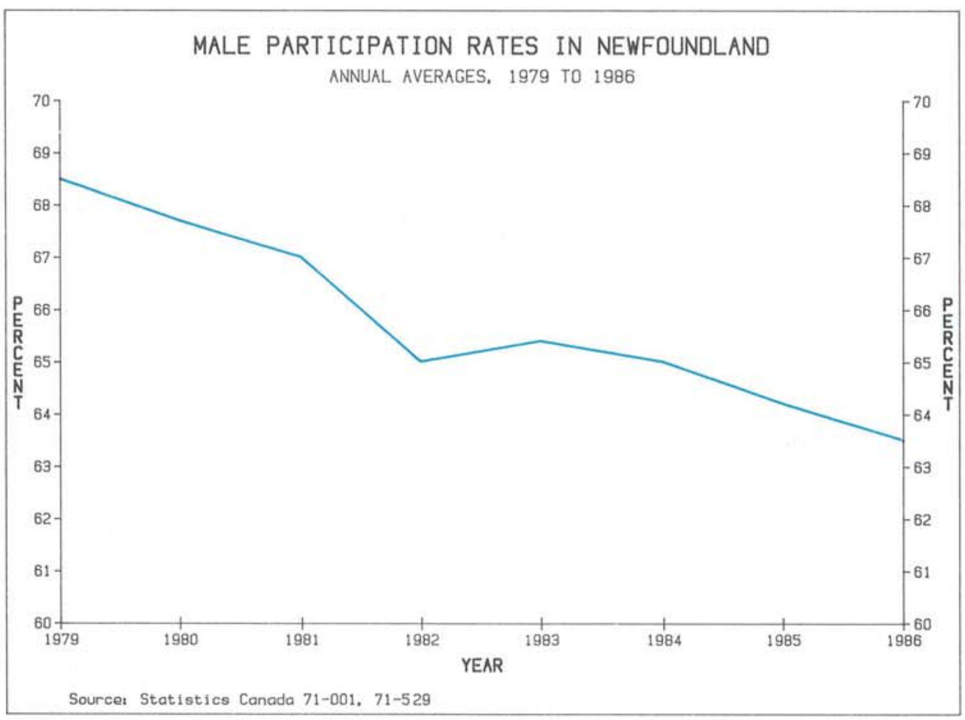


Table VII.1

ANNUAL AVERAGE LABOUR FORCE INDICATORS

Year	Participation Rates %	Labour Force (000's)	Employment (000's)	Unemployment Rate %
1979	52.3	200	170	15.1
1980	52.7	205	178	13.3
1981	52.6	208	179	13.9
1982	52.1	209	174	16.8
1983	52.1	214	174	18.8
1984	52.9	221	176	20.5
1985	53.0	224	176	21.3
1986	53.0	226	181	20.0

Source: Statistics Canada 71-529, 71-001.

The Labour Force Survey on which Table VII.1 above is based is conducted monthly and provides a 'snapshot' of annual average labour force activity such as employment during the year. For example, the number of people employed in the Province varies from month to month, particularly in seasonal industries. The Labour Force Survey adds together the monthly employment figures from January to December to determine the total number of person months of employment. This total, which may be thought of as the **labour effort,** is then averaged over the twelve months of the year to give an annual average profile of employment.

While the Labour Force Survey provides useful information regarding the amount of labour effort required in the economy, its limitations must be understood. By way of example, it provides only limited information about the number of people who held jobs for some period of time during the year or the number of people who actually participated in the labour force at different times. The population of labour force age represents the pool of both people and skills upon which employers within the Province can draw to meet present and future workforce requirements. In other words, it represents all potential labour force participants. **The actual numbers of people participating and the extent of their labour force activity are obscured in the annual averaging process.**

As indicated in Table VII.1 above, the annual average participation rate in 1986 was 53 percent. This means that of the 427,000 people in the Province of labour force age (all those persons 15 years of age and older), an **annual average** of 53 percent of these people or 226,000 participated in the labour force and experienced either employment or unemployment or both. If in fact more than 226,000 people actually participated in the labour force during 1986, this would not even be indicated by the **monthly** labour force statistics. The average of 226,000 person years spent in the labour force during 1986 was not necessarily representative of the total number of people who entered the labour force during the year to seek employment and who were either employed or unemployed.

While annual average labour force statistics provide useful information for some purposes, particularly in assessing the changing requirement for labour effort, they mask the complex and dynamic nature of this important element of the Newfoundland and Labrador economy.

People are continually moving into and out of the labour force and between states of employment and unemployment. Much of this activity is **hidden** when only annual average labour force data is examined.

In addition to the monthly Labour Force Survey on which annual average statistics are based, Statistics Canada conducts an Annual Work Patterns Survey. This survey attempts to capture labour force activity in terms of the actual number of people, rather than the annual average number of people, who participated in the labour force and were either employed or unemployed (or both) for some period of time during the year. Data from this survey together with data from the Labour Force Survey are provided in Table VII.2 below for 1985, the most recent year for which comparable data are available.

Table VII.2

NUMBER OF PERSONS IN THE LABOUR FORCE WHO WERE EITHER EMPLOYED OR UNEMPLOYED AT SOME TIME DURING 1985

	Persons in the Labour Force (000's)	Persons Employed (000's)	Persons Unemployed (000's)	Population of Labour Force Age (000's)
Annual Average	224	176	48	422
Labour Force Experience	286	267	114	422

Source: Statistics Canada 71-001 (annual averages) and The Annual Work Patterns Survey, Statistice Canada, March 1986.

The Annual Work Patterns Survey does not provide a picture of **labour effort** which is different from that given by the monthly Labour Force Survey. It does, however, provide a more informative picture of how that effort is met, and the degree of success being met by people's job search activities. During 1985, some 286,000 people representing 68 percent of the population of labour age participated in the labour force for some period; the **average** number of people participating was 224,000 or 53 percent. Furthermore, of the 286,000 people who entered the labour force in search of a **job** during 1985, 93.4 percent or 267,000 were successful. Clearly, the number of **jobs** obtained in the course of a year is very different from the annual average number of **person years** which account for total labour effort.

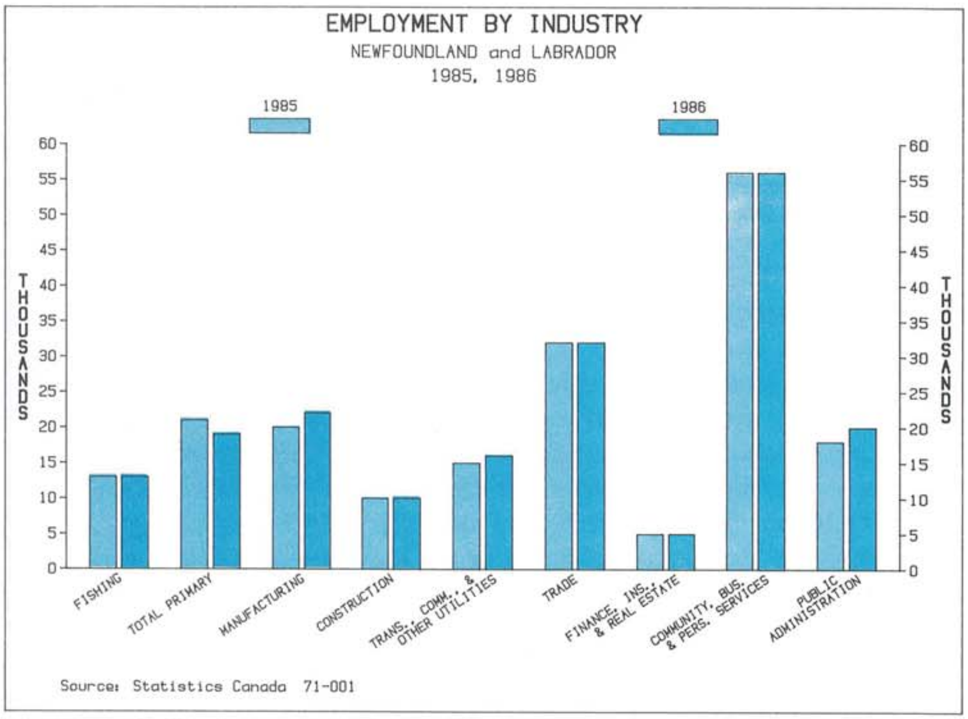
During 1985 annual employment totalled 176,000 person years. At the same time, however, some 267,000 people actually found work during the year and, on average, **jobs** lasted nearly 31.3 weeks, or nearly two-thirds of the year. Of course, some jobs would be seasonal whereas others would last a full year. While 114,000 people experienced some period of unemployment during 1985, the average duration of unemployment was about 8.3 weeks. The balance of approximately 12.4 weeks was spent outside the labour force. Furthermore, only 6.6 percent of labour force participants (or 19,000 people) were unsuccessful in finding any employment whatsoever. The number of people experiencing periods of unemployment during 1985 corresponds closely with the number of people receiving Unemployment Insurance, which serves to reduce the hardship associated with unemployment.

In terms of comparison with the country as a whole, 96.1 percent of Canadians who entered the labour force in search of a job found employment during 1985 as opposed to 93.4 percent in Newfoundland. The key difference, of course, is the average length of employment; 40.6 weeks in Canada compared to 31.3 weeks in Newfoundland.

There are many complex factors which influence the composition of the labour force over time and which lead to the dynamic nature of this important element of the economy. Only one year of labour force activity has been briefly examined here although important changes in the structure and composition of the labour force have occurred in recent years. Since these changes have important implications for the future size, age and skill structure of the labour force, a more detailed examination of these changes is provided in a special report at the end of this document.

Returning to annual averages, Diagram VII.5 illustrates the industries where employment gains and losses occurred in 1986. Employment in primary industries fell for a number of reasons. First, pulpwood production declined last year due mainly to inventory accumulation in 1985. Second, mining companies in particular have sought to increase output through improved productivity. This is a continuation of a process of rationalization which has enhanced the industry's competitiveness and will assist in ensuring its long term viability in the world market place.

Diagram VII.5



Employment in the manufacturing sector increased in 1986. This increase can be attributed primarily to an improved fishery in various places in Newfoundland and Labrador where employment in the food-processing industry peaked in June. Transportation, Communications and Other Utilities, as well as Public Administration also recorded increased employment in 1986 while employment in all other industries remained unchanged.

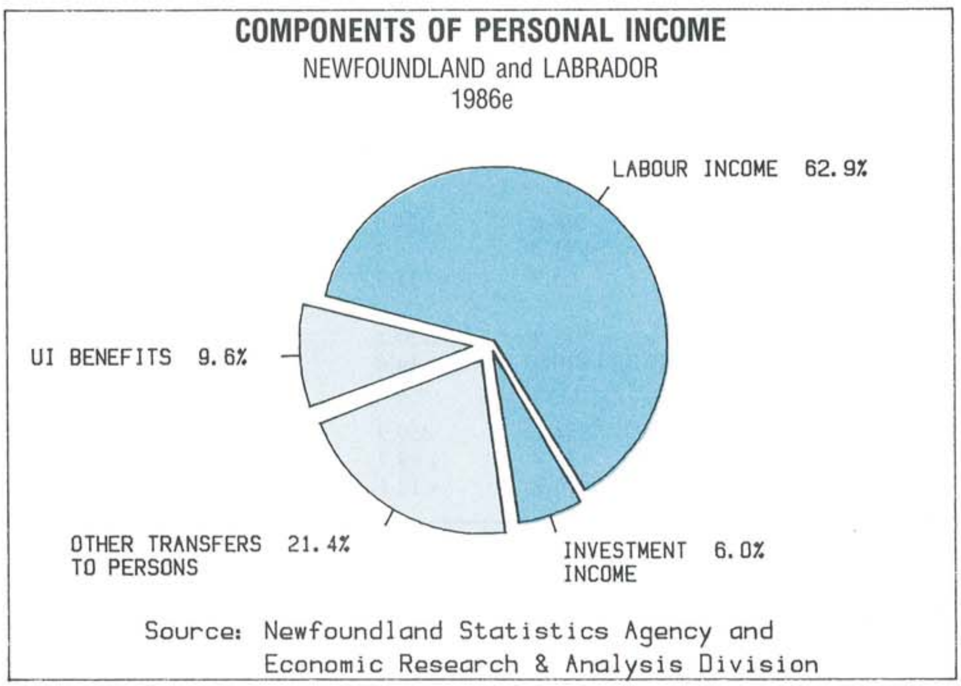
In 1987, gains of between 1,500 and 2,000 person years of employment are expected, mainly on the strength of improved prospects in primary forestry and fishing, mining, and certain industries of the service sector. However, as participation rates continue to increase, unemployment rates will fluctuate during the year and should average about 19.7 percent.

VIII. PERSONAL INCOME

Personal income measures the money received, from any source, by all individuals resident in the Province. In 1986, total personal income of $6.2 billion exceeded the value of Gross Domestic Product by nearly 2 percent. This represents a substantial cash flow through the economy of Newfoundland and Labrador. The amount of personal income available for consumption within the Province is a major determinant of the level of economic activity. It is also a major determinant of the standard of living which residents of the Province can enjoy. The amount of tax revenue which is available to Government for expenditure on public goods such as education, health and transportation systems is also influenced by both the level and distribution of personal income.

Personal income has the following components: labour income, investment income and transfer income, which includes Unemployment Insurance benefits. These components are illustrated in Diagram VIII.1 for 1986.

Diagram VIII.1



Real labour income consists mainly of total wages and salaries received by all workers in the Province. The level of total wages and salaries in the Province is primarily determined by the level and type of employment, and also by changes in labour productivity. In the past, total employment and total real labour income have generally moved in the same direction.

Transfer payments to individuals represent the second largest component of personal income in the Province and include such items as Unemployment Insurance benefits, social assistance, family allowances, pensions and old age security payments. Some components of transfer income, such as family allowances and old age security payments, are primarily related to demographic and social factors, while others, such as Unemployment Insurance payments, are related to employment and the level of economic activity in the Province.

After all personal taxes have been paid and personal consumption expenditures accounted for, a certain amount of personal income is available to be invested. These investments generate additional earned income for residents of the Province in the form of dividends from stocks, shares and mutual funds, interest on bonds, bank accounts and other savings instruments, and capital gains. In 1986, this form of income accounted for about 6 percent of all personal income in the Province.

Table VIII.1

PERSONAL INCOME: NEWFOUNDLAND & LABRADOR
1981-1986
(Millions of Dollars)

	1981	1982	1983	1984	1985e	1986e
Personal Income	4,408.0	4,899.0	5,287.0	5,618.0	5,955.0	6,220.0
% Change	+17.2	+11.1	+7.9	+6.3	+6.0	+4.5
% Change (Real)	+3.4	+1.0	+1.0	+1.8	+1.8	+1.4
Labour Income*	2,951.0	3,223.0	3,396.0	3,566.0	3,740.0	3,915.0
% Change	+17.5	+9.2	+5.4	+5.0	+4.9	+4.7
% Change (Real)	+3.7	-0.7	-1.4	+0.6	+0.7	+1.7
Interest, Dividends & Misc. Invest. Inc.	285.0	318.0	301.0	342.0	380.0	375.0
% Change	+46.9	+11.6	-5.3	+13.6	+11.1	-1.3
% Change (Real)	+29.5	+1.4	-11.4	+8.8	+6.7	-4.1
Transfer Income** (Excluding U.I.B.)	878.3	973.9	1,130.1	1,211.1	1,280.6	1,330.0
% Change	+11.2	+10.9	+16.0	+7.2	+5.7	+3.9
% Change (Real)	-1.9	+0.8	+8.6	+2.6	+1.5	+0.9
U.I. Benefits	293.7	384.1	459.9	498.9	554.4	600.0
% Change	+10.6	+30.8	+19.7	+8.5	+11.1	+8.2
% Change (Real)	-2.4	+18.9	+12.1	+3.9	+6.7	+5.1

*Labour Income includes wages, salaries and supplementary labour income, net income of non-farm incorporated business (including rent), military pay and allowance, and net income received by farm operators for farm production.

**Transfer income is comprised of payments from governments to individuals in form of items such as family and youth allowances, old age security.

e—estimates

Source: Statistics Canada, Newfoundland Statistics Agency, and Economic Research and Analysis Division.

The numerical values of the personal income components are provided in Table VIII.1. During every year from 1981 to 1986 real gains were recorded in total personal income as growth in the nominal dollar value exceeded the rate of inflation. The purchasing power of total personal income grew in real terms at an annual average rate of 1.7 percent. Periods of employment losses such as 1982 and 1983 were met with declines in labour income and, in some cases, investment income as workers were forced to expend savings in an effort to maintain their standard of living. In both of these years, losses in labour income were more than offset by an increased rate of growth in transfer income. This is to be expected as some types of transfer payments, such as Unemployment Insurance and social assistance, are designed to automatically stabilize income levels by counteracting decreases in labour income. The increased cash flow during the worst recession in recent history clearly benefited businesses in the Province as retail sales rose by 4.8 percent in real terms in 1983, a year in which both labour and investment income declined. After 1983, as economic conditions in the Province improved, labour income grew in real terms and the rate of growth in transfer income slowed considerably from the recession period. Much of the continued growth in transfer payments came from Unemployment Insurance benefits as rapid growth in the labour force continued to put upward pressure on the unemployment rate.

The growth pattern of individual components of personal income during the 1980's has been consistent with general economic trends and government policy direction throughout the period. Labour income increased dramatically in 1981 due to a combination of high wage settlements related to double digit inflation and strong employment gains in 1980 which carried through to 1981. Labour income declined in real terms during 1982 and 1983 due to the sharp decline in employment associated with the recession. Labour income growth improved in real terms from 1984 to 1986 as gains were recorded in both employment and GDP.

Income from savings and investments experienced major increases in 1981 due to record high interest rates. However, by 1983 earnings from these sources declined in real terms due to the effects of the recession. Rising levels of unemployment forced many individuals to utilize savings and liquidate investments in order to offset losses in earned income. This trend reversed itself in 1984 and 1985 as general economic conditions improved and interest rates remained in the 11 to 14 percent range. A decline in these earnings occurred in 1986 due to lower interest rates and work stoppages which again forced some individuals to expend savings. In additon, capital gains exemptions introduced in the 1985 federal budget may have led to some reallocation of resources as investment funds moved into non-interest bearing and non-taxable capital investments.

Transfer income, including Unemployment Insurance benefits, increased dramatically in 1982 and 1983 in response to falling employment levels and rising unemployment rates. The rate of growth in transfer income declined from 1984 to 1986 as economic conditions in the Province improved. Some of the growth in transfer income from sources other than Unemployment Insurance can be attributed to automatic inflation indexing of federal programs, and to the general economic recession which peaked in 1982 and 1983. The growth rate of these transfers has declined annually since 1983 in response to government expenditure restraint, improved economic conditions in the Province and demographic factors. Annual Unemployment Insurance benefits increased by only $45.6 million in 1986 following an increase of $55.4 million in 1985.

During 1986, with the exception of investment income, all components of personal income contributed to real growth of 1.4 percent. Real growth of 1.7 percent in labour income and a reduced real rate of growth for all types of transfer income were consistent with the annual average gain of 5,000 in employment and a decline in the numbers unemployed.

Total personal income is expected to grow by about 4.5 percent in nominal terms in 1987 due to an improved economic climate and anticipated gains of between 1,500 and 2,000 in employment. The current dollar value of personal income should reach $6.5 billion in 1987.

IX. CONSUMER SPENDING

Personal consumption expenditures within the Province make a significant contribution to the local economy. This is because the purchase of goods and services in the Province generates income and employment for local producers and distributors. The final contribution of expenditures to the domestic economy varies with the degree to which the items purchased are produced locally.

Table IX.1 outlines the distribution of consumption expenditure by type of product for a 'representative' Newfoundland family in 1982, the most recent year for which detailed data are available. The table indicates that the largest component of consumption expenditure was food which accounted for 26.1 percent. In order of importance, food was followed by shelter, transportation, and clothing.

Table IX.1

DISTRIBUTION OF CONSUMPTION EXPENDITURES BY TYPE FOR REPRESENTATIVE NEWFOUNDLAND FAMILY IN 1982

Category	Percentage of current consumption		
Food	**26.1**		
Shelter	**17.0**		
Principal Accommodation		16.0	
Rented			3.2
Owned			6.4
Water, Fuel and Electricity			6.4
Other Accommodation		1.0	
Household Operation	**6.7**		
Household Furnishings and Equipment	**5.0**		
Household Furnishings		2.6	
Household Equipment		2.1	
Services		0.1	
Clothing	**9.6**		
Transportation	**15.3**		
Private Transportation		14.0	
Public Transportation		1.4	
Health Care	**2.0**		
Personal Care	**2.6**		
Recreation	**5.4**		
Reading Materials and Other Printed Matter	**0.6**		
Education	**0.7**		
Tobacco Products and Alcoholic Beverages	**6.0**		
Miscellaneous	**3.0**		
TOTAL	100.0		

Note: Percentages may not add to total because of rounding error. There were 465 families in the sample with the average size being 3.68 persons.

Source: Statistics Canada catalogue 62-555.

The most important factors determining the level of consumer spending are personal disposable income (i.e., personal income after taxes), consumer confidence and interest rates. When personal disposable income rises, consumer confidence improves, or credit becomes cheaper and easier to obtain, then personal consumption expenditures tend to rise.

Several factors contributed to increased consumer spending in Newfoundland and Labrador during 1986. Gains in personal income exceeded inflation by 1.4 percent and this increased consumers purchasing power. A decline in the savings rate and an increase in the level of personal loans also fueled consumer spending growth. The average level of personal loans held by chartered banks in the Province increased by 11.5 percent in the first three quarters of 1986 compared with the same period in 1985. The decline in interest rates during 1986 was probably a major factor leading to increased consumer borrowing.

Retail trade statistics provide a good indication of the level of consumer spending. Preliminary estimates indicate that the value of retail trade in the Province rose by 6.1 percent in 1986 to a record level of $2,392 million. In December, the most important month for retail trade because of the Christmas season, there was a 14.0 percent increase over the same month in 1985. Stores dealing mainly in non-necessities or discretionary items (often referred to as luxury goods) were among those that experienced the strongest sales growth in 1986. This indicates an improvement in consumer confidence. These businesses included hardware stores, sporting goods and accessories stores, automotive parts and accessories stores, and book and stationery stores, all of which experienced sales growth in excess of 17 percent in 1986.

The largest decline in sales was recorded by service stations. However, the 15.3 percent decrease in sales is mainly attributable to lower gasoline prices and does not necessarily indicate a reduction in the volume of sales.

Transportation expenditures, which include purchases of new motor vehicles, accounted for 15.3 percent of family consumption expenditure in 1982 (See Table IX.1). Sales of new motor vehicles rose significantly in 1986 to a level of 24,525 units, an increase of 4.1 percent over 1985. The total value of motor vehicle sales rose by 10.5 percent to about $309 million. A more detailed breakdown of these sales by type of vehicle and place of manufacture is provided in Table IX.2. This table reveals that new commercial vehicles registered greater sales growth than passenger cars. As well, passenger cars manufactured outside of North America and Japan achieved the strongest sales growth with the number of units sold rising by 16.5 percent over 1985. The increasing popularity of these cars is probably a reflection of their low prices relative to the prices of competing vehicles. Also notable in 1986 was the decline in sales of Japanese made passenger cars. This decline is likely attributable to higher prices since the depreciation of the Canadian dollar against the yen made Japanese imports more expensive. The dollar value of Japanese passenger car sales rose even though the number of units sold declined.

Table IX.2

NEW MOTOR VEHICLE SALES IN NEWFOUNDLAND AND LABRADOR

	1986	Percentage Change from 1985
Total New Motor Vehicles		
Number of Units	24,525	4.1
Value of Sales	$309,410,000	10.5
Total Passenger Cars		
Number of Units	16,707	1.8
Value of Sales	$196,423,000	9.0
Passenger Cars Manufactured in North America		
Number of Units	13,196	1.1
Value of Sales	$155,671,000	6.8
Passenger Cars Manufactured in Japan		
Number of Units	1,834	-4.4
Value of Sales	$23,892,000	13.0
Passenger Cars Manufactured in Other Countries		
Number of Units	1,677	16.5
Value of Sales	$16,860,000	25.8
Total Commercial Vehicles		
Number of Units	7,818	9.3
Value of Sales	$112,987,000	13.2
Commercial Vehicles Manufactured in North America		
Number of Units	7,197	10.5
Value of Sales	$104,756,000	13.3
Commercial Vehicles Manufactured Overseas		
Number of Units	621	-2.7
Value of Sales	$8,231,000	12.6

Note: Commercial vehicles are those which are not passenger cars. They may or may not be bought for commercial uses. Similarly, passenger cars may or may not be bought for personal use.

Source: Statistics Canada catalogue 63-007.

Restaurants, caterers and taverns, which are part of the Community, Business, and Personal Services industry, also benefited from increased consumer expenditures in the Province during 1986. In the first ten months of the year, total receipts were $113.9 million, up by 12.2 percent over the same period in 1985.

Gains in personal income should translate into continued growth in consumer spending in 1987. Personal savings are not likely to experience a further decline in 1987 given the decreases in recent years. However, low interest rates may give consumers some incentive to make greater use of personal loans to finance increased spending.

X. INVESTMENT

Investment spending is important to the ongoing growth and development of the Province's economy in that it either adds to or enhances productive capacity (or capital stock) and hence the growth potential of the economy. For example, investment in the pulp and paper modernization program has enhanced both the quality of newsprint in the Province and the competitive position of the industry. Investment in a new paper machine, on the other hand, would expand the industry's newsprint capacity. Investment in maintaining and expanding infrastructure such as transportation and communication networks is essential to the efficient functioning of the economy. Oil and gas exploration is also treated as an investment since the discovery and subsequent development of recoverable reserves would lead directly to increased productive capacity in the Province.

Investment spending is classified as either capital or repair. Capital expenditures, which are essentially those made to purchase and install new durable physical assets such as buildings or machinery and equipment, are a major determinant of economic growth and development. Repair expenditures are those made to maintain the operating efficiency of existing durable physical assets.

Capital expenditure data, which provides an indication of investment activity in the Province, is provided in Table X.1 for 1985 and 1986. The estimates are based on a survey of investment intentions carried out by Statistics Canada last year. Capital expenditures include outlays for machinery and equipment as well as outlays for construction activity.

Table X.1

CAPITAL EXPENDITURES IN NEWFOUNDLAND AND LABRADOR
(millions of dollars)

	Construction Activities			Machinery & Equipment		
	1985		1986	1985		1986
Primary industries and Construction industry	731.0	(−34.7%)	477.2	68.2	(15.0%)	78.4
Manufacturing of food and beverages	8.4	(57.1%)	13.2	10.8	(30.6%)	14.1
Other Manufacturing	16.3	(8.0%)	17.6	108.9	(42.2%)	154.9
Transportation, communication other utilities	80.9	(−21.1%)	63.8	85.3	(46.1%)	124.6
Trade, finance, and commercial services	56.3	(135.7%)	132.7	82.5	(18.4%)	97.7
Institutions and government departments	276.0	(11.5%)	307.8	83.4	(9.1%)	91.0
Housing	228.2	(18.1%)	269.4	—		—
TOTAL	1397.1	(−8.3%)	1281.7	439.1	(28.3%)	560.7
Total excluding primary and construction industries	666.1	(20.8%)	804.5	370.9	(30.0%)	482.3

Note: 1986 data are investment intentions.

Source: Statistics Canada 61-206.

For most industries, strong growth of expenditures on both machinery and equipment and construction activities was recorded in 1986. The major exception was construction in primary industries which includes expenditures on oil and gas exploration. If the primary and construction industries are excluded from the totals, then 1986 expenditures on construction activities grew by 20.8 percent and expenditures on machinery and equipment grew by 30.0 percent.

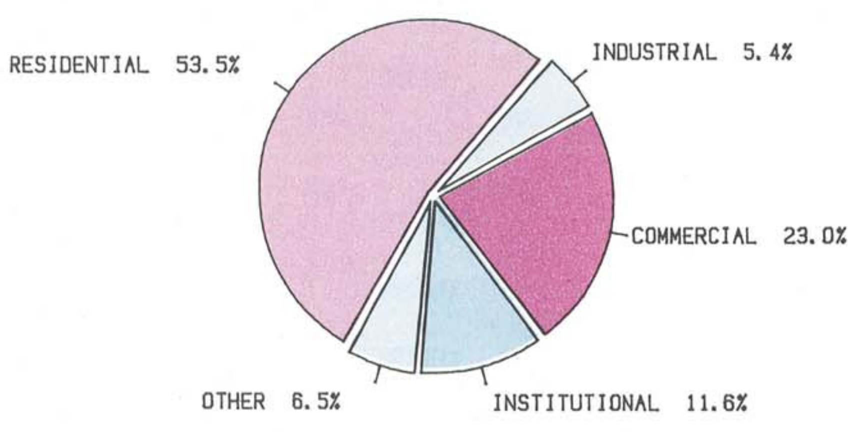
The investment survey also indicated that total repair expenditures would rise during 1986 by 2.5 percent to $545.1 million. The bulk of these expenditures (59.4 percent) were for machinery and equipment repair while the remainder were for construction repair activity. Repair expenditures are essential to maintain the Province's existing capital stock.

Construction expenditures (both capital and repair) are classified as either building construction or engineering construction. Total building construction by type of expenditure in 1986 is illustrated in Diagram X.1. Residential construction accounts for more than half of building construction while commercial and institutional construction account for a further 34.6 percent.

Engineering construction includes all types of construction expenditures that do not involve the construction or repair of buildings. Examples include the construction of roads and bridges. As illustrated in Diagram X.2, engineering construction expenditures in 1986 were dominated by oil and gas spending, most of which was related to offshore oil and gas exploration activity. The remainder consisted largely of expenditures involving the development of infrastructure for the Provincial economy such as roads, electric power facilities, and water and sewer projects.

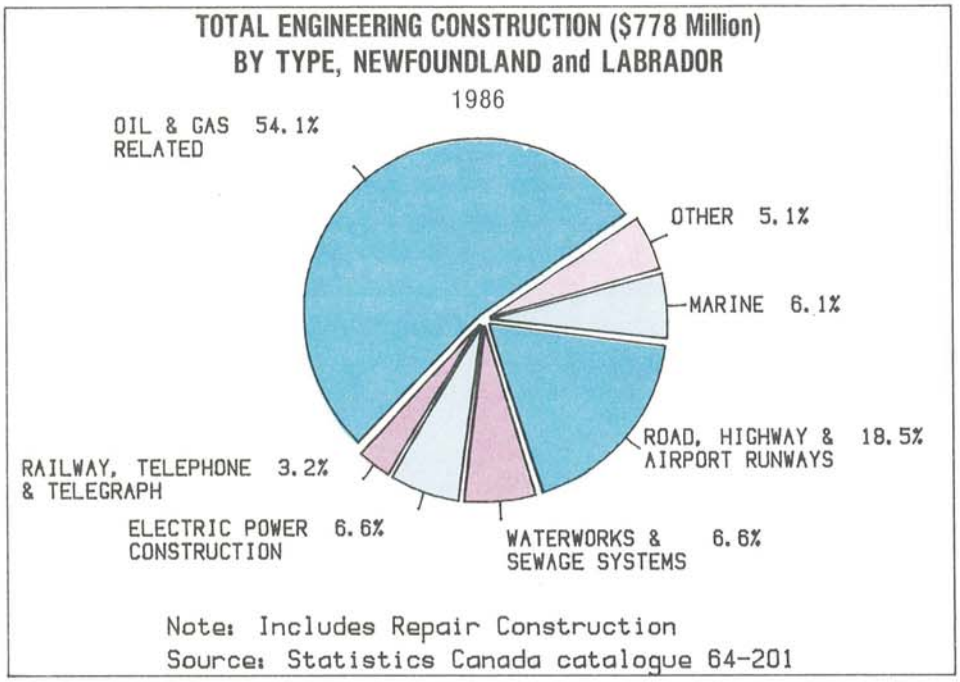
Diagram X.1

TOTAL BUILDING CONSTRUCTION ($649 Million)
BY TYPE, NEWFOUNDLAND and LABRADOR
1986



Note: Includes Repair Construction
Source: Statistics Canada catalogue 64-201

Diagram X.2



While investment plays a crucial role in both maintaining and expanding the economy's productive capacity, it is also an important component of total demand for the output of goods and services in the Province. Total investment expenditures in the Province were estimated to be $2,388 million in 1986. While investment expenditures have a high import content, especially for machinery and equipment purchased from outside the Province, some of these expenditures would result in additional purchases of goods and services produced within the Province. Furthermore, the amount and type of investment spending determines the level of activity in the construction industry.

Statistics Canada has not yet released the survey of investment intentions for 1987. Nevertheless, another sharp decline in oil and gas exploration activity combined with the completion of modernization activity at the Grand Falls paper mill early in 1987 and reduced expenditures on the Corner Brook paper mill is expected to result in a decrease in real terms in total capital expenditures. An early release of the Hibernia project could offset declines in other investment categories.

XI. THE SERVICE SECTOR

The service sector, which consists of five major industry divisions, accounted for approximately 65 percent of total Gross Domestic Product (GDP) in Newfoundland and Labrador during 1985. In the same year, 126,000 person years of employment were generated in the service sector, or more than 72 percent of total employment. Since some of this employment would be seasonal, annual average employment statistics would understate, to some extent, the number of jobs supported by this industry. Table XI.1 below outlines the 1985 distribution of total GDP within the service sector in order of the size of each industry's contribution to the total.

Table XI.1

NEWFOUNDLAND AND LABRADOR SERVICE SECTOR
1985 GROSS DOMESTIC PRODUCT BY INDUSTRY
AT FACTOR COST (constant 1981 dollars)

	$ Millions	Percent of Total Service Sector
Community, Business & Personal Services	940.0	34.0
Public Administration	590.0	21.3
Wholesale & Retail Trade	450.0	16.2
Transportation, Communications & Other Utilities	420.0	15.0
Finance, Insurance & Real Estate	375.0	13.5
TOTAL	2,775.0	100.0

Source: Newfoundland Statistics Agency and Economic Research and Analysis Division, Cabinet Secretariat.

Note: When GDP is disaggregated to an industry level, there is a slight residual error of estimate. In 1985, the residual was -$75 million. For this reason, the addition of figures in this table and Table IV.1 will yield a slightly different estimate than the 1985 total GDP estimate used elsewhere ($4,215, constant 1981 dollars) in this report.

The high concentration of the Province's GDP in these service industries is directly related to the wide range of public goods and services provided by governments such as education, health and welfare, and the high level of demand for the goods and services provided by non-government industries. These service industries are very labour intensive and this, together with the considerable requirement for services in the Province, accounts for the relatively large size of this component of the economy.

The contribution made to GDP by government activities and expenditures in the Province are primarily reflected in the **Community, Business and Personal Services and Public Administration** industries, which together accounted for 55.3 percent of service sector GDP and 35.7 percent of total GDP in 1985. An examination of the areas of government responsibility provides considerable insight into why government activities contribute so significantly to economic activity within the Province. Government and institutions of government are responsible for the development, provision and maintenance of social and economic infrastructure throughout the economy; development, management and regulation of the Province's primary resources; and development, management and delivery of essential services to the population such as health, education, welfare and justice. These essential goods and services support the basic framework within which economic development and activity in the Province occurs. The table below highlights major areas of Provincial government responsibility in the 1986/87 fiscal year together with illustrative examples of the types of services provided by various Departments of Government.

Table XI.2

AREAS OF RESPONSIBILITY OF GOVERNMENT, GOVERNMENT AGENCIES AND INSTITUTIONS AND EXAMPLES OF THE SERVICE PROVIDED

Area of Responsibility	Service Provided	Example of Government Department Responsible for Provision of the Service
Infrastructure — Provision and Management	Highway systems — construction and maintenance,	Transportation
	Airports, ferry terminals, water systems, supply &	Environment
	distribution of electrical energy	Energy
Resources — Management and Regulation	Fishery — Provides infrastructure, manages and promotes	Fisheries
	Forestry — management and development	Forest Resources and Lands
	Minerals — manages the Province's mineral resources	Mines
	Protection and enhancement of the environment	Environment
Essential services to the population — Provision and Maintenance	Develops and maintains Provincial education system (primary, elementary & secondary)	Education
	Co-ordinates, facilitates, monitors, post-secondary education and training services	Career Development and Advanced Studies
	Co-ordinates existing hospital and nursing homes services	Health
	Income support for needy persons; protection of children, adoption services and services to disabled or disadvantaged persons	Social Services
	Protection of citizens, persons and property	Justice

Table XI.2 (Cont'd)

AREAS OF RESPONSIBILITY OF GOVERNMENT, GOVERNMENT AGENCIES AND INSTITUTIONS AND EXAMPLES OF THE SERVICE PROVIDED

Area of Responsibility	Service Provided	Example of Government Department Responsible for Provision of the Service
Development of the Economy	Identifies and promotes business opportunities in the Province relating to resource, trade and tourism development	Development & Tourism
	Economic and social development in rural areas	Rural, Agricultural and Northern Development
	Provides housing and plans and administers industrial parks and properties	Newfoundland and Labrador Housing Corporation
	Local government and rural planning and development; also, provision of water and sewer services in unincorporated areas	Municipal Affairs
Other Public Services	Consumer and commercial services to the general public	Consumer Affairs and Communications
	Quality of life, management of parks, and wild life resources preservation, recreation and fitness	Culture, Recreation and Youth
	Labour standards and procedures; occupational health & safety; labour & management	Labour

Source: Economic Research and Analysis Division, Cabinet Secretariat.

These essential services are costly for Government to provide as demonstrated by the estimated gross expenditures associated with their provision in the 1986/87 fiscal year. The expenditures, which are outlined in Table XI.3 below, flow into the economy through the government Departments which provide, or ensure the provision of, the various services. In some instances a Department will provide a service directly whereas in other instances, the Department ensures the provision of services. In either case, the activities of government in carrying out its responsibilities will influence the level of activity in both the goods and service producing sectors.

Table XI.3

ESTIMATES OF GROSS EXPENDITURES BY THE PROVINCIAL GOVERNMENT DURING THE 1986-87 FISCAL YEAR BY CATEGORY OF RESPONSIBILITY AND DEPARTMENT OF GOVERNMENT

Category of Responsibility	Responsible Department	Revised Estimate ($000)	Percent of Total
Infrastructure — Provision and Management	Transportation	188,337	
	Environment	4,070	
Resources — Management and Regulation	Fisheries	24,925	
	Environment	••	
	Forestry	30,509	
	Energy	49,164	
	Mines	8,207	
SUB-TOTAL		**305,212**	**14.7**
Essential services to the population — Provision and Development	Education	415,500	
	Career Development & Advanced Studies	172,905	
	Health	611,027	
	Social Services	186,204	
	Justice	85,644	
SUB-TOTAL		**1,471,280**	**70.6**
Development of the Economy	Development & Tourism	24,299	
	Rural, Agricultural & Northern Development	33,450	
	Newfoundland & Labrador Housing Corporation	10,272	
	Municipal Affairs	97,303	
SUB-TOTAL		**165,324**	**8.0**
Other Public Services	Consumer Affairs and Communications	2,207	
	Culture, Recreation & Youth	33,082	
	Labour	6,426	
SUB-TOTAL		**41,715**	**2.0**
General Government(1)		**97,081**	**4.7**
Total Gross Government Expenditures		2,080,612	100.0

(1) Includes costs of the Executive Council, Department of Finance, the Legislature and the Department of Public Works. Excludes Consolidated Fund Services.

•• Included elsewhere.

Source: Treasury Board.

As federal and municipal government expenditures flowing into the economy are omitted from Table XI.3 above, this table does not include all government expenditures made in the Province which influence the level of economic activity through the provision of public goods and services. Federal government expenditures can be broken out in much the same way as Provincial expenditures since, in many instances, both levels of government have shared responsibility for the provision and maintenance of certain services. For example, the Canada Employment and Immigration Commission and the Department of Career Development and Advanced Studies share responsibility for the development of the Province's labour force. Other services, such as postal services (Canada Post), are the sole responsibility of the Federal government. Expenditures by all three levels of government exert a strong influence on economic activity in the Province and on the size and composition of the service sector.

Virtually all government departments are considered part of the Public Administration industry. In view of the wide range of responsibilities delegated to government, it is not surprising that this industry accounted for 21.3 percent of GDP in the service sector in 1985 and 13.8 percent of total GDP. Provision of such a wide range of services requires a considerable number of people. This is reflected in the Labour Force Survey which, in 1986, indicated that approximately 20,000 person years of employment were generated in the Public Administration industry. Although most government departments fall under Public Administration, the expenditures of these departments affect Gross Domestic Product and the general level of economic activity in other industries throughout the economy. Table XI.4 below summarizes government departments or agencies in terms of some illustrative examples of industries which benefit from the expenditures.

Table XI.4

ILLUSTRATIVE EXAMPLES OF INDUSTRIES WHICH BENEFIT, IN TERMS OF EMPLOYMENT AND GDP, FROM GOVERNMENT EXPENDITURE BY DEPARTMENT OR AGENCY

Public Administration	Industry
(Department/Agency)	
Transportation	Transportation, Communication & Other Utilities; Construction Industry; all industries which use and benefit from the Transportation System
Environment	Various components of the Service Sector
Mines & Energy	Electric Power & Water Utilities Industry; Mining Industry
Fisheries	Primary Fishing and Fish Products Industries; Transportation, Communications and Other Utilities, Construction Industry
Education	Community, Business and Personal Services
Career Development & Advanced Studies	All Industries

Table XI.4 (Cont'd)

ILLUSTRATIVE EXAMPLES OF INDUSTRIES WHICH BENEFIT, IN TERMS OF EMPLOYMENT AND GDP, FROM GOVERNMENT EXPENDITURE BY DEPARTMENT OR AGENCY

Public Administration	Industry
Health	Community, Business and Personal Services
Development & Tourism	Resource Industries; Service Industries
Rural, Agricultural & Northern Development	Resource Industries; Wholesale and Retail Trade
Newfoundland & Labrador Housing Corporation	Construction
Municipal Affairs	Construction, Transportation, Communication and Other Utilities
Consumer Affairs	Consumers in general
Culture, Recreation & Youth	Community, Business and Personal Services; Construction Industry
Labour	All Industries
Social Services	Community, Business and Personal Services; Wholesale and Retail Trade
General Government	Public Administration

Source: Economic Research & Analysis Division, Cabinet Secretariat.

The Community, Business and Personal Services industry accounted for 34 percent of GDP in the service sector in 1985 and 21.9 percent of total GDP; this was the largest of all industries in the Province in terms of both GDP and employment. Approximately two-thirds of this industry is made up of services incidental to education, health and welfare, all of which are related to the 'provision and development of essential services to the population'. As illustrated in Table XI.3, this component of government expenditure accounted for 70.6 percent of total expenditures in the 1986/87 fiscal year. The provision of education and health services is particularly labour intensive as demonstrated by the fact that in 1984 more than 20,000 persons were employed in the provision of these services alone.

In addition to services such as education, health and welfare provided by government, many other services of a business or personal nature fall within the Community, Business and Personal Services industry. As illustrated in Table XI.5 below, this component of the industry provides a wide range of services to the public in addition to those attributable to governments.

Table XI.5

COMMUNITY BUSINESS AND PERSONAL SERVICES OTHER THAN THOSE PROVIDED BY GOVERNMENT

Major Service Group	Type of Service
Motion Picture, Audio and Video Production & Distribution	Motion Picture Theatres, Video Shops
Sports and Recreation, Clubs and Services	Golf & Curling Clubs Bowling Alleys
Personal Household Service	Barber and Beauty Shops Laundries & Cleaners Funeral Homes
Membership Organizations	Religious Organizations Labour Organizations Political Organizations
Computers and Related Services	Computer Services Computer Equipment Maintenance and Repair
Accounting and Bookkeeping Services	Chartered and Certified Accountants Accounting and Bookkeeping Services
Architectural, Engineering and Other Scientific and Technical Services	Architects, Engineers, Draftsmen
Lawyers and Notaries	Barristers, Solicitors, Lawyers
Other Services	Machine & Equipment Rental Automobile & Truck Rental & Leasing Photographers Electric Motor Repairs Travel Services
Accommodation Services	Hostel, Motel and Hotel Services
Food and Beverage Services	Restaurants, Caterers, Taverns, Bars and Night Clubs

Source: Standard Industrial Classification 1980 and Economic Research & Analysis Division, Cabinet Secretariat.

The level of output and employment for some components of the Community, Business and Personal Services industry tends to be fairly stable from one year to the next except in times of government budgetary restraint. For example, the requirement for law enforcement services and for education and health are strongly related to demographic and social factors. Other components of the industry are primarily related to the general level of economic activity in the Province. Changes in real wages and in the level of employment will influence the level of output of all components of this industry.

For the Community, Business and Personal Services industry as a whole, annual average employment was estimated at 56,000 person years in 1986, unchanged from 1985. Real GDP in this industry, however, increased by 3.5 percent in 1986 and is expected to increase by between 2.8 and 3.1 percent in 1987.

The contribution of wholesale firms and retail outlets to economic activity within the Province is reflected in the GDP of the **Wholesale and Retail Trade** industry, the third largest component of Provincial GDP. In 1985, this industry accounted for 16.2 percent of GDP in the service sector and 10.5 percent of total GDP. In the same year, some 32,000 person years of employment were generated in this industry, or approximately 18.2 percent of total employment.

Wholesale firms are those primarily engaged in the purchase of goods for sale and distribution to retailers and to industrial, commercial, institutional or professional users and, sometimes, to other wholesalers. Wholesalers also act as agents or brokers, buying or selling merchandise on a commission basis. Illustrative examples of the types of products distributed by wholesalers in the Province are provided in Table XI.6 below.

Retail businesses are primarily engaged in buying commodities for resale to the general public for household, personal or business consumption and in providing related retail services such as product installation and repair.

Table XI.6

PRODUCTS DISTRIBUTED BY THE WHOLESALE TRADE SERVICE INDUSTRY

Major Product Group	Type of Product
Food	Confectionaries, Poultry & Eggs, Meat & Meat Products, Fish & Seafood, Dairy Products
Beverages	Beers, Alcoholic Beverages, Soft Drinks
Drugs & Toilet Preparations	Drugs and Druggist Sundries
Apparel	Clothing, Footwear
Electrical & Electric Household Appliances & Parts	Electrical House Appliances
Household Furniture	Furniture—Kitchen, Bedroom, Living Room
Household Furnishings	China & Glassware, Floor Coverings, Draperies
Motor Vehicles	Automobiles (new & used), Buses, Trailers
Motor Vehicle Parts	Automotive Parts & Accessories, Recapping Tires, Retreading Tires
Hardware	Combination of Basic Lines of Hardware
Lumber & Building Material	Lumber, Plywood, Paint, Glass, Wallpaper
Machinery & Equipment	Office & Store Equipment, Dental, Hospital & School Equipment
Toys, Amusement & Sporting Goods	Toys, Firearms, Tents

Source: Standard Industrial Classification (1980) and Economic Research and Analysis Division, Cabinet Secretariat.

An examination of the types of firms found in the Retail Trade industry and the types of products distributed aids in understanding the relative importance of this industry. Table XI.7 highlights the types of goods and services provided by the retail segment of the industry.

Table XI.7

**RETAIL TRADE STORES:
ILLUSTRATIVE EXAMPLES OF THE TYPES OF GOODS SOLD**

Type of Establishment	Product Sold
Food Stores	Usual line of products carried by Chain Grocery Stores, Corner Grocery Stores, Supermarkets
Liquor Stores	Beers, Wines & Liquors
Prescription Drugs & Patent Medicines Stores	Pharmaceutical and Health Care Products
Shoe, Apparel, Fabric & Yarn	Shoes, Men & Women's Clothing, Fabric & Yarns
Household Furniture, Appliance & Furniture Stores	Household Furniture, Appliances & Furnishings, Television & Radios, Drapery & Floor Coverings
Automotive Vehicles, Parts & Accessories Stores	Automotive Dealers (new & used), Motorcycle & Snowmobile Dealers, Gasoline Service Stations, Automotive Parts, Motor Vehicle Repair Shops
General Retail Merchandising Stores	Usual line of products carried by Department Stores, General Merchandise Stores
Other Retail Stores	Books & Stationery, Paint, Glass & Wallpaper, Hardware, Sporting Goods, Jewellery Stores, Musical Instruments, Toys, Optician's Shops, Monument & Tombstones, Mobile Homes

Source: Standard Industrial Classification (1980) and Economic Research and Analysis, Cabinet Secretariat.

There is a high level of demand from all areas of the economy for these goods and services, and Table IX.1 is repeated here as Table XI.8 to illustrate this fact for the household sector. This table outlines the distribution of consumer expenditures in the Province for a representative family in 1982. It is readily apparent that at least 60 percent of total consumer expenditures are related to the goods and services provided by the Wholesale and Retail Trade industry. In 1986, as discussed in Section IX, the value of retail sales in the Province was $2.392 billion. This does not represent the total amount of cash flow through this industry, however, since all sales and services are not captured by retail trade statistics, particularly in light of the fact that sales by wholesalers are excluded from retail trade statistics.

Table XI.8

DISTRIBUTION OF CONSUMPTION EXPENDITURES BY TYPE FOR REPRESENTATIVE NEWFOUNDLAND FAMILY IN 1982

Category	Percentage of current consumption		
Food	**26.1**		
Shelter	**17.0**		
Principal Accommodation		16.0	
Rented			3.2
Owned			6.4
Water, Fuel and Electricity			6.4
Other Accommodation		1.0	
Household Operation	**6.7**		
Household Furnishings and Equipment	**5.0**		
Household Furnishings		2.6	
Household Equipment		2.1	
Services		0.1	
Clothing	**9.6**		
Transportation	**15.3**		
Private Transportation		14.0	
Public Transportation		1.4	
Health Care	**2.0**		
Personal Care	**2.6**		
Recreation	**5.4**		
Reading Materials and Other Printed Matter	**0.6**		
Education	**0.7**		
Tobacco Products and Alcoholic Beverages	**6.0**		
Miscellaneous	**3.0**		
TOTAL	100.0		

Note: Percentages may not add to total because of rounding error. There were 465 families in the sample with the average size being 3.68 persons.

Source: Statistics Canada 62-555.

The Wholesale and Retail Trade industry purchases manufactured goods locally and links the Province's economy to national and international economies through its imports. Local wholesalers import products from numerous markets and as well, large national clothing, food and hardware distribution chains and other companies ship goods directly to their wholesale and retail outlets in the Province.

Because the Wholesale and Retail Trade industry distributes goods to all areas of the Provincial economy, its performance and output depends on the level of activity in other industries in both the goods and service sectors. For example, increases in the level of employment or real wages in Public Administration will influence the demand for goods sold by the Wholesale and Retail Trade industry. Also, growth in the fishing industry or increased activity in the construction industry will stimulate increased output in the Wholesale and Retail Trade industry.

In 1986, the Wholesale and Retail Trade industry benefited from both increased employment and increased real personal income. Although the level of employment in the industry was unchanged from 1985, real GDP grew by 2.6 percent and is expected to increase by about 1.4 percent in 1987. This is consistent with the anticipated performance of other Provincial industries in 1987 and with anticipated gains in employment and real personal income.

The **Transportation, Communications and Other Utilities** industry accounted for 15 percent of GDP in the Province's service sector in 1985 and 9.8 percent of total GDP. Annual average employment in 1986 approximated 16,000 person years, a gain of 1,000 over 1985.

The Transportation, Communications and Other Utilities industry, which is larger in terms of GDP, than any of the goods producing industries, includes the activities of firms and governments which provide transportation and communications links within the Province and to the rest of the world. The services provided by this industry are fundamental, and are essential to the functioning of the economy. As Table XI.9 demonstrates, this industry provides transportation for individuals within the Province, as well as to and from the Province. The industry also provides for the movement of large volumes of freight to and from the Province. This is particularly critical for Newfoundland and Labrador since virtually all of the output of the primary and secondary industries such as fish products, pulp and paper products and iron ore are exported and large volumes of consumer goods are imported. The maintenance of transportation networks and the provision of communications services such as radio and television, as well as telephone and postal services, are also important to the Province. In view of the magnitude, and wide range, of services offered, it is not surprising that output and employment in this industry is so large.

Table XI.9

SERVICES PROVIDED BY THE TRANSPORTATION COMMUNICATIONS & OTHER UTILITIES INDUSTRY

Type of Service	Services Provided
Air Transport	Air Passenger Service, Air Cargo Servicing, Airport Operations
Railway Transport	Container Service, Railway Freight
Water Transport	Coastal Shipping, Freight Transport, Ocean Transportation
Truck Transport	General Freight, Fish, Forest and Consumer Products
Other Transportation & Services Incidental to Transportation	Taxicab; Highway, Street & Bridge Maintenance; Storage & Warehousing
Telecommunications Broadcasting	Radio & Television Broadcasting
Telecommunications Carriers	Cable Service, Public Telephone, Satellite Communications, Telephone Network
Postal & Courier	Postal Service, Parcel Express, Pick-up & Delivery

Source: Standard Industrial Classifications, 1980 and Economic Research and Analysis Division, Cabinet Secretariat.

Some components of the Transportation, Communications and Other Utilities industry are more directly related than others to the level of economic activity in other sectors of the economy, particularly in the short term. The communications and other utilities components is related to the general level of economic activity and also to government policy and demographic factors. For example, decisions relating to changes in the staff complement or capital expenditure program of the Canadian Broadcasting Corporation (CBC) are influenced by Federal government policy, while, increases in the number of telephone lines required will be more directly dependent on population growth. The transportation component, however, will be influenced more, in the short term, by the level of activity in other goods and services industries. For example, increased activity is anticipated during 1987 in the fishery, forestry, and Wholesale & Retail Trade industries. This, combined with gains in real personal income, will cause the level of transportation activity to increase as well because of the increased movement of goods and people. The outlook for the Transportation, Communications and Other Utilities industry in 1987 is positive with GDP forecast to rise by about 2.0 percent.

The contribution to Provincial GDP of firms which provide banking, financial, insurance and real estate services to the general public, to governments, and to businesses and institutions are primarily reflected in the **Finance, Insurance and Real Estate** industry. In 1985 this industry accounted for 13.5 percent of GDP in the service sector and 8.7 percent of total GDP. Employment was 5,000 in 1986 on an annual average basis, unchanged from 1985, however, GDP increased by 3.5 percent and an increase of between 3.6 and 4.0 percent is forecast for 1987.

Demand for the services of the Finance, Insurance and Real Estate industry tends to be high but relatively constant, in the short term. For example, between 1979 and 1985 there was virtually no growth of GDP in this industry. This is largely due to the nature of the services provided by the industry as outlined in Table XI.10. The services are important to the public in general as well as to business and to government, however, the level of output for some components of the industry are related more to long term economic development and population growth trends than to the level of economic activity from one year to the next.

Table XI.10

EXAMPLES OF ESTABLISHMENTS PROVIDING SERVICES IN THE FINANCE, INSURANCE & REAL ESTATE INDUSTRY

Banks	Investment Dealers
Trust Companies	Life & Health and Property Insurance
Credit Unions	Operators of Buildings & Dwellings
Consumer Loan Companies	Real Estate Agencies
Business Financing Companies	

Source: Standard Industrial Classification, 1980 and Economic Research & Analysis, Cabinet Secretariat.

It is clear from the previous discussions that most of the services provided by the Province's service sector are consumed within the Province. There are, however, **exportable services** such as tourism. The Province's tourism industry has been a traditional export of the Newfoundland and Labrador service sector. While much of the tourist activity falls under the Community, Business and Personal Services industry, other industries such as Transportation and Wholesale and Retail Trade also benefit.

In 1985, the last full year for which statistics are available, the Tourism industry generated a cash flow of approximately $244 million in the Province and estimates for 1986 indicate an increase of approximately 6 percent. This industry, like many other components of the service sector, is labour intensive and it is estimated that in 1985 approximately 7,500 person years of employment, shared between 10,600 individuals, was generated. This represents slightly in excess of 4 percent of annual average employment in the Province during 1985.

The Tourism industry has four main components: accommodation and lodging, food services, transportation, and tourist attractions. In 1986, several major improvements were made to the accommodation and lodging component. Under the Federal-Provincial Tourism Development Subsidiary Agreement (TDSA), funds were provided to upgrade a large number of tourist lodging establishments around the Province. In addition, the TDSA provided funding for renovations to Hotel Gander as well as funding towards the Hotel-Convention Center in St. John's, which is slated for completion in the fall of 1987.

There were no major changes in the food service component of the tourist industry during 1986, however, the transportation component saw major changes. CN Marine became an independent Crown Corporation known as Marine Atlantic. Their new 1,200 passenger ferry, the MV Caribou, began operating in January between North Sydney, Nova Scotia and Port aux Basques; this considerably enhanced the quality of water transportation available to tourists. A similar vessel will provide ferry services between North Sydney and Argentia beginning in 1989.

Two new regional airlines began operating early in 1986, increasing the level of competition in the air transport industry and providing more attractive airfares to potential tourists. Air Atlantic was created in February 1986 and serves as a feeder to the Canadian Pacific (CP) Air network. Air Nova is a new airline which serves as a feeder to the Air Canada network. The transportation sector is expected to stabilize during 1987 with no major new additions anticipated.

The 'tourist attraction' component of the tourism industry benefited from several additions or improvements in 1986. The Marble Mountain ski area near Corner Brook, the Splash 'n' Putt Park near Glovertown, and Sunnyside Park near Cormack are some examples. As well, the Terra Nova National Park has undergone some minor improvements as have the downtown areas of St. John's and Carbonear which should prove attractive to tourists.

Several major improvements or additions to tourist attractions are projected for 1987. At present, there is only one fluvarium in North America where visitors can observe fish in their natural habitat; a second is planned for St. John's in 1987. The Gros Morne national park is undergoing major changes to its camping and recreation areas. An interpretation center is in the planning stages for the historic town of Trinity and further improvements are scheduled in the Humber Valley and the Terra Nova Park areas.

Despite heavy competition in national and international markets, the Newfoundland and Labrador tourist industry will continue to experience steady growth in 1987 because of improved and expanded infrastructure and aggressive marketing efforts.

The period since the mid-1970's has seen the development of a new component in the service sector of the Province. This new, non-traditional exportable service relates to ocean and offshore **research and development** (R & D). R & D in relation to the oceans and the offshore has become firmly established, and recent developments indicate that expansion of this sector will continue.

Due to the vital importance of ocean resources to the Province's economy, and several key developments such as offshore oil and gas exploration, research and development in ocean-related sciences has led to the growth of this new component of the service sector. Memorial University of Newfoundland has played a lead role in the expansion of ocean related R & D and is the site for many of the physical research facilities that can be found within the Province. The Centre for Cold Ocean Resources Engineering (C-CORE) is located on the University campus. C-CORE's long term research agenda revolves around three main areas: (1) the measurement of ice impact forces on various offshore structures; (2) the development of ice hazard detection radar systems; and (3) research related to ice scouring on the ocean floor. Funding for C-CORE over a five year period in the amount of $5 million was recently approved under the Canada-Newfoundland Offshore Development Fund Agreement. These funds will be used to support and accelerate long term research and development work at C-CORE.

The Marine Sciences Research Laboratory (MSRL) of Memorial University, located in Logy Bay just outside St. John's, is currently pursuing research in aquaculture, physiological studies of marine animals and fish, and other studies related to potential offshore oil and gas development. The Newfoundland Institute for Cold Ocean Science (NICOS) is responsible for coordinating basic oceanographic research within the Faculty of Science at Memorial University. Two dozen faculty members, cross appointed from a variety of disciplines, direct research projects in physical and biological oceanography, geophysics, sea bird ecology, biochemistry, regional geographic studies and the chemistry of marine natural products.

In 1982, the Centre for Offshore and Remote Medicine and Telemedicine (MEDICOR) was established at Memorial University to research all aspects of health care as it pertains to offshore oil and gas development and to develop specialized health care techniques. The amount of $2.7 million for MEDICOR was recently approved under the Canada-Newfoundland Offshore Development Fund Agreement, which will broaden and improve its various offshore-related training, research and direct medical services.

In 1985, the Institute for Marine Dynamics, a division of the National Research Council of Canada, was opened on the campus of Memorial University. The Institute boasts the world's largest ice-tank, a 200 metre towing tank, a model ocean basin and all modern facilities required to support its research program. The main thrusts of the Institute's research are studies in hydrodynamics, and ice physics and engineering.

The next significant development in ocean related R & D will be the construction of a new building to house the Centre for Earth Resources Research. Funding in the amount of $25 million was announced in February 1986 under the new Canada-Newfoundland Offshore Development Fund. The University's ability to research all aspects of the Northern ocean and its resources continues to grow in scope and sophistication.

There are several other marine-oriented institutions in the Province which, although separate from Memorial University, work in close scientific cooperation with the University. For example, the new campus for the Institute of Fisheries and Marine Technology was substantially completed in 1985 at a cost of $42 million. The facilities at the Marine Institute include, among other things, a modern flume tank for use in testing fishing gear and assisting in the design of ships and other marine related structures. The Institute delivers a comprehensive list of technical and scientific marine-related programs. Requests to develop new technologies in these fields and related financial support has come from both the public and private sectors. In the period since the mid-1970's, the continued expansion of ocean related research facilities has led to the creation of many independent, scientifically oriented consulting firms in the Province. One of the largest of these firms is Newfoundland Ocean Research and Development Corporation (NORDCO). Since its creation in 1975, NORDCO's staff has grown from 35 to 90 permanent members and revenues have increased from $0.5 million in 1985 to about $5.6 million in the 1987 fiscal year. Although NORDCO's research program is diverse, it is developing specialized expertise in Marine Signal Processing and Remote Sensing. Indeed, NORDCO is one of the largest independent research firms in Canada specializing in Marine Resources. The amount of $7.4 million in funding was recently approved under the Canada-Newfoundland Offshore Development Fund Agreement to assist NORDCO in the establishment of the Centre of Excellence in Marine Signal Processing and Remote Sensing.

Over the next two years, the Federal Department of Fisheries will establish a Centre of Disciplinary Expertise (CODE) in St. John's. This Centre will have a full complement of oceanographers, hydrographers, and other related marine scientists who research methods to improve resource assessment and survey methodologies pertaining to fish stocks. In this connection, Newfoundland and Labrador has also been designated as the key region in the country for research related to the Northern codfish. Overall, a twenty-two percent increase in scientific research staff of the Federal Department of Fisheries and Oceans is expected in the Province by 1988.

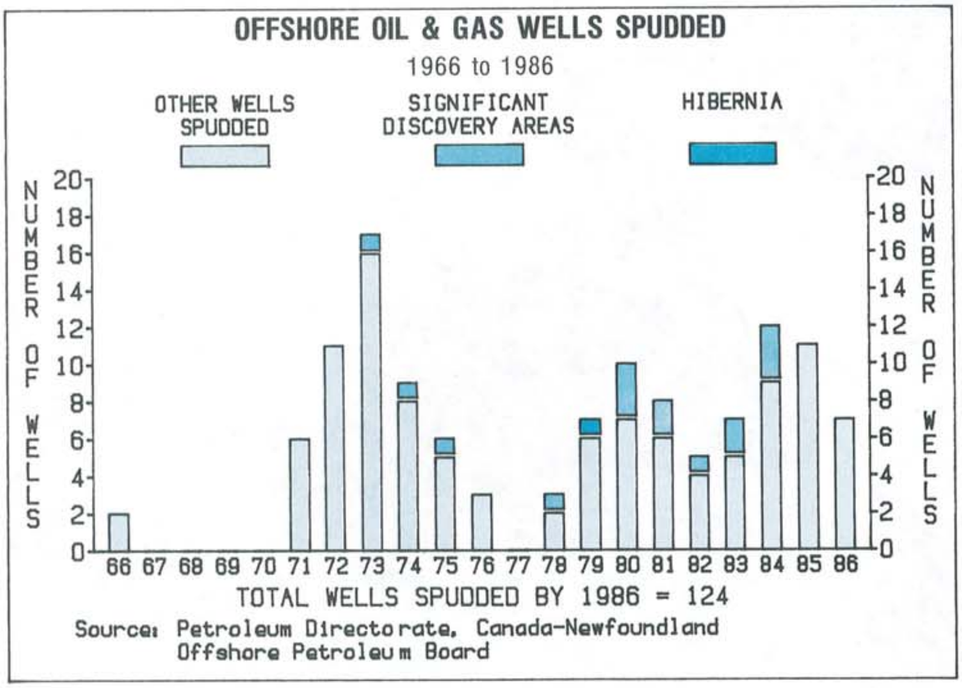
The development and continued expansion of this non-traditional R & D component of the service sector is assured in the near future. The Province is well equipped to share new technologies developed with other marine-oriented countries and various groups from around the world have expressed interest in utilizing the Province's research and development expertise.

In summary, all industries of the service sector are expected to experience continued economic growth in 1987. The service sector as a whole should grow by about 2.5 to 2.8 percent in 1987 and some improvement in employment prospects can be expected. Furthermore, continued improvement and expansion of infrastructure related to the Tourism industry, and the use of aggressive marketing efforts, will enhance future growth prospects in this traditional export component of the service sector. As well, the continued development and growth of non-traditional service exports related to marine research and development will influence the future development and expansion of the Province's service sector.

XII. A REVIEW OF OFFSHORE OIL AND GAS EXPLORATION

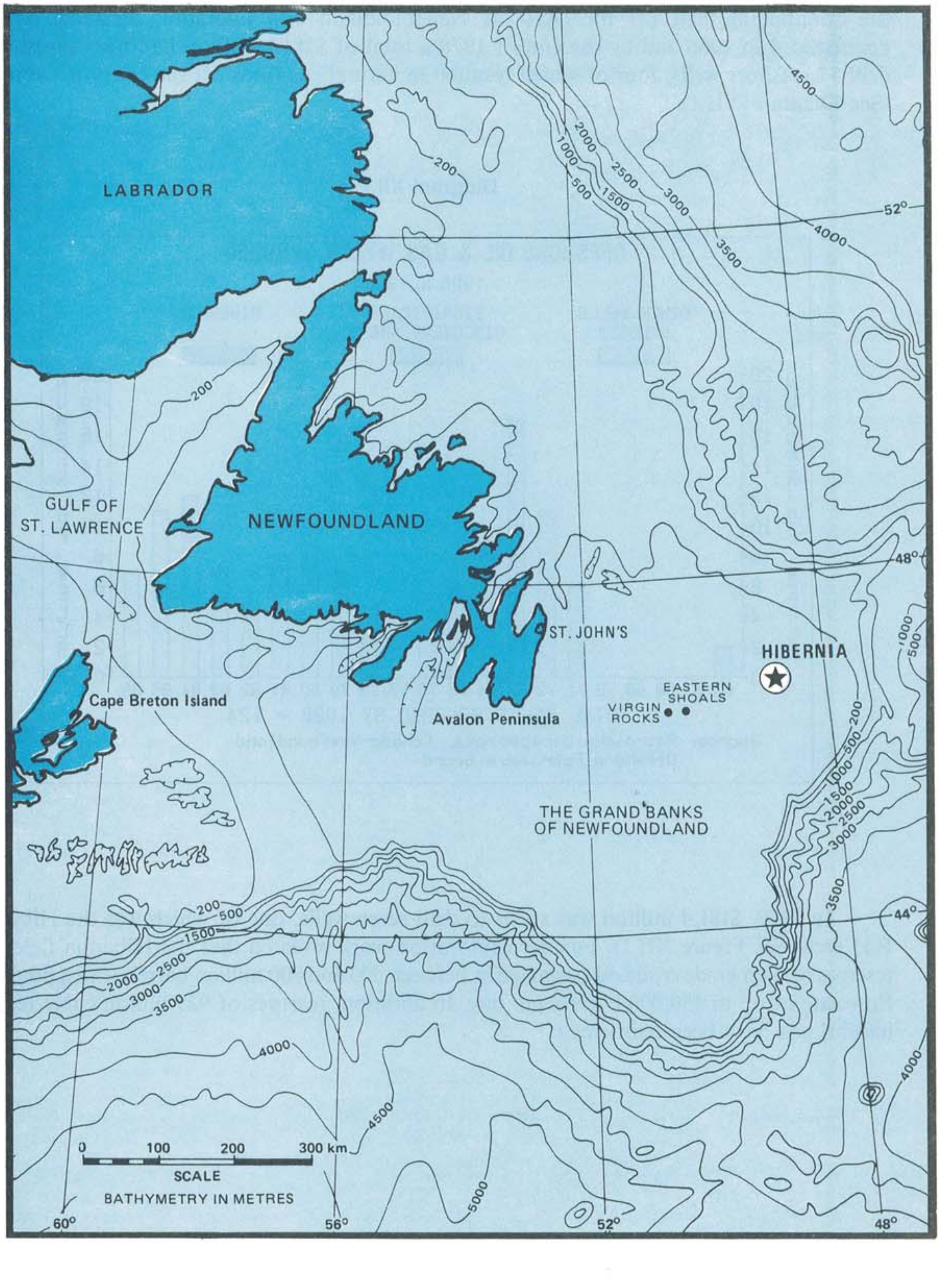
In the early 1960's specialized surveys detected potential hydrocarbon formation beneath the continental shelf off the coast of Newfoundland and Labrador. Sporadic drilling commenced in 1966 and by the end of 1978 a total of $281.1 million had been invested to drill 57 offshore wells, four of which resulted in natural gas finds off the coast of Labrador (See Diagram XII.1).

Diagram XII.1



In 1979, $181.4 million was spent to drill seven wells, one of which was the Hibernia P-15 well (See Figure XII.1). Further exploration work revealed that the Hibernia field has reserves of high grade crude oil estimated at between 500 and 800 million barrels with a potential flow rate of up to 150,000 barrels per day. In addition, reserves of 925 billion cubic feet of natural gas have been confirmed.

Figure XII.1

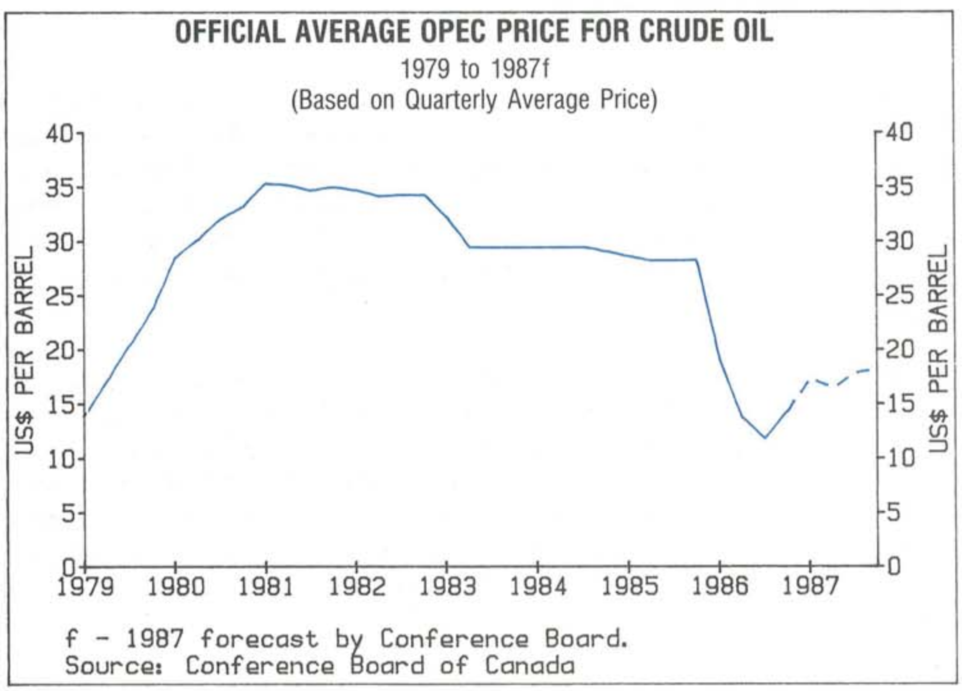


LABRADOR
NEWFOUNDLAND
GULF OF
ST. LAWRENCE
Cape Breton Island
Avalon Peninsula
ST. JOHN'S
HIBERNIA
EASTERN
SHOALS
VIRGIN
ROCKS
THE GRAND BANKS
OF NEWFOUNDLAND
0 100 200 300 km
SCALE
BATHYMETRY IN METRES
60°
56°
52°
48°
52°
48°
44°
200
500
1000
1500
2000
2500
3000
3500
4000
4500
5000

The discovery of Hibernia in 1979 together with high world oil prices and the introduction in 1980 of Petroleum Incentive Program (PIP) grants provided substantial incentives to increased levels of offshore exploration activity. PIP grants provided for reimbursement of up to 80 percent of the cost of drilling new wells and between 1980 and 1985 exploration expenditures increased at an annual average rate of 23.5 percent. By the end of 1986, 124 wells had been drilled off the coast of Newfoundland and Labrador resulting in 16 significant oil and gas discoveries and cumulative total expenditures of approximately $3.3 billion.

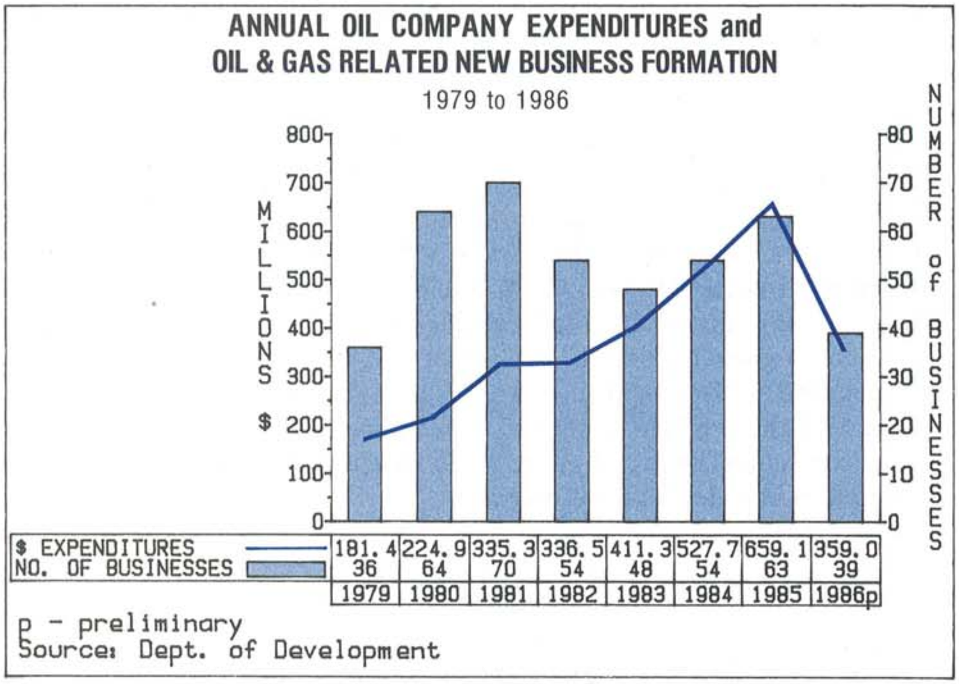
Investment in offshore oil and gas exploration peaked at $659.1 million in 1985, a year during which the average OPEC price for oil (refers to oil sold under contract) was about US$28 a barrel. During 1986 the OPEC price averaged between US$14 and US$15 a barrel and, in response to both falling world oil prices and the withdrawal of Petroleum Incentive Program (PIP) grants, expenditures declined to $359.0 million. OPEC prices are expected to rise somewhat to an average of about US$17 in 1987 (See Diagram XII.2 below). Exploration expenditures during 1987 are expected to be at least $200 million with between five and eight wells drilled. These figures include the drilling of two delineation wells at the Terra Nova field (located Southeast of Hibernia). On March 9, 1987 Petro Canada announced its intention to develop this field and production could commence as early as 1991. This announcement together with a continued firming of prices could have a positive impact on future levels of offshore exploration and development activities.

Diagram XII.2



During the period 1979 to 1986, a total of $3.035 billion was spent on offshore oil and gas exploration. Annual expenditures during this period are displayed graphically in Diagram XII.3 below. The vigour with which the Province's business sector pursued opportunities arising from these expenditures is also evident in Diagram XII.3 from the number of new, oil and gas related, businesses formed during that period.

Diagram XII.3



The number of new businesses formed to meet the needs of the oil and gas industry following the 1979 discovery of Hibernia varied from a low of 36 in 1979 to a high of 70 in 1981. Many international and national companies established regional offices in the Province to provide specialized products and services from sites close to offshore drilling and development activities. However, many enterprising Newfoundlanders also established oil and gas related businesses in response to the opportunities offered by a major offshore oil and gas exploration and development program.

The types of products and services on which oil and gas exploration expenditures were made from 1979 to 1984 are outlined in Table XII.1 below. These expenditures can be grouped into three preference categories representing the ownership and/or operation of the business which captured these expenditures. These include Newfoundland and Labrador owned businesses in which Newfoundlanders have at least a 51 percent interest; Newfoundland and Labrador operated businesses, usually provincially established subsidiaries of national or international firms; and 'other' businesses which are neither owned nor operated by Newfoundlanders.

Table XII.1

TOTAL OFFSHORE OIL AND GAS EXPLORATION EXPENDITURES BY TYPE OF PRODUCT OR SERVICE 1979 to 1984[1]

	Product Service Category	$	%
1.	Drilling Contractors	923.1	45.8
2.	Supply Boat Lease	223.6	11.1
3.	Fuel, Lubricants	98.6	4.9
4.	Drill Casing, String	86.3	4.3
5.	Oilwell Equipment	78.0	3.9
6.	Helicopter Rentals	66.7	3.3
7.	Oilwell Logging	60.1	3.0
8.	Drilling Fluids	52.9	2.6
9.	Flowtesting and Equipment	37.5	1.9
10.	Engineering Consultants	35.3	1.8
11.	Seismic Processing	32.0	1.6
12.	Diving Support	25.2	1.2
13.	Bits	23.4	1.2
14.	Wellhead Equipment	22.9	1.1
15.	Cement and Services	21.7	1.1
16.	Communications—General	21.7	1.1
17.	Supply Base Services	18.0	0.9
18.	Environmental Consultants	17.3	0.9
19.	Site Survey Services	11.3	0.6
20.	Oilfield Equipment	11.2	0.6
21.	Other[2]	150.3	7.5
	TOTAL	$2,017.1	100.0%

[1]Detailed statistics are not yet available for 1985 and 1986.

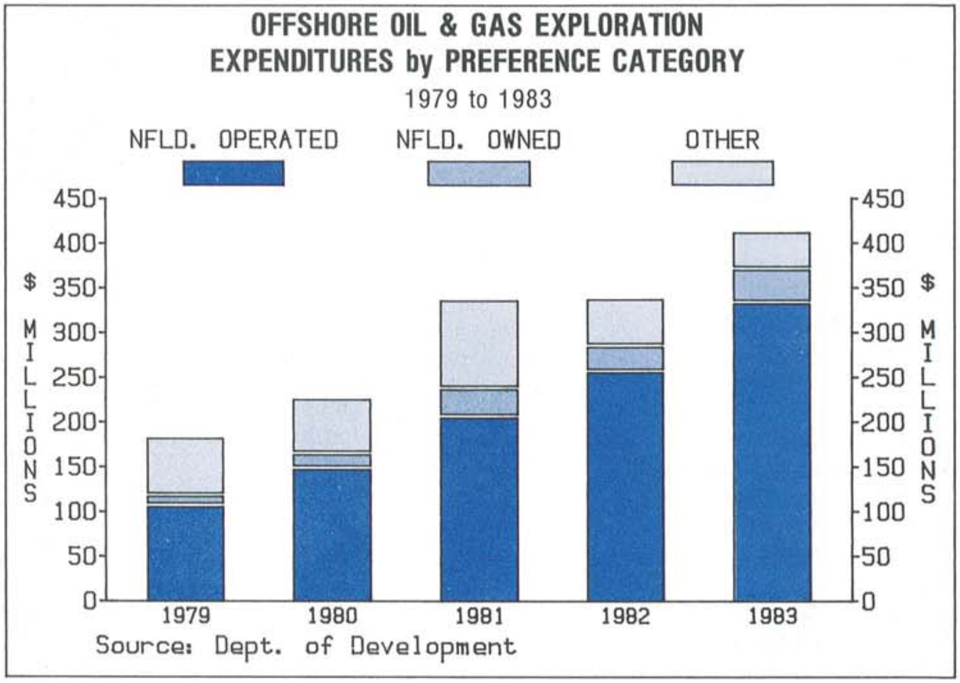
[2]Includes 29 product/service categories for a total of 49 categories in all.

Source: Department of Development.

The distribution of expenditures from 1979 to 1983, by preference category, is illustrated in Diagram XII.4 below. The share of expenditures captured by Newfoundland and Labrador owned and/or operated businesses increased from 64 percent in 1979 to nearly 90 percent in 1983; this is consistent with the formation of a total of 272 oil and gas related businesses in that period. During 1983, the most recent year for which detailed information on preference category is available, Newfoundland and Labrador owned companies captured expenditures in 30 of the 49 types of products and services outlined in Table XII.1 above.

Newfoundland and Labrador owned and/or operated companies captured expenditures in 38 of the 49 expenditure categories in 1983, covering a wide range of products and services provided to the oil and gas industry. Specialized services which have benefited most include consultants, aircraft services, weather services, supply base activities, equipment suppliers, and food, catering and accommodation industries. The two largest components of expenditure, drilling contracting and supply boat leases, are captured by Newfoundland operated companies.

Diagram XII.4



While a large proportion of the 'captured' expenditures are transferred outside the Province to purchase goods and services produced elsewhere, the percentage of total oil and gas expenditures actually staying in the Province (that is, the proportion of expenditures resulting in the purchase of locally produced goods and services) has improved from about 19.3 percent in 1979 to approximately 24 percent currently.

In preparation for the development and production phases of offshore oil and gas, the Canada/Newfoundland Offshore Development Fund Agreement was signed in February 1986. The $300 million Agreement will be used to offset some of the costs of social and economic infrastructure required to ensure that the Province receives maximum economic benefit from the development of offshore oil and gas reserves. Some of the projects which have been approved or proposed under the Agreement to date relate to human resource development, technology transfer, improvement of existing facilities, and research and development. Funds from the Agreement will also be used to offer incentives to the Hibernia partners to establish a combined gravity-based system graving dock and main support frame assembly site in the Province. Activities of this nature will further enhance the Province's ability to derive maximum benefit from the development of offshore oil and gas reserves.

Clearly, oil and gas activities have led to the development of a new and vibrant industry within the economy of Newfoundland and Labrador. This in itself has been of tremendous benefit to the Province in terms of the employment and incomes generated. Perhaps even more importantly, however, many Newfoundland and Labrador owned or operated companies are now well positioned to service the present and future needs of the offshore oil and gas industry. Moreover, the experience and expertise developed in both the private and public sectors from past offshore oil and gas exploration activities will serve the Province well in the future as development proceeds.

The Government of Newfoundland and Labrador is optimistic concerning the development of offshore oil and gas reserves. Petro Canada's recently announced intention to further delineate and develop the Terra Nova field, which, although not as large as the Hibernia field, has commercial potential even in today's lower-price environment, represents a significant boost to the Province. In addition, the Hibernia fiscal negotiations between the Federal and Provincial Governments and Mobil and its partners have proceeded well in recent weeks. A decision is expected soon on whether or not the fiscal arrangements are such as to permit early project release. The Province believes that the operator, after considering various technical, financial and economic factors including projected petroleum prices, intends to commence development of the field upon reaching agreement on the fiscal regime. The development phase of the Hibernia field is expected to take six years and require capital expenditures in excess of $5 billion in constant 1986 dollars, or an estimated $7.6 billion in 'as spent' dollars. Development of both fields would generate substantial employment and industrial benefits for the Province.

XIII. CONCLUSION

The past year was marked by an overall improvement in the Provincial economy as full recovery from the 1981 recession was finally achieved. In 1986, real Gross Domestic Product increased by an estimated 1.9 percent from its level in 1985. Our resource based industries, which are linked to the economies of other countries, benefited from continued growth in the international economy. The contribution of the fishery to economic growth was felt in both the goods and service producing sectors. This favourable economic climate was further enhanced by low levels of inflation and interest rates.

While the gains achieved in 1986 were significant, a number of difficult and unsolved problems remained. The unemployment rate is forecast to fall to 19.7 percent in 1987, however, unemployment levels in the Province continue to be high by any standard of comparison. The problems faced by the labour intensive inshore fishery in some areas of the Province continue to present a challenge to policy makers and the industry alike. Furthermore, growth of the public sector is restrained at both levels of government.

Nevertheless, economic growth seems assured in the short term. The international economy, and especially the United States is expected to turn in strong growth in 1987 and this will translate into strong demand for resource based products. Fish prices and demand for fish products are at all time highs. The pulp and paper mill modernization program is proceeding on schedule and the resulting gains in efficiency, productive capacity and product quality will ensure the long term viability of the Province's forest industry. The mining industry, and particularly the iron ore industry, has undergone a period of rationalization and the gains in productivity and efficiency achieved have improved the industry's competitive position. Petro Canada recently announced its intention to further delineate and develop the Terra Nova field and this will boost offshore exploration activity during 1987. Furthermore, an early release of the Hibernia project would considerably enhance the investment climate in the Province and contribute to Gross Domestic Product growth forecast at between 2.4 to 2.7 percent in 1987. Overall, the outlook is for continued improvement in 1987 as growth in the goods producing sector continues to provide stimulus for the service industries.

Appendix 1

AN INVENTORY OF MAJOR PROJECTS

NEWFOUNDLAND and LABRADOR

Appendix 1

AN INVENTORY OF MAJOR PROJECTS IN NEWFOUNDLAND AND LABRADOR

Project	Location	Estimated Capital Cost ($ Millions)	Start/End Date	Comments
Abitibi-Price Modernization	Grand Falls	31.0	1985/1987	Approximately 50% for purchase of imported machinery; includes funds for upgrading of the largest existing paper machine. Federal and provincial governments will contribute $6.2 million; balance provided by the company.
Abitibi-Price Modernization	Grand Falls	16.0	1986/1987	Upgrading of #6 and #7 machines, 25% Federal funding; balance provided by the company.
Agnes Pratt Home — Extension	St. John's	8.8	1987/1988	136 new beds will be added, some of which will be replacements.
Airport Master Plan	St. John's Airport	100.0	1984/2000	Facelift for main runway, combined services building (garage, fire station, etc.) undertaken in 1985. Overall construction would include a new terminal building. Plan not fully approved for funding by Federal government. 100% Federal funding.
Avalon Mall — Extension	St. John's	6.1	1986/1987	About $1.7 million spent during 1986. Private funding.
Baie Verte Highway Depot	Baie Verte	1.2	1986/1988	Planning and site work in 1986. Provincial funding.
Bank of Nova Scotia	Downtown St. John's	30.0	1985/1987	A 22,000 square meter office complex. Construction started in 1985 with an estimated $10 million spent in the 1985/1986 fiscal year. The entire project should be completed in the fall of 1987. Private funding.
Bilingual School	Port au Port Peninsula	1.7	1987/1988	100% Federal funding.
Botwood Chronic Care Facility	Botwood	8.0	1986/1987	Includes 75 beds. Provincial funding.
Bridges and Causeways Construction	Locations within the Province	4.3	1987/1988	Various projects. Provincial funding.
Burin Peninsula Development Fund	Burin Peninsula	28.0	1984/1989	Construction of an oil rig servicing facility is completed. Fund also includes support for reactivation of St. Lawrence fluorspar mine and for upgrading of FPI trawler refit centre and secondary processing facility at Burin. To date about $26 million has been spent under the fund. 70% Federal, 30% Provincial.
Charles R. Bell Ltd. — Extension	St. John's	1.4	1986/1987	About $200,000 spent during 1986. Private funding.
Confederation Building — East Block Renovations	St. John's	23.0	1986/1988	Renovations to existing offices and House of Assembly. Provincial funding.
Corner Brook Pulp & Paper Mill Modernization Program	Corner Brook	230.0	1985/1990	Involves the installation of new equipment and improved processes. The Federal and Provincial governments will contribute $40 million of total cost. Balance paid by the company.
Department of National Defense, Northern Warning Stations	Saglek & Cartwright, Labrador	65.0	1986/1988	Cost of the two stations include only construction costs and not radar equipment. Federal funding.

Appendix 1 (Cont'd)

AN INVENTORY OF MAJOR PROJECTS IN NEWFOUNDLAND AND LABRADOR

Project	Location	Estimated Capital Cost ($ Millions)	Date	Comments
Fisher Institute of Applied Arts and Technology	Corner Brook	3.0	1987/1988	A new Technology Wing will be added and other renovations.
Forest Resource Roads	Locations within the Province	2.1	1987/1988	Provides various roads for Silviculture work under the new ERDA agreement. 70% Federal, 30% Provincial funding.
Forestry Subsidiary Agreement II	Gander/Wooddale	1.5	1986/1987	Final capital expenditures under this agreement. Provided $1 million for Forest Protection Centre in Gander and $0.5 million for 10 greenhouses at Wooddale Tree Nursery. 90% Federal, 10% Provincial funding.
Gander International Airport	Gander	1.8	1985/1987	Rehabilitate airport electrical power distribution. Federal funding.
Golden Heights Manor — Extension	Bonavista	3.4	1987/1988	Extension will add 40 new beds to the existing 25.
Goose Bay Airport	Happy Valley, Goose Bay	4.3	1986/1987	To complete restoration of Runway 08/26 and taxiways A, B and C. Federal funding.
Goose Bay Airport	Happy Valley, Goose Bay	1.5	1985/1987	Repair roofs on 8 buildings. Federal funding.
Government Store	Hopedale	1.1	1986/1988	Federal-Provincial funding through the Native People's Agreement. 46% Federal, 54% Provincial funding.
Governors Park	Salmonier Line	6.9	1987/1988	Will include the construction of a Resort including recreational facilities, campsites, hotel and training personnel in the hospitality industry.
Grand Falls Hospital — expansion	Grand Falls	20.4	1986/1990	Provincial funding.
Gros Morne National Park	Great Northern Peninsula	65.0	1983/1987	May extend to 1988; annual approval has not yet been received for this year's capital expenditures. Federal funding.
Hangar	Happy Valley, Goose Bay	10.8	1987	To shelter aircraft belonging to the German Airforce.
Highway Improvement and Construction	Locations within the Province	22.0	1987/1988	A variety of projects undertaken by the Province. Provincial funding.
Hope Brook Gold Mine	Hope Brook	143.9	1986/1988	Includes construction of a mine, mill, dock facilities and living quarters. Some Federal and Provincial funding.
Hotel Complex	Happy Valley, Goose Bay	3.0	1987	By Northstar Holdings.
Hotel — Convention Centre — Office Complex	Downtown St. John's	60.0	1985/1987	The 11 floor hotel-convention centre will contain 300 rooms, underground parking, squash courts, indoor pool, sauna and whirlpool. The convention centre will be able to accommodate up to 2,000 people. The federal government is contributing $1.75 million, the municipal council $0.25 million and the Province $3 million under the Tourism Agreement. Balance private.

AN INVENTORY OF MAJOR PROJECTS IN NEWFOUNDLAND AND LABRADOR

Project	Location	Estimated Capital Cost ($ Millions)	Date	Comments
Industrial Parks Agreement	Windsor, Gander, Port-aux-Basques, Pasadena	17.8	1984/1988	Industrial mall in Pasadena already in operation while the industrial park and mall in Port-aux-Basques and industrial parks in Windsor and Gander are substantially complete. Approximately $1.4 million remains to be spent in 1987/88.
Institute of Fisheries and Marine — Marine Technology — Flume Tank	St. John's	8.3	1985/1987	Installation of a flume tank began in 1985 and work will continue until completion in mid-1987. 65% Federal, 35% Provincial funding.
Labrador Airport Programs	Labrador Communities	2.1	1987/1988	General restoration, equipment shelters and installation of lights. Federal funds.
Memorial University of Newfoundland — Centre for Earth Resources Research	St. John's	25.0	1987/1989	The 100,000 sq. ft. building (classrooms and laboratory) will accommodate the research arm of the earth science resource centre at MUN. 75% Federal, 25% Provincial funding.
Memorial University of Newfoundland — Centre for Offshore and Remote Medicine and Telemedicine	St. John's	2.7	1987/1989	Will broaden and improve various offshore-related training, research and direct medical services. 75% Federal, 25% Provincial funding.
Memorial University of Newfoundland	St. John's	3.0	1986/1987	School of Business — Extension. Provincial funds.
Motor Vehicle Registration Building	Mount Pearl	8.8	1986/1988	Provincial funds.
Municipal Road Paving Projects and Municipal Water & Sewer Projects	Locations within the Province	49.0	1987/1988	In addition to $24,000,000 in carry overs on existing projects, new approvals of a further $25,000,000 will be made. Provincial and municipal funding.
Newfoundland and Labrador Housing Corporation — Housing and Land Development	Locations within the Province	79.7	1987/1988	This relates to the Corporation's capital expenditure program of which many programs are cost shared with CMHC. This budget includes spending for the Rural and Native Housing Program, the Non-profit Housing Program, the Residential Rehabilitation Assistance Program (RRAP), residential land assemblies, industrial land development, modernization of the Corporation's rental portfolio, and the construction of four group homes.
Newfoundland and Labrador Housing Corporation — Office Building	St. John's	3.0	1987/1988	48,000 sq. ft. office building.
Newfoundland and Labrador Hydro — Generation Related	Locations within the Province	27.1	1986/1990	Includes rehabilitation of gas turbines in Stephenville and at the Hardwoods terminal station in Mt. Pearl, replacement of Boiler Control System (Units 1 and 2) in the Holyrood Thermal Plant, installation of a spillway in West Salmon Dam, construction of a new energy management system and control centre.

Appendix 1 (Cont'd)

AN INVENTORY OF MAJOR PROJECTS IN NEWFOUNDLAND AND LABRADOR

Project	Location	Estimated Capital Cost ($ Millions)	Date	Comments
Newfoundland and Labrador Hydro — Transmission Related	Locations within the Province	38.0	1986/1988	Includes relocation of portion of 230 KV Transmission line in Chance Cove area; installation of 138/2S KV Transmission System from Bottom Brook to Grandy Brook, Hope Brook and Burgeo; Fogo/Change Islands inter-tie to the Island Grid; and distribution systems upgrading.
Northwest Atlantic Fisheries Centre	St. John's	13.0	Uncertain	Development of Phase Three. Federal funds.
Offshore Survival Centre	Little Soldiers Pond, Foxtrap	5.0	1987/1989	Construction should begin this summer and completion is scheduled for the spring of 1989.
Petroleum Technology Training Program	Across the Province	21.1	1987/1991	Upgrade existing post-secondary technology training facilities and establish new programs and training facilities related to the offshore petroleum industry.
Port-aux-Basques Water Supply	Port-aux-Basques	9.7	1985/1987	Provide water treatment plant for Port-aux-Basques as well as other water treatment programs. 76% Federal, 24% Provincial funding.
Postville Wharf	Postville	1.4	1986/1987	Federal funds. 85% complete. Work to complete the project will start in the spring.
Re-activation of the Come-By-Chance Oil Refinery	Come-By-Chance	27.0	1987	Partial operation should commence around June/July 1987. Full production should commence by year end. Private funds.
Road and Bridge Rehabilitation	Locations within the Province	13.7	1987/1988	Various projects. Provincial funds.
Royal Canadian Mounted Police — Bonavista Detachment	Bonavista	1.4	1987/1988	Construction of detachment in Bonavista. Federal funds.
Royal Canadian Mounted Police — Other Capital Expenditures	Locations within the Province	3.1	1986/1988	Includes expenditures on various detachments and married quarters. Federal funds.
Royal Newfoundland Constabulary Building	Corner Brook	3.3	1986/1987	Provincial funds. To be completed by April 1987.
School Construction	Locations within the Province	22.0	1987/1988	$20 million is the 1987/1988 Provincial contribution with the school boards contributing a further 10% towards an ongoing school construction program.
School of Fine Arts, Sir Wilfred Grenfell College	Corner Brook	7.0	1985/1988	Construction began in 1986. Provincial funds.
Sir Humphrey Gilbert Building	St. John's	10.0	1987/	Major renovation program. Federal funds.
Sobey's Square — Extension	Mount Pearl	4.3	1986	The extension will enclose Zeller's department store. Private funds.
St. Anthony Airport Development	Great Northern Peninsula	12.4	1983/1987	New airport includes runway, taxiway, air terminal, visual and navigation aids. Nearly completed. Federal funds.
St. John's Courthouse	St. John's	3.0	1985/1987	Restoration work. Provincial funds.

Appendix 1 (Cont'd)

AN INVENTORY OF MAJOR PROJECTS IN NEWFOUNDLAND AND LABRADOR

Project	Location	Estimated Capital Cost ($ Millions)	Date	Comments
St. John's Port Terminal — Finger Pier Development	St. John's	7.0	1987	This is part of the Master Plan to develop the Port of St. John's. Phase I has been completed at a cost of $3.4 million. Other developments require both private and public funds, yet to be approved. All money committed to date has been by the St. John's Port Corporation. Total value of the Master Plan was estimated at $75.2 million in 1982.
Subsidiary Agreement on Highways Development	Trans Canada Highway and Trans Labrador Highway	180.0	1985/1991	$15 million was allocated for the first and last years with $30 million dollars to be spent in each of the intervening years. To date, approximately $45,000,000 under the program has been spent. It will be used for general upgrading, bridge and overpass structures, passing lanes and some four-lane construction. 62.5% Federal, 37.5% Provincial funding.
Terra Transport — Improvements to Newfoundland Railway	Locations across the Island	29.1	1986/1990	Repairs to track and rolling stock, including locomotives; new ballast and railway tie programs. 100% Federal funding.
Tourism Agreement	Locations within the Province	15.5	1984/1989	Incentives aimed at the tourism industry. Includes $7 million for attractions and accommodations facilities and $3.75 million for major travel generators. 60% Federal, 40% Provincial funding.
Village Mall	St. John's	Uncertain	1987	Repairs to building following the collapse of a portion of the roof. Private funds.
Water and sewer Projects	Nain, Postville, and Rigolet	3.0	1987/1988	Joint funding under the Native People's agreement. Term of the agreement was from the fiscal year 1986/1987 — 1987/1988. 66% Federal, 34% Provincial. Total value of the agreement is approximately $4,660,000.
Wharf Extension and Storage Shed	St. Lawrence	2.3	1986/1987	Wharf 65% completed, and storage shed 33% completed. Remainder to be finished this summer. 100% Federal funds.

Appendix 2

SUMMARY OF CONSTRUCTION ACTIVITY FOR SELECTED MUNICIPALITIES

NEWFOUNDLAND and LABRADOR, 1986

Appendix 2

SUMMARY OF CONSTRUCTION ACTIVITY FOR SELECTED MUNICIPALITIES (1986) DOLLARS SPENT (THOUSANDS)

	Corner Brook		Grand Falls		Gander	
	# PERMITS	$ (000's)	# PERMITS	$ (000's)	# PERMITS	$ (000's)
New Residential	60	$3,328.1	33	$1,980.0	41	$2,493.0
Residential Renovations	406	$1,632.2	197	$818.5	137	$327.1
Accessory Building	109	$125.3	0	$0.0	0	$0.0
New Apartment Buildings	0	$0.0	1	$150.0	0	$0.0
Apt. Bldg. Renovations	0	$0.0	0	$0.0	0	$0.0
New Commercial	4[1]	$415.0	2	$1,000.0	6	$1,392.0[2]
Comm. Renovations	52[1]	$655.0	9	$765.0	29	$0.0
New Industrial	0	$0.0	1	$200.0	0	$0.0
Industrial Renovations	0	$0.0	2	$25.0	0	$0.0
New Institutional	17	$2,649.0	1	$200.0	13[3]	$1,517.9
Inst. Renovations	0	$0.0	3	$16,152.0	0	$0.0
New Government	0	$0.0	0	$0.0	0	$0.0
TOTAL	648	$8,804.6	249	$21,290.5	225	$5,730.0

Source: Municipal Governments of Corner Brook, Grand Falls, Gander, Mt. Pearl and St. John's.

[1] Includes Commercial and Industrial buildings
[2] Includes New Commercial and Commercial Renovations
[3] Includes Government and Institutional
[4] Includes New Residential, Residential Renovations and Apartment Building Renovations

Appendix 2

SUMMARY OF CONSTRUCTION ACTIVITY FOR SELECTED MUNICIPALITIES (1986) DOLLARS SPENT (THOUSANDS)

	Mount Pearl		St. John's		Total - Five Municipalities	
	# PERMITS	$ (000's)	# PERMITS	$ (000's)	# PERMITS	$ (000's)
New Residential	151	$11,476.6[4]	444	$28,328.3	729	$47,606.0
Residential Renovations	258	$0.0	1,319[7]	$6,656.9	2,317	$9,434.7
Accessory Building	0	$0.0	172	$288.3	281	$413.6
New Apartment Buildings	0	$0.0	228[8]	$11,968.0	229	$12,118.0
Apt. Bldg. Renovations	39[5]	$0.0	0	$544.0	39	$544.0
New Commercial	16	$6,582.3[6]	60[9]	$55,182.0	88	$64,571.3
Comm. Renovations	64	$0.0	0	$0.0	154	$1,420.0
New Industrial	2	$1,836.5	0	$0.0	3	$2,036.5
Industrial Renovations	0	$0.0	0	$0.0	2	$25.0
New Institutional	2	$1,917.0	12[9]	$11,761.4	44	$18,045.3
Inst. Renovations	0	$0.0	0	$0.0	3	$16,152.0
New Government	0	$0.0	7[9]	$7,444.0	7	$7,744.0
TOTAL	532	$21,812.4	2,242	$122,472.9	3,896	$180,110.4

[5] Includes 35 subsidiary apartments and 4 apartment house/housing complex demolitions
[6] Includes New Commercial and Commercial Renovations
[7] Includes 269 apartments in dwellings
[8] Includes 145 New and Renovation Apartment building units, and 83 Row Housing/Semi-Detached/Duplex units
[9] Includes New Construction 1986 and carry-over from 1985

Appendix 3

SELECTED ECONOMIC INDICATORS:

NEWFOUNDLAND and LABRADOR, 1983-1987

Appendix 3

NEWFOUNDLAND AND LABRADOR
SELECTED ECONOMIC INDICATORS: 1983-1987

	1983	1984	1985	1986e	1987f
Gross Domestic Product at factor cost					
(millions of current $)	4,938	5,452	5,835	6,100	6,521
(% change - Current$)	9.5	10.4	7.0	4.5	6.9
Gross Domestic Product at factor cost					
(millions of constant $)	3,980	4,130	4,215	4,295	4,411
% change - Constant $)	-.4	3.8	2.1	1.9	2.7
Personal Income					
(millions of current $)	5,287	5,618	5,955	6,220	6,488
$ change - Current $	7.9	6.3	6.0	4.5	4.3
$ change - Constant $	1.0	1.8	1.8	1.4	0.5
Retail Trade					
(millions of current $)	1,971	2,071	2,254	2,392	2,507
$ change - Current $)	11.9	5.1	8.8	6.1	4.8
$ change - Constant $)	4.8	0.6	4.5	3.1	1.0
Gross investment					
(millions of current $)	2,141	2,323	2,368	2,388	2,472
$ change - Current $	8.4	8.5	1.9	0.8	3.5
% change - Constant $	6.7	5.7	-1.6	-3.7	-0.7
Labour Force (000's)					
Annual Average	214	221	224	226	228
% change	2.4	3.3	1.4	0.9	0.9
Employment (000's)					
Annual Average	174	176	176	181	183
% change	0.0	1.1	0.0	2.8	1.1
Unemployment Rate (%)					
Annual Average	18.8	20.5	21.3	20.0	19.7
% change	11.9	9.0	3.9	-6.1	-1.5
St. John's					
Consumer Price Index	117.5	122.7	127.8	131.6	136.6
Annual Average (1981 = 100)					
% change	6.8	4.4	4.2	3.0	3.8

f: forecast
e: estimate

Source: Statistics Canada, Newfoundland Statistics Agency and Economic Research and Analysis Division, Executive Council.

THE ECONOMY 1987

SPECIAL REPORT: LABOUR FORCE DYNAMICS

Economic Research and
Analysis Division,
Cabinet Secretariat,

MARCH 1987

PREFACE

Many important changes in the structure and composition of the Newfoundland and Labrador labour force have occurred in recent years. Such changes have important implications for the future size, age and skill structure of the labour force and, consequently, for the Province's ability to meet the labour demands of its employers, or potential employers.

This report provides an overview of the labour force in 1986 together with a brief examination of changes in the structure of the labour force which have occurred in recent years. Labour market flows during 1985 are also examined. As it is intended that this special report be entirely self-contained, there is some overlap between this report and Chapter VII of THE ECONOMY 1987 which discusses employment and the labour force.

As with any market, the labour market has several important elements, two of which are the **supply** of labour services and the **demand** for labour services. Both sides of the market are equally important determinants of the final labour market outcome. This report, primarily because of time constraints, focusses almost exclusively on the supply side of the labour market leaving important demand side considerations to be more closely examined in the future. Furthermore, the examination of the supply side of the labour market is, for the most part, carried out at a fairly aggregate level since time did not permit the examination of occupational detail. It is clear that tremendous changes have occurred in the structure and composition of the labour force in recent years. There is also strong evidence to suggest that those jobs lost within the Province since 1980 are different in nature and scope than the jobs which have been generated. To the extent that the skills demanded by employers in the Newfoundland and Labrador labour market are changing over time, then this is yet another important consideration to be addressed through more detailed examination, in the future, of available statistics.

INTRODUCTION

The potential labour force, commonly referred to as the **source population** or **the population of labour force age,** includes all individuals in the Province at any given time who are 15 years of age and over. Given the source population, the actual size of the **labour force** at a point in time is determined by the **participation rate;** that is, the percentage of those individuals of labour force age who actually participate in the labour market at a point in time and are either employed or unemployed but seeking employment. The **unemployment rate** refers to the percentage of labour force participants who are unemployed at a point in time.

There are a number of ways to measure labour market activity, and the method chosen will depend on which aspect of labour market activity is to be measured. Statistics Canada publishes two key sets of annual labour market indicators each year; the Labour Force Survey, which provides monthly as well as annual data, and the Annual Work Patterns Survey, which provides only annual data. Both of these surveys provide valuable information concerning labour market activity, however, because these surveys are designed for somewhat different purposes, each has both advantages and limitations which must be understood.

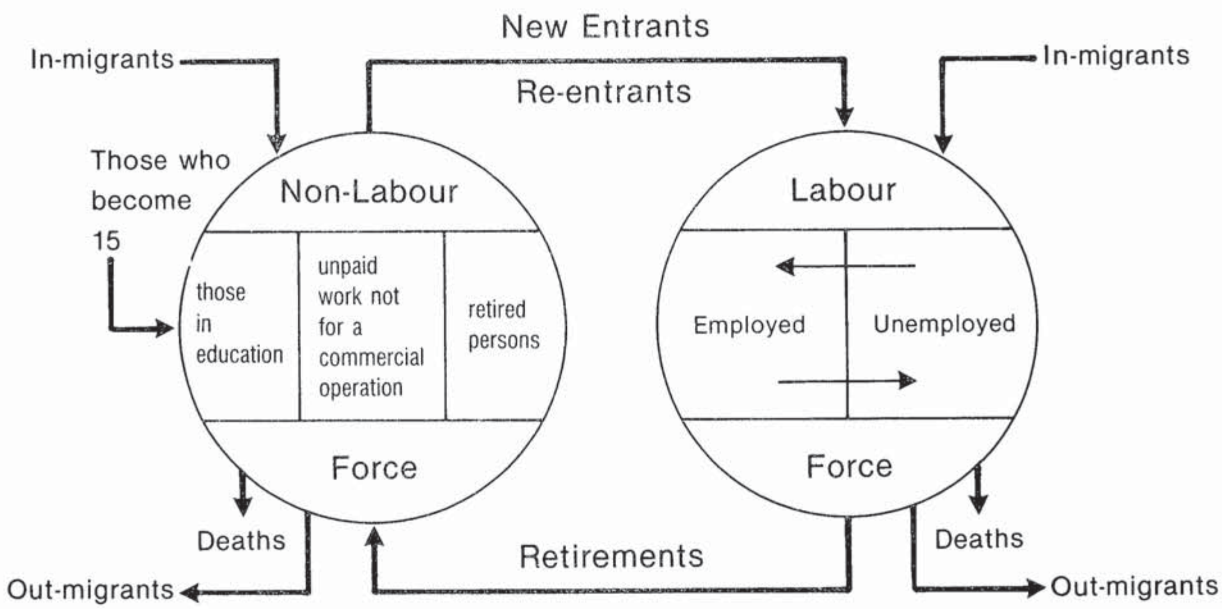
The Labour Force Survey is the most commonly used indicator of labour market activity during a year. This survey is conducted monthly and provides a 'snapshot' of annual average labour market characteristics, such as the size of the labour force, during the year. For example, the number of people offering their services in the Province's labour markets during a year varies from month to month, particularly in seasonal occupations such as those found in the fishing or construction industries. The Labour Force Survey adds together the monthly labour force figures from January to December to determine the total person months of labour services offered in the labour market during a year. This total, which may be thought of as a measure of the **stock of labour effort** offered in the labour market, is then averaged over the twelve months of a year to give an annual average profile of the size of the labour force in terms of person years. A person year can be made up of one person working twelve months during the year, two people each working six months of the year and so on. **In any given year, the actual numbers of people participating and the extent of their labour force activity are obscured in the annual averaging process.**

Annual average employment in a year is also measured in person years and may be thought of as the stock of labour effort which is **utilized** in the economy to produce the goods and services which account for Gross Domestic Product. The **people** who are employed or unemployed, however, change from one month to the next; that is, it is not necessarily the case that the same people are either employed or unemployed from month to month even though the total number of people may not change. The Labour Force Survey is designed to provide a reasonable approximation of the total labour effort which is either offered or required in the economy during a year. It is also useful in assessing the changing structure of the labour force and the changing requirement for labour effort over a period of years.

In addition to the monthly Labour Force Survey on which annual average statistics are based, Statistics Canada conducts an Annual Work Patterns Survey. This survey, which is conducted only once a year, attempts to capture labour force activity in terms of the actual number of people, rather than the annual average number of people, who participated in the labour force and were either employed or unemployed (or both) for some period of time during a year. The Annual Work Patterns Survey does not necessarily provide a picture of total **labour effort** in a given year which is different from that given by the Labour Force Survey. It does, however, provide a more informative picture of how that effort is met, and the degree of success being met by people's job search activities.

The dynamic nature of the Province's labour force is illustrated in Figure R.1 below which highlights the flows between the labour force and the pool of individuals who are not participating in the labour force at a point in time, the non-labour force. People are continually moving into and out of the labour force and between states of employment and unemployment over the course of a year. The flows illustrated in Figure R.1 also highlight key factors, such as migration, which play a role in the changing structure and composition of both the potential and actual Newfoundland and Labrador labour force.

Figure R.1
Schematic Illustration of Flows Between the Labour Force Source Population and the Labour Force



Source: Economic Research and Analysis Division, Cabinet Secretariat.

Statistics from the Labour Force Survey are used in this report to provide a profile of the labour force in 1986 and to highlight some of the important changes in the structure and composition of the Newfoundland and Labrador labour force in recent years. Data from the Annual Work Patterns Survey is used to illustrate the dynamic nature of the Province's labour force during 1985, the most recent year for which data from this survey is available.

AGGREGATE CHANGES IN THE LABOUR FORCE: 1979-1986

Aggregate labour force indicators for 1986, and changes from 1985, were discussed in Chapter VII of THE ECONOMY 1987. The structure and composition of the labour force, however, has changed considerably from earlier years and these changes are not readily apparent by discussing only two years of Labour Force Survey data. One key area in which compositional change in the labour force, at an aggregate level, has occurred in recent years is through changing participation rates for males and females. Assuming that the source population is unchanged, then changes in the total participation rate over time will cause the size of the labour force to change. Changes in the relative participation rates of males and females, on the other hand, can cause changes in the structure and composition of the labour force, particularly to the extent that there are differences in the training, skills and experience which men and women bring to the labour market.

In the period from 1979 to 1986, the number of women entering the labour force increased dramatically as the female participation rate rose from 35.9 percent to 42.6 percent. This is illustrated in Diagram R.1 below. The annual average increase in the participation rate for women was 2.5 percent. At the same time the male participation rate fell as Diagram R.2 shows. The annual average decline in the male participation rate was 1.1 percent. The annual average size of the labour force increased by 26,000 between 1979 and 1986; there were about 4,000 more men and about 22,000 more women in the labour force.

Diagram R.1

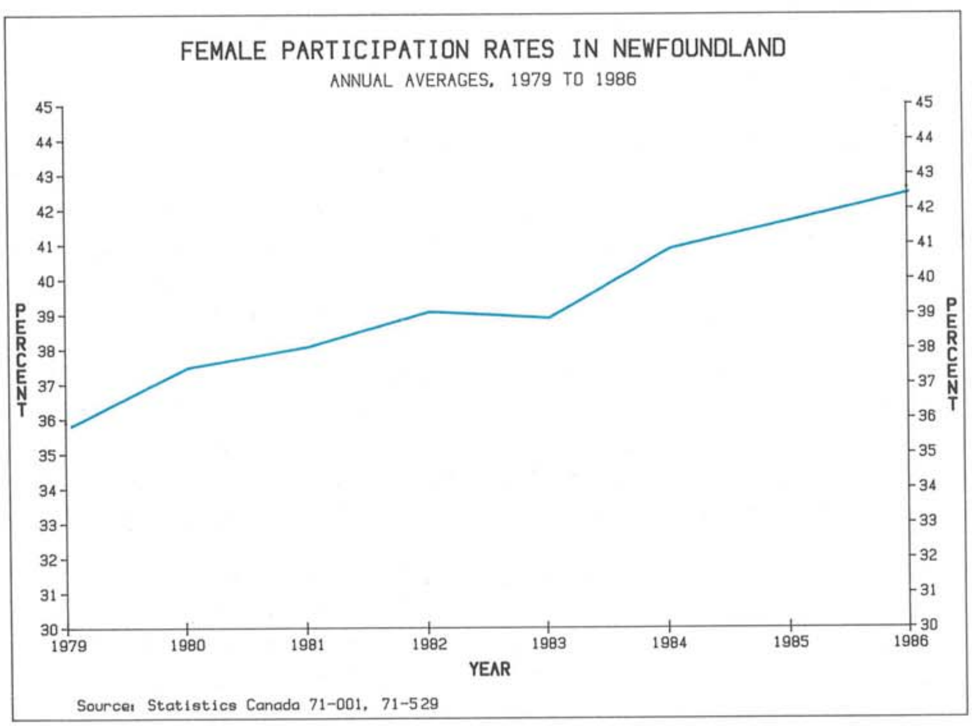
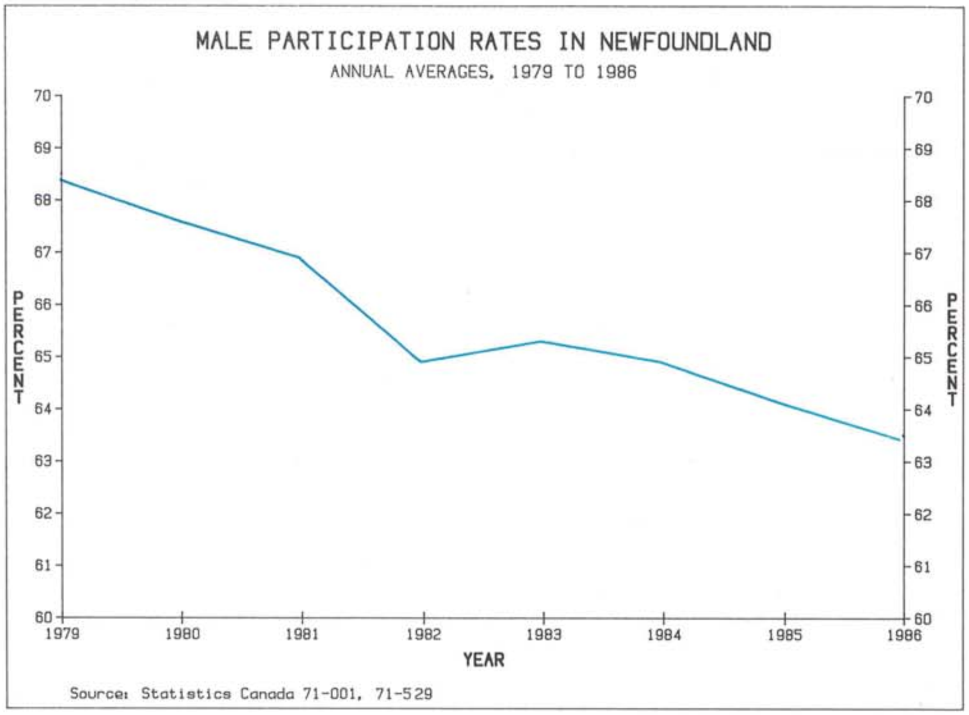


Diagram R.2



In terms of the division of the labour force between males and females, there has clearly been a structural shift. In 1979, males accounted for about 65.8 percent of the labour force and females for about 34.2 percent; the comparable figures for 1986 were 59.7 percent males and 40.3 percent females.

Not only did females increase their share of the labour force, they also increased their share of total employment. In 1979, about 65.9 percent of employment was captured by men and about 34.1 percent by women. By 1986, men's share of total employment in the Province had fallen to about 60.2 percent whereas the share for women had risen to about 39.8 percent. This suggests that, in general, the additional women who entered the labour force between 1979 and 1986 were relatively successful in their job search activities.

In 1986, annual average employment was 11,000 person years higher than in 1979. The success of women's job search activities is revealed by the fact that, in terms of annual averages, there were 14,000 **more** females employed than in 1979 whereas there were 3,000 **less** males. Employment for women between 1979 and 1986 grew at an annual average rate of 3.1 percent compared with annual average growth of 0.9 percent for total employment.

These shifts in labour force and employment patterns for males and females in Newfoundland and Labrador are suggestive of important structural changes on the demand side of the labour market that can be understood only through more detailed examination of the available statistics. Some evidence to suggest that demand side changes have occurred is provided by the fact that between 1979 and 1986, 2,000 person years of employment were lost in the traditionally male-dominated goods producing industries whereas 13,000 person years were gained in the service producing industries. Furthermore, during the 1979 to 1986 period, the unemployment rate for women, while higher than for men, increased at a slower annual average rate; 3.7 percent a year from 16 percent in 1979 to 20.7 percent in 1986 for women compared with 4.1 percent a year from 14.7 percent in 1979 to 19.5 percent in 1986 for men. The increase in the female unemployment rate was due almost entirely to rapid growth in the female labour force whereas the increased unemployment rate for men was due almost exclusively to declining job opportunities since growth in the male labour force was very slow (0.4 percent a year). Table R.1 below reveals some interesting structural shifts in the labour force and in labour force activity between 1979 and 1986.

Table R.1

LABOUR MARKET INDICATORS: MALE AND FEMALE, 1979 AND 1986 (thousands)

	Labour Force		Participation Rate		Employed		Unemployed	
	M	F	M	F	M	F	M	F
1979	131	68	68.5%	35.9%	112	58	19	11
1986	135	91	63.5%	42.6%	109	72	26	19
AARG	0.4%	4.3%	−1.1%	2.5%	−0.4%	3.1%	4.6%	8.1%

F: Female; M: Male

AARG: Annual Average (or compound) rate of growth.

Source: Statistics Canada 71-001 and Economic Research Analysis Division, Cabinet Secretariat.

Insofar as male and female labour force participants are concerned, there have clearly been structural shifts on both the supply and the demand sides of the labour market in recent years. It is also clear that females have been relatively successful in obtaining employment in the 1979 to 1986 period. What is not clear, however, is the extent to which the employment obtained by females was in relatively low paying or high paying occupations and whether or not this employment was full-year or part-year, or full-time or part-time.

These are important questions, however, full and definitive answers to questions such as these can only be provided through examination of detailed occupational changes which may have occurred in recent years. Time constraints have not permitted this level of analysis at this time. To the extent, however, that the labour force is made up of males and females of different age groups, and to the extent that the education and skills which individuals have to offer in the labour market differ by age groups, then examination of the age structure of the labour force in 1986 together with an assessment of changes in the age structure in recent years may shed some light on the aggregate changes discussed above.

AN OVERVIEW OF THE LABOUR FORCE IN 1986

The observed changes in participation rates, the labour force and employment for both males and females can be more closely examined through disaggregation of labour market indicators by various age groups. This will further enhance our ability to assess the significance of structural and compositional changes which have been occurring over time. An overview of the labour force in 1986 provides a reference point for assessing these changes.

Participation rates vary among males and females in the Province, and also among different age groups of the source population. These variations clearly have implications for the structure and composition of the labour force. The participation rates in 1986 for both males and females by different age groups are provided in Table R.2. Not surprisingly, the lowest participation rates were in the 15-19 year age group for both males and females; many of these individuals would still be attending educational institutions. While the participation rates for females were lower than for males in all age groups in 1986, the male/female gap was noticeably wider beginning with the 25-34 year age groups with the largest differences occurring in the 45-65 year age groups. Female participation rates were highest for the 20-24 year age group and were successively lower thereafter whereas male participation rates were successively higher until the 45-54 year age group. Although the participation rates for males were higher in all age groups, the highest rates for both males and females were in the same age groups, 20 to 44 years.

Table R.2

ANNUAL AVERAGE PARTICIPATION RATES BY AGE AND SEX NEWFOUNDLAND AND LABRADOR, 1986

Years of Age	Both Sexes	Males %	Females %	Difference Between Male and Female	Ratio of Male to Female Participation Rates
15-19	28.4	29.9	26.8	3.1	1.116
20-24	66.2	70.3	62.2	8.1	1.130
25-34	70.9	83.6	58.7	24.9	1.424
35-44	71.6	85.5	57.5	28.0	1.487
45-54	63.8	81.4	45.4	36.0	1.793
55-64	37.4	56.4	18.2	38.2	3.099
Annual Average	53.0	63.5	42.6	20.9	1.491

Source: Statistics Canada 71-001 and Economic Research and Analysis Division, Cabinet Secretariat.

In 1986, there were about 426 thousand people of labour force age in Newfoundland and Labrador. On an annual average basis, 53 percent of these people participated in the labour force, and the annual average size of the labour force was about 226,000. As illustrated in Table R.3 below, 135,000 (or about 60 percent) of the labour force participants in 1986 were male while the balance of 91,000 (or about 40 percent) were female. The age structure of the 1986 labour force is also illustrated in Table R.3 which reveals that some 79 percent of the labour force consisted of individuals between the ages of 15 and 44 years. The most significant differences between the male and female labour force were in the percentage concentrations between 15-24 years and 45 and over. Although the absolute numbers for the 15-24 year age groups were not significantly different, the percentage concentration of the female labour force was noteably higher than for males. This was because of significantly lower participation rates for females 45 years and over which had the effect of raising the concentration in the lower age groups.

Table R.3

THE ANNUAL AVERAGE LABOUR FORCE OF NEWFOUNDLAND AND LABRADOR BY AGE COHORTS (1986)

Age Cohort	Both Sexes ('000)	Percent of Total	Males ('000)	Percent of Total	Females ('000)	Percent of Total
15-19	16	7.1	9	6.7	8	8.8
20-24	38	16.8	20	14.8	18	19.8
25-34	68	30.1	39	28.9	29	31.9
35-44	56	24.8	34	25.2	22	24.2
45-54	31	13.7	20	14.8	11	12.1
55-64	15	6.6	12	8.9	4	4.4
65+	2	.9	1	.7		
TOTAL	226	100.0	135	100.0	91	101.2

Source: Statistics Canada 71-001 and Economic Research and Analysis Division, Cabinet Secretariat.

Note: Percentages may not add to 100 due to independent rounding.

The 1986 annual average labour force can be divided into two groups, those who were employed and those who were unemployed. Table R.4 below summarizes 1986 annual average employment in Newfoundland and Labrador for both males and females by age group. The distribution of total employment between males and females was virtually identical to the distribution of the total labour force suggesting that male and female participants were equally as successful in finding employment. As with the labour force, annual average employment is concentrated in the 25-44 year age groups; these age groups, both male and female, accounted for about 56 percent of employment in 1986.

Table R.4

ANNUAL AVERAGE EMPLOYMENT BY AGE AND SEX IN NEWFOUNDLAND AND LABRADOR IN (1986)

Age Cohort	Both Sexes ('000)	Percent of Total	Males ('000)	Percent of Total	Females ('000)	Percent of Total
15-19	11	6.1	5	4.6	5	6.9
20-24	27	14.9	14	12.8	13	18.1
25-34	55	30.4	32	29.4	23	31.9
35-44	47	25.9	29	26.6	18	25.0
45-54	27	14.9	18	16.5	9	12.5
55-64	13	7.2	10	9.2	4	5.6
TOTAL	181	99.4	109	99.1	72	100.0

Source: Statistics Canada 71-001 and Economic Research and Analysis Division, Cabinet Secretariat.

Note: Percentages may not add to 100 due to independent rounding.

The distribution of 1986 annual average unemployment in the Province, together with the percentage concentrations by age group, is provided in Table R.5 below. Statistics Canada does not release unemployment statistics by age groups for males and females since the relatively small number of individuals in each group produces unreliable estimates. The highest concentration of unemployment was in the 20-34 year age group which accounted for 53.3 percent of all unemployment in 1986.

Table R.5

TOTAL UNEMPLOYMENT IN NEWFOUNDLAND AND LABRADOR IN 1986

Years of Age	Both Sexes ('000)	Percent of Total
15-19	6	13.3
20-24	11	24.4
25-34	13	28.9
35-44	9	20.0
45-54	4	8.9
55-64	2	4.5
TOTAL	45	100.0

Source: Statistics Canada 71-001.

In 1986, on an annual average basis, 20.0 percent of the Newfoundland and Labrador labour force was unemployed. As has been suggested by earlier discussions, the unemployment rate for different age groups varies and, consistent with earlier observations, in 1986 the highest unemployment rates occurred in the 15-19 and 20-24 year age groups. The lowest rates occurred in the older age groups. For all 25-64 year age groups, the unemployment rate averaged 16.2 percent, less than the annual average unemployment rate of 20.0 percent. Unemployment rates by age groups are provided in Table R.6 below.

Table R.6

ANNUAL AVERAGE UNEMPLOYMENT RATES BY AGE GROUP FOR NEWFOUNDLAND AND LABRADOR IN 1986

Age Cohort	Both Sexes %
15-19	35.1
20-24	29.4
25-34	19.3
35-44	16.5
45-54	11.9
55-64	-
TOTAL	20.0

Source: Statistics Canada 71-001.

CHANGES IN THE LABOUR FORCE: 1981-1986

It is clear from previous discussions that the aggregate male and female components of the labour force have undergone dramatic shifts in recent years. The aggregate changes, however, are merely an average of changes which have occurred for different male and female age groups of the labour force. Examination of the data by age groups will permit identification of particular age groups, both male and female, which account for these aggregate changes.

The balance of this report examines some such changes in the period between the Census years, 1981 and 1986.

Disaggregation by age group results in much smaller population counts and, since the absolute numbers tend to be less accurate when small populations are observed, the analysis of changes in the labour force is confined to changing trends. For each component of the labour force examined, the trends between 1981 and 1986 are illustrated diagramatically by an index number using 1981 as the base year (1981 = 100). The interpretation of an index number is straightforward. For example, an index value of 130 in 1986 would indicate that the absolute value of the indicator had increased by 30 percent between 1981 and 1986. An index value of 70 in 1986, on the other hand, would indicate that the absolute value of the indicator had decreased by 30 percent between 1981 and 1986. As a general rule of thumb, an index value above 100 indicates an increase in 1986 compared to 1981 whereas an index value below 100 indicates a decrease.

Diagrams R.3 and R.4 provide indices of participation rates and of the labour force for both males and females by age groups. It is clear that the participation rates for males in all age groups declined between 1981 and 1986, with the largest decline registered in the 15-19 year age group, the only age group in which female participation rates declined. These observations are consistent with the index of the labour force provided in Diagram R.4. With the exception of a relatively small increase for males in the 20-24 and 34-44 year age groups, all growth in the labour force came from females with the strongest growth in the 34-44 and 45-54 year age groups. Strong gains for females were also made in the 20-24 and 25-34 year age groups. The only decline in the female labour force was registered in the 15-19 year age group and, even here, the decline was smaller than for males. Of the additional 18,000 people who entered the labour force between 1981 and 1986, 15,000 were females while only 3,000 were males.

Diagram R.3

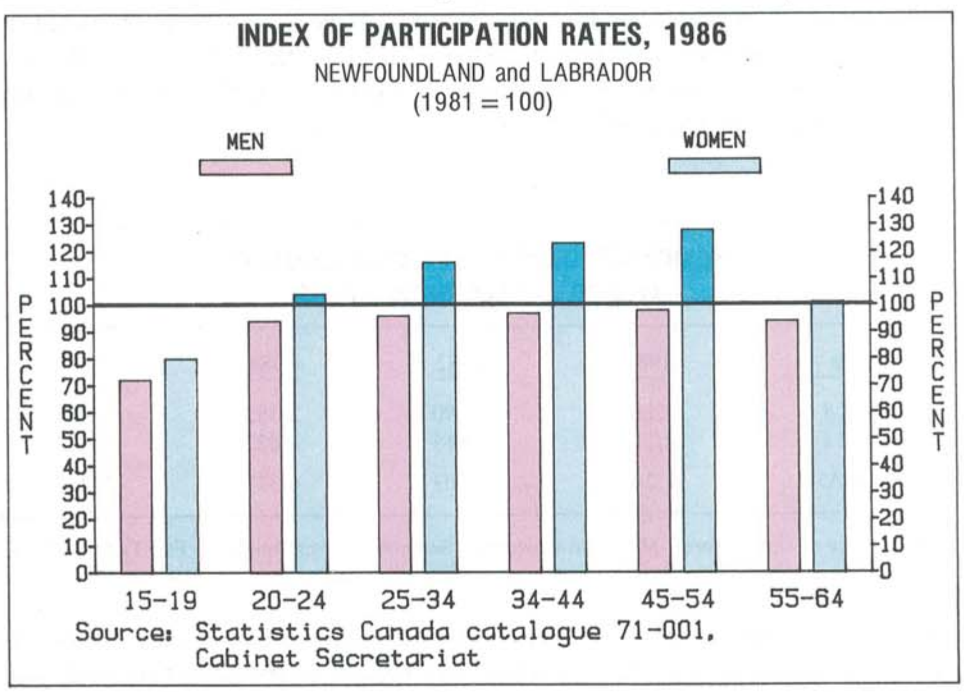
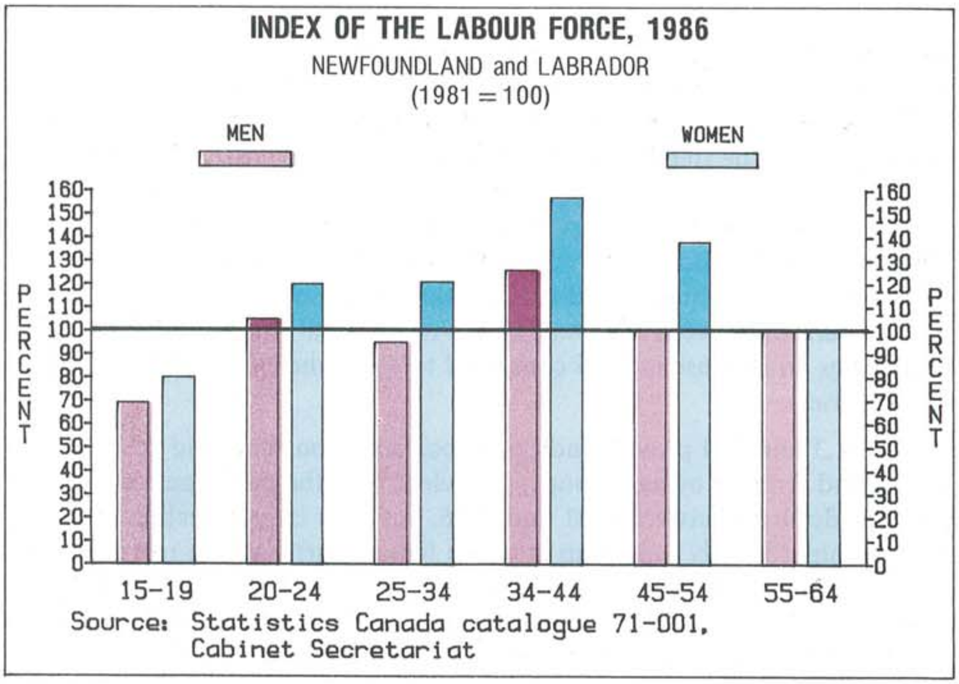


Diagram R.4



The most significant decrease for both males and females in both participation rates and the labour force occurred in the youngest age groups. Estimates indicate that the number of individuals participating in this portion of the labour force fell by approximately 7,000. Part of the explanation for this decline lies in increasing numbers of young men and women who are enrolling in educational institutions. Between 1981 and 1985, full time enrollments at Memorial University of Newfoundland for people between the ages of 16 and 21 increased by nearly 2,000 as indicated in Table R.7 below. Comparable statistics for the Trade and Vocational schools were not available. Another part of the explanation lies in out-migration, which is discussed in later pages of this report.

Table R.7

MEMORIAL UNIVERSITY ENROLLMENT BY AGE — FALL SEMESTERS

Age	1981	1982	1984	1985
16-18	3,130	3,690	2,355	2,394
19-21	2,116	3,013	4,022	4,839
TOTAL	5,246	6,703	6,377	7,233

Source: Office of the Registrar, Memorial University, Summary of Enrollments — Full Time Students.

Diagram R.5 below, which illustrates changes in employment since 1981 for males and females by age group, suggests that the observed changes in participation rates and in the size of the labour force are related to changes on the demand side of the labour market. Most of the employment growth was captured by women between the ages of 25 and 54 years; this is consistent with growth in participation rates and in the labour force for women in these age groups. The only decline in employment registered for women was in the 15-19 year age group, the only age group for women which registered a decline in the labour force. For males, the only increase in employment was registered in the 34-44 year age group, the only male age group for which any significant increase in the labour force was observed between 1981 and 1986. Employment for all other male age groups either declined or was unchanged.

As illustrated in Figure R.1 on page 124, migration can also have an important influence on the structure of the Province's labour force. Migration patterns in Newfoundland and Labrador have historically been characterized by net out-migration in periods of economic growth and increasing job opportunities in other parts of the Country, and by net in-migration in periods of recession and diminishing job opportunities elsewhere. For example, in the period from 1976 to 1981, approximately 4,000 people were leaving the Province annually. In the period from 1981 to 1986, however, fewer people left the Province and in 1982, in the midst of the recession, the trend of net out-migration was reversed. During 1982, more people entered the Province than left. Diagram R.6 below illustrates net migration (in-migration minus out-migration) for 1982/83 and 1985/86 for both males and females by age. It is clear that the net in-migration observed during the recession has since been reversed with the number of people leaving approximately the same as in the 1976 to 1981 period.

Diagram R.5

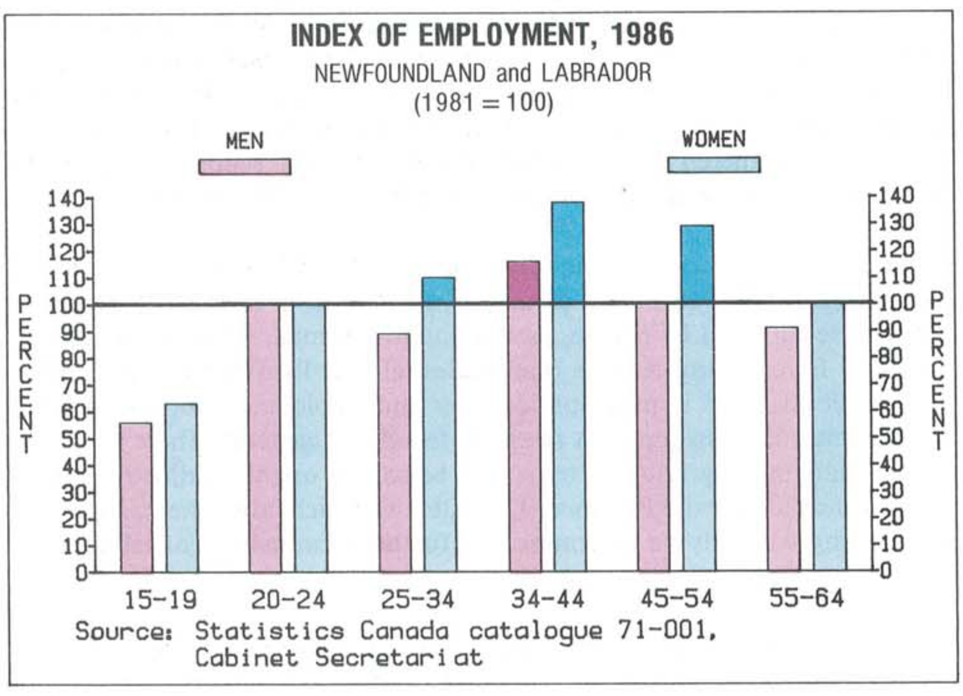
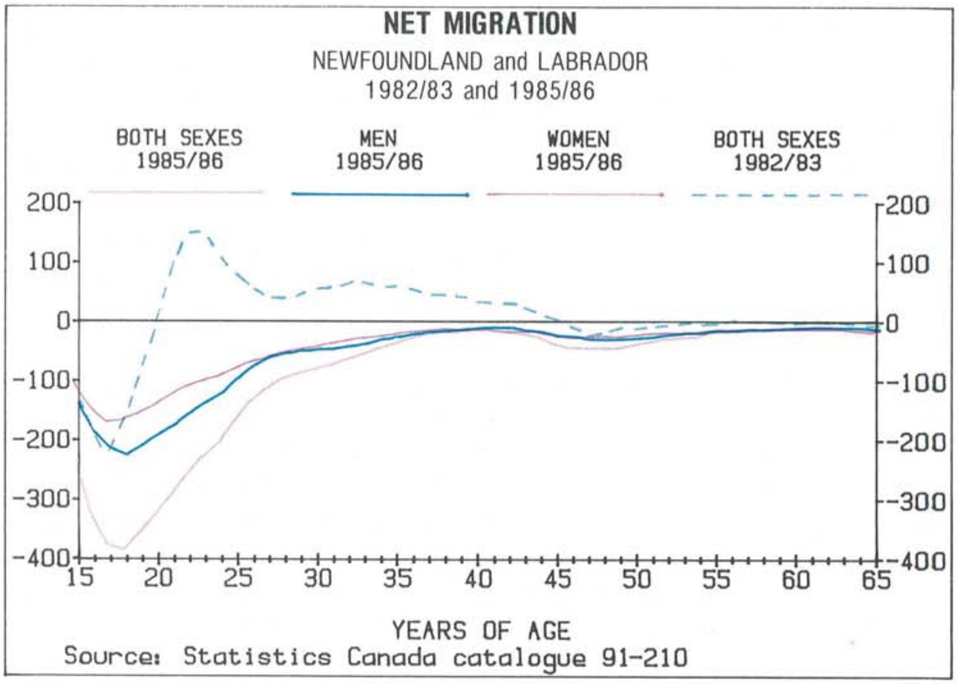


Diagram R.6



The observed decline in the labour force for young men and women was only partly explained by increasing enrollments in educational institutions. While many factors may have influenced the declines in the labour force, another part of the explanation lies in net migration trends. It is clear from Diagram R.6 above that the largest population losses through net migration were in the 15-19 year age group. These younger members of the source population are unlikely to have furthered their education beyond the high school level and would have a narrower range of skills and experience to offer in the labour markets.

Net out-migration tapered off rapidly after age 25 for both males and females. This may be related to the observation that all employment gains in the 1981 to 1986 period (See Diagram R.5) were captured by people, predominantly women, between the ages of 25 and 54. The fact that fewer young females than males left the Province is also consistent with the trend of smaller declines in participation rates and employment for young females than for males and increasing participation rates for females in general. There is some evidence to suggest that changing migration patterns may be part of ongoing adjustment to changing labour market conditions in the Province. The extent to which adjustment, by this and other means, is occurring will only be determined by further examination of labour market and related statistics.

It would be interesting to determine the destination of people migrating from the Province. While it is not possible to do this for all out-migrants, it is possible for those who use Unemployment Insurance benefits to finance their job search activities outside the Province. Unemployment Insurance statistics indicate that in 1986, some 2,240 active UI claims were transferred outside the Province. Approximately 70 percent of these claims (or 1,560) were transferred to Ontario and 18 percent (or 399) to Alberta. The balance of 281 claims were spread among the other seven provinces. In the same year, approximately 1,699 active UI claims were transferred into the Province for a difference of 541, the net number of claims transferred out of the Province.

ANNUAL LABOUR MARKET FLOWS DURING 1985

Figure R.1 above illustrated that many factors influence the composition and structure of the Province's labour force. These factors cause the labour force to be a very dynamic element of the Provincial economy. The previous discussions have identified and described, at an aggregate level, tremendous changes in the structure and composition of the labour force in recent years. These changes, however, have been assessed using annual average statistics from the Labour Force Survey. As discussed in the Introduction to this report, annual average labour force statistics obscure part of the dynamic dimension of the labour force within a year. By way of illustration, data from the Annual Work Patterns Survey is compared below to data from the Labour Force Survey for 1985, the most recent year for which comparable data is available.

According to the Annual Work Patterns Survey, during 1985 some 286,000 people, representing 68 percent of the population of labour age, participated in the labour force for some period; the **average** number of people participating, according to the Labour Force Survey, was 224,000 or 53 percent. Furthermore, of the 286,000 people who entered the labour force in search of **a job** during 1985, 93.4 percent or 267,000 were successful. Clearly, the number of **jobs** obtained in the course of a year is very different from the annual average number of **person years** which approximate total labour effort. Data from the Annual Work Patterns Survey together with data from the Labour Force Survey are provided in Table R.8 below for 1985.

Table R.8

NUMBER OF PERSONS IN THE LABOUR FORCE WHO WERE EITHER EMPLOYED OR UNEMPLOYED AT SOME TIME DURING 1985

	Persons in the Labour Force ('000)	Persons Employed ('000)	Persons Unemployed ('000)	Population of Labour Force Age ('000)
Annual Average	224	176	48	422
Labour Force Experience	286	267	114	422

Source: Statistics Canada 71-001 (annual averages) and The Annual Work Patterns Survey, Statistics Canada, March 1986.

During 1985 annual average employment totalled 176,000 person years. At the same time, however, some 267,000 people actually found work during the year and, on average, **jobs** lasted 31.3 weeks, or nearly two-thirds of the year. Of course, some jobs would be seasonal whereas others would last a full year. While 114,000 people experienced some period of unemployment during 1985, the average duration of unemployment was about 8.3 weeks.

The balance of approximately 12.4 weeks was spent outside the labour force. Furthermore, only 6.6 percent of labour force participants (or 19,000 people) were unsuccessful in finding any employment whatsoever. The number of people experiencing periods of unemployment during 1985 corresponds closely to the number of people who received Unemployment Insurance benefits, which serves to reduce the hardship associated with periods of unemployment.

In terms of comparison with the country as a whole, 96.1 percent of Canadians who entered the labour force during 1985 in search of a job found employment as opposed to 93.4 percent in Newfoundland and Labrador. The key difference, of course, is the average length of employment; 40.6 weeks in Canada compared to 31.3 weeks in Newfoundland and Labrador.

This brief examination of only one year of labour market **flow** data makes it clear that annual averages mask much of the complex and dynamic nature of annual labour force activity in Newfoundland and Labrador. There are many more people participating in Provincial labour markets than annual averages would suggest. Further insights into the structure of the Province's labour market could be gained not only through a more detailed examination of annual flow data within a year but also through an examination of additional years of flow data. Furthermore, in view of the fact that the demand for labour services represents the demand for the different skills offered by individuals, labour markets need to be examined at an occupational level in order to more fully understand labour market dynamics.

CONCLUSION

While this report has examined only certain dynamic elements on the supply side of the labour market, and some of the ongoing adjustments to changing labour market circumstances which have occurred in the Province over a relatively short period of time, it has considerably enhanced our understanding of the Province's most important economic resource, the people who make up the labour force. This examination has given rise to a number of questions and although some questions have been left unanswered, a framework has been developed within which the dynamics of Newfoundland and Labrador labour markets can be more fully understood. It is clear that the process of restructuring on the supply side of the labour market has been fairly rapid and extensive. There is also some evidence to suggest that these changes have occurred in response to changes in the demand for labour. To the extent that this is the case, future labour supply side adjustments could be viewed as an indication of future changes in the economy and in the nature and extent of the Province's future labour requirements.