

**ECONOMIC DEVELOPMENT
PROSPECTS IN
NEW BRUNSWICK**

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

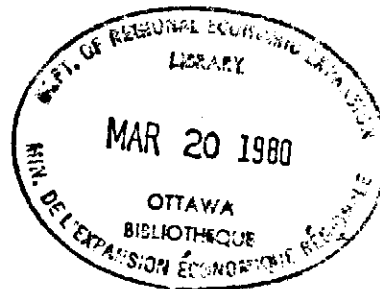
HT
395
•C32A5
New Bruns
-wick.

ment Gouvernement
Ja du Canada

l Expansion
ic Économique
on Régionale

December 1979

HC
117
14
C1372

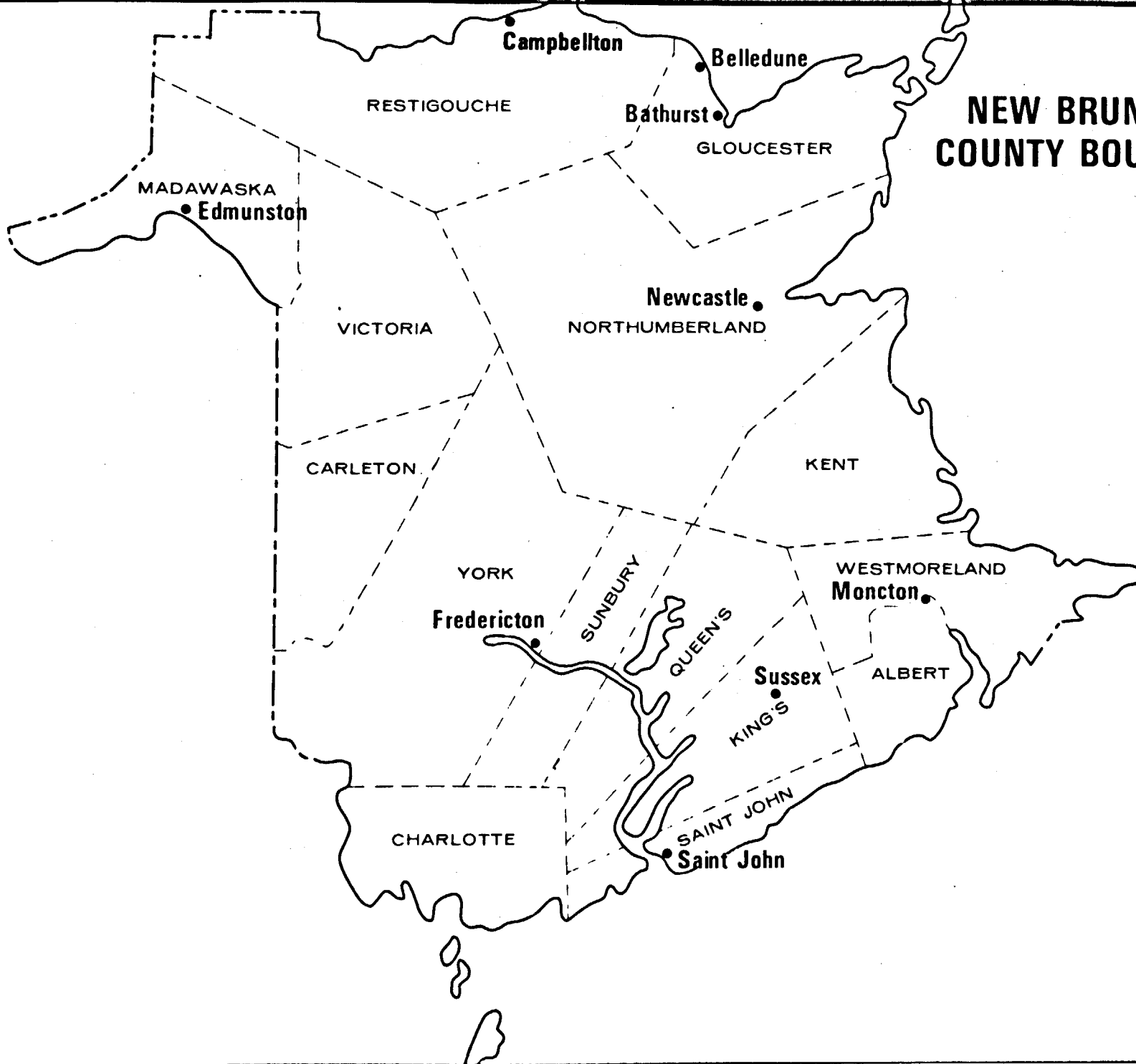


Can. DREE

/ ECONOMIC DEVELOPMENT PROSPECTS

IN NEW BRUNSWICK /

NEW BRUNSWICK COUNTY BOUNDARIES



PREFACE

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

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

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

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

TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| 1. OVERVIEW..... | 1 |
| 2. ECONOMIC DEVELOPMENT FACTORS..... | 3 |
| 2.1 Factors..... | 3 |
| 2.1.1 Resource Endowments..... | 3 |
| 2.1.2 Market Environment..... | 7 |
| 2.1.3 Other Factors..... | 9 |
| 2.2 Overview of Economic Performance..... | 12 |
| 2.2.1 General Indicators..... | 12 |
| 2.2.2 Labour Market..... | 14 |
| 2.2.3 Investment Climate..... | 16 |
| 2.2.4 Sectoral Review..... | 16 |
| 2.2.5 Sub-Provincial Circumstances..... | 22 |
| 2.3 Medium-Term Prospects..... | 23 |
| 3. DEVELOPMENT PROBLEMS AND ISSUES..... | 25 |
| 3.1 Energy..... | 25 |
| 3.2 Urbanization..... | 26 |
| 3.3 Employment Creation Policy..... | 28 |
| 3.4 Transportation..... | 30 |
| 3.5 Provincial Fiscal Situation..... | 31 |
| 3.6 The Export Sector..... | 32 |
| 4. APPROACHES TO ECONOMIC DEVELOPMENT..... | 33 |
| 4.1 Federal..... | 33 |
| 4.2 Provincial..... | 34 |
| 5. ECONOMIC DEVELOPMENT OPPORTUNITIES..... | 38 |
| 5.1 Agriculture and Related Industries..... | 38 |
| 5.2 Fishing and Fish Processing..... | 42 |
| 5.3 Forest Industries..... | 44 |
| 5.4 Mining..... | 48 |
| 5.5 Non-Resource-Based Manufacturing..... | 51 |
| 5.6 Shipbuilding and Ship Repairs..... | 52 |
| 5.7 Transportation and Construction..... | 53 |
| 6. SUMMARY AND CONCLUSIONS..... | 55 |

1. OVERVIEW

The New Brunswick economy has made significant gains over the 1971-78 period, both absolutely and relative to the nation as a whole. In terms of the growth of output and investment, New Brunswick has outperformed the nation. In response to this growth performance, the historical trend of net out-migration reversed itself and, as a result, population growth has exceeded the national average.

However, employment growth, although buoyant by historical standards, has not been sufficient to absorb a labour force growing at rates in excess of the Canadian average. Accordingly, the unemployment rate has risen steadily over the period. The unemployment situation for the 15-24 age group is particularly severe.

Earned income per capita, as a proportion of the national average, declined slightly over the period, as gains in earned income per employee were offset by relative declines in the proportion of the labour force population employed.

As for Canada as a whole, on balance the outlook until 1985 is for moderately slower economic growth than has been the case over 1971-78. The unemployment rate, which increased steadily during the period 1971-78, can be expected to decline somewhat from its present very high level. However, there exist a number of major economic development opportunities with the potential to improve the rate of provincial economic growth.

The sector with perhaps the greatest potential is mining. Most important here are expansion in mine production of zinc and potash and the potential for a zinc refining facility. The fishing sector presents numerous opportunities for expanded output. However, this sector is not as important to New Brunswick as it is to the other Atlantic provinces. Considerable potential exists to expand the output of agricultural products for both domestic and export markets. In the forest products sector, the backbone of the provincial economy, a program of modernization and rationalization of production facilities, in addition to a continuation of intensive forest management, is required to improve the industry's competitive position.

Although manufacturing investment has been a weak spot in recent years, a number of opportunities exist in the non-resource-based manufacturing sector. The most important of these is an opportunity for the construction of Arctic-class vessels.

The buoyant economic growth of recent years has increased the province's fiscal capacity. However, in keeping with those of all the eastern provinces, New Brunswick's fiscal capacity has declined relative to the all-province average because of the very great increase in the fiscal capacity of western Canada. The province's fiscal capacity limits its ability to undertake economic development measures. This is perhaps the most serious development issue facing the province.

An additional development issue is the apparent need for the federal-provincial development strategy as implemented under the Canada/New Brunswick General Development Agreement to place increased emphasis on employment creation. To date, output and productivity improvement in the resource-based industries have received the most emphasis. However, these industries alone do not offer sufficient job creation opportunities to reduce the unemployment rate while employing new entrants to the labour force.

2. ECONOMIC DEVELOPMENT FACTORS

2.1 Factors

2.1.1 Resource Endowments

Agriculture

Over the last 50 years or so there has been a considerable decline in farmland acreage in New Brunswick, primarily as a result of technological developments. Improved land and total farmland in 1976 was one-third of the total in 1931. However, this decline slowed dramatically over the 1971-76 period and current indications are that it may have halted.

Many of the farmers, who left farming in pursuit of opportunities in other industries, were located on good farmland which was abandoned; much of it has reverted to forest.

In addition, there is a problem with the availability of land. The characteristics of the terrain, climate and settlement pattern do not favour an intensive type of agriculture. This results in a small ratio of improved to total farm acreage. There has also been, in recent years, considerable pressure on farmland from urban growth.

There are no soils of top quality (Class 1) due to low natural fertility and adverse climatic factors. The climate results in a relatively short, cool and moist growing season, which moderates the rate of plant growth and has a selective influence on the crops that can be produced. The small size of the provincial market, combined with the sourcing practices of merchandisers, has limited the production of many products.

Fisheries

The New Brunswick fishery is primarily an inshore fishery. The principal species are molluscs and crustaceans, mainly lobster and crab, and pelagic and estuarial, primarily herring and tuna. Each of these categories accounts for about 45 per cent of landings by value. The groundfish industry is limited pretty well to the Gulf of Saint Lawrence and accounts for the remaining 10 per cent of landings.

The volume of sea fish landings declined from the early 1960s, until about 1975, with the decline being quite rapid in the early 1970s. All major species have been involved in this decline. The drop in landings has resulted in over-capacity in both the harvesting and processing plants, employment declines, and low profitability. In the period since 1975, landings and output of processed fish appear to have stabilized.

Forestry

New Brunswick is one of the most forested provinces of Canada, with 83 per cent of the total land area being productive forest land. Of the productive forest land some 94 per cent is stocked.

Productive forest land is about equally distributed between public and private ownership (45 per cent public and 55 per cent private).

Gross merchantable volume (GMV) of New Brunswick forest land is around 70.6 million cubic metres. Softwood species dominate, accounting for 72 per cent of GMV, while hardwoods account for the remaining 28 per cent.

White and red spruce and balsam fir are the most important species of the softwoods. Sugar and red maple, white and yellow birch are the most important of the hardwood species.

Mature stock of New Brunswick forests is in many cases of medium to poor quality. The spruce budworm has severely damaged balsam fir and to a lesser extent spruce, whereas pine, cedar and hardwoods were high graded over the years leaving trees and stands of inferior quality.

The forest products industry underwent considerable expansion over the 1960s and early 1970s. In addition, the budworm infestation has decreased the annual sustainable harvest through increasing tree mortality and reducing the growth of the forest. As a result, it is estimated that the rated capacity of existing industry exceeds supply by about one-third of the allowable annual cut. Surplus hardwood exists, but this is almost entirely suitable for pulpwood only.

Mining

New Brunswick possesses the largest reserves of zinc, lead and silver of any province in the country. In terms of measured and indicated economic reserves of metal contained in ores, New Brunswick has about 40 per cent of the country's zinc, 45 per cent of lead and 35 per cent of silver. These extensive deposits of base metals resulted in considerable growth in the mining sector in the 1960s. The major zinc-lead-copper mine is being expanded. However, the New Brunswick ores are relatively complex, resulting in low metal recovery rates with existing technologies.

Development of major potash deposits is under way with production expected to begin in 1982-83. A tungsten and tin mine

is also being developed to come into production about the same time. Uranium exploration has been intensified and some encouraging finds have been made.

Human Resources

Due primarily to the heavy levels of out-migration of population over the 1950s and 1960s, New Brunswick entered the 1970s with a low proportion of its population in the prime working-age category (25-54) relative to Canada as a whole. The heavy out-migration also tended to depress the general level of education and skills in the labour force. Since 1971 the aging of the population and the reversal in the historical trend to out-migration has resulted in a gradual amelioration of these problems.

However, the fact that New Brunswick has proportionately more of its population in the 10-15 and 15-24 age groups has meant that in recent years New Brunswick has relied relatively heavily on the younger age groups for the labour requirements of the economy. This situation can be expected to continue for another few years.

As illustrated by the trends in the unemployment rate and employment/population ratio in Table 1, the under-utilization of the labour force in the 15-24 age group has increased over the 1975-78 period. This is primarily a result of the large supply in this age category plus the shortages of opportunities which match the aspirations of well-educated youths.

TABLE 1

LABOUR MARKET TRENDS

New Brunswick and Canada

| | Employment/ Population Ratio | | Unemployment Rate | |
|----------------------|------------------------------------|-------------|----------------------|-------------|
| | <u>1975</u> | <u>1978</u> | <u>1975</u> | <u>1978</u> |
| <u>New Brunswick</u> | | | | |
| 15-24 age group | 48.0 | 44.5 | 14.9 | 20.3 |
| Total | 48.5 | 48.1 | 9.8 | 12.6 |
| <u>Canada</u> | | | | |
| 15-24 age group | 55.3 | 55.0 | 12.0 | 14.5 |
| Total | 56.9 | 57.4 | 6.9 | 8.4 |

Source: Statistics Canada, Labour Force Survey

Recent years have seen quite dramatic increases in school retention rates, and the long-standing differences in educational attainment of the labour force between the New Brunswick and Canada averages are expected to practically disappear in the next few years. The number of high school graduates leaving New Brunswick schools is expected to increase slightly until 1981, before declining.

Because of the industrial distribution of the economy and the relatively low level of urbanization, job opportunities for females have traditionally been relatively poor. Although female employment and labour force participation has increased significantly in recent years, in many areas of the province, there is considerable under-utilization of female labour.

The rationalization of the primary industries, which took place over the decade of the 1960s and the early 1970s, often resulted in some of the better qualified workers leaving these industries for other opportunities. In recent years considerable effort has been expended in upgrading workers and teaching the new skills demanded by changing technology.

However, New Brunswick, in common with most provinces, faces shortages of highly skilled tradesmen. This problem is particularly acute in times of buoyant demand. The heavy construction activity in recent years has resulted in skilled workers leaving the manufacturing sector for higher paying construction jobs.

The quantitative comparisons of productivity, and unit labour costs as between sectors in different provinces, which can be made with available statistics, do not allow an estimate of the extent to which labour quality is a factor in productivity differences.

Informal discussions with entrepreneurs generally reveal that, on balance, New Brunswick workers are at least as productive as their counterparts elsewhere in Canada when allowance is made for scale of production and technology employed.

Quantitative estimates, given in Table 2, do reveal that relative to the rest of Canada productivity and unit labour costs in the province's manufacturing sector have improved relative to the Canadian average since 1971.

2.1.2 Market Environment

Because of the dependence on the resource sectors, the distance from national markets and the small provincial market, the New Brunswick economy is relatively more dependent on export markets than is the country as a whole. Over the period 1974-78, as indicated in Table 3, exports averaged over one quarter of total gross provincial product. Over the period since 1971 the proportion of GDP accounted for by exports has increased steadily. Perhaps the most significant development recently has been the decline of the Canadian dollar, which has greatly increased the competitiveness and profitability of exporters.

TABLE 2

Trends in Labour Productivity and Costs - Manufacturing

Value-Added Per Person-Hour
Canada = 100

| | <u>New Brunswick</u> | <u>Atlantic Region</u> |
|------|----------------------|------------------------|
| 1961 | 81 | 75 |
| 1971 | 67 | 66 |
| 1975 | 89 | 73 |
| 1976 | 79 | 77 |

Wage Cost Per Dollar of Value-Added

Canada = 100

| | <u>New Brunswick</u> | <u>Atlantic Region</u> |
|------|----------------------|------------------------|
| 1961 | 101 | 112 |
| 1971 | 123 | 122 |
| 1975 | 103 | 108 |
| 1976 | 116 | 117 |

Source: Statistics Canada, Catalogue Nos. 31-203 and 31-204

TABLE 3

Domestic Exports as a Proportion of GDP

New Brunswick and Canada

| | <u>New Brunswick</u> | <u>Canada</u> |
|------|----------------------|---------------|
| 1971 | 21.8 | 18.2 |
| 1974 | 28.2 | 21.0 |
| 1977 | 26.0 | 20.2 |
| 1978 | 26.1 | 21.8 |

Source: Statistics Canada, Catalogue No. 65-001

The United States is the predominant market for New Brunswick exports. This heavy reliance on a single market area has led to instability of production.

Pulp and newsprint are the major commodities exported, accounting for about one half of total exports. The primary markets for these products are the United States (50 per cent) and Europe (25 per cent). Efforts have been made in recent years to penetrate markets in Japan and South America.

Currently, about 65 per cent of fish and fish products exports go to the United States. In recent years, western Europe and Japan have become increasingly important markets. Almost all exports of lumber go to the northeastern United States.

The fact that the bulk of New Brunswick exports are unprocessed or semi-processed products sold on a swing basis on world markets often makes for severe instability in provincial economic activity.

In some cases the cyclical fluctuations of world commodities markets are offset by formal marketing arrangements. This is the case with zinc concentrate and lead metal, which are the most important export commodities after pulp and paper.

The Atlantic provinces market for manufactured goods has increased in importance in recent years. Table 4 indicates the increased importance of these markets along with export markets for the province's manufactured goods.

Manufacturing production for local markets has increased in recent years, although not relative to other markets. The relatively high rate of population growth since 1971 has resulted in the provincial market for a great variety of products reaching the threshold size necessary to justify local production facilities.

The Canadian market for manufactured products, principally Ontario and Quebec, has become less important in recent years as illustrated in Table 4. With a few important exceptions, locally produced non-resource-based products have been unable to compete with the production scale, product range and sophisticated marketing and distribution network of the large national manufacturers.

2.1.3 Other Factors

Scale of Production

Because of a variety of factors including the location of natural resources, the dispersed settlement pattern and the small size of provincial and local markets, a feature of the province's industrial production capacity in several sectors is the small scale of production unit relative to national and

international standards. Primary farming, forestry, fishing, most manufacturing sectors and construction are examples.

TABLE 4

Destination of Shipments
New Brunswick Manufacturing

1967 and 1974

| <u>From N.B.</u> <u>To</u> | <u>1967</u> | <u>1974</u> |
|-------------------------------|-------------|-------------|
| | | (8) |
| New Brunswick | 43 | 32 |
| Other Atlantic provinces | 10 | 11 |
| Quebec | 9 | 9 |
| Ontario | 13 | 9 |
| Western Canada | 2 | 1 |
| Yukon, NWT & unallocated | - | 4 |
| Exports | 24 | 33 |

Source: Statistics Canada

In most industries there is a strong direct relationship between size of plant and production efficiency. The small size of plant may be the most important factor behind the low levels of productivity in certain sectors, compared to the national average. In addition, small producers do not generally have the resources to invest in management areas such as marketing, product research and development, and management information systems. As a result, in certain sectors such as sawmilling and fish products, the marketing effort is highly fragmented on an industry basis. Research and development directed toward specific New Brunswick problems is often non-existent in certain industrial sectors.

Most small firms and entrepreneurs do not have the capital necessary to invest in modern production equipment and processes.

Market and technological forces have resulted in a considerable rationalization of production into large production units in a number of sectors in recent years.

It appears that this rationalization has made a major contribution to the significant improvements in production efficiency and labour productivity relative to the Canadian

average which was noted earlier. However, there is a need for further rationalization in a number of sectors.

Geographic Pattern of Economic Activity

The economy of the northern half of the province is primarily resource based, and this type of activity is accompanied by a low level of urbanization. In the northwest of the province, agriculture and forestry are the key sectors, while in the northeast, forestry, fishing and mining are the principal activities. The economy of the southern half of the province is based primarily on activities such as trade, distribution, transportation, government and non-resource-based manufacturing, and is much more highly urbanized.

As might be expected when comparing rural and urban economies, considerable differences in employment and income levels exist. The major factors are the seasonality and cyclical instability of resource production activity and the relative lack of job opportunities for youth and women in rural areas.

The historical trend has been for an increasing proportion of provincial population to be located in the southern portion of the province, and this trend has continued in recent years. In the period since 1971, almost all of the provincial population growth has occurred in or adjacent to the urban centres of Moncton, Saint John and Fredericton.

The economic linkages between north and south are relatively weak as the resources of the north are generally exported in unprocessed or semi-processed form. Manufacturing activity in the south has relatively few linkages to northern regions.

Institutional Factors

In 1977 the New Brunswick government adopted a government-purchasing policy designed to optimize the inclusion of New Brunswick content wherever possible. The aim of the policy is to ensure that expenditures by government departments and agencies provide for the maximum of materials and services from provincial manufacturers, contractors and suppliers.

In 1972 Supply and Services Canada adopted a procurement policy designed to maximize the purchasing of supplies to be used in a region, from the region itself. New Brunswick does not seem to have benefited from this policy, perhaps because of a requirement for a minimum of three competitors for local purchasing.

2.2 Overview of Economic Performance

2.2.1 General Indicators

Demographic Trends

Over the period 1971-79, New Brunswick's population has grown at an average rate of 1.3 per cent per year. Total population now stands at about 701 000. This compares to a rate of 1.2 per cent per year for Canada as a whole. As a result, the Province's share of national population has increased marginally to 3 per cent. This represents a significant departure from the historical trends. Over the 1961-71 period, for example, the growth of the New Brunswick population averaged only 0.6 per cent per annum as compared to 1.7 per cent for Canada as a whole.

The principal factor behind the increased population growth has been the reversal of the historical trend of net out-migration. Over the period 1971-76, the province gained 9 800 persons from net in-migration. This compares to the 1966-71 period when the province lost some 24 500 persons as a result of net out-migration. Chart 1 depicts this reversal in net migration trends.

Although the indications are that the net inflow of migrants has tapered off from the peak levels of 1975-76, net in-migration remains at 1 000 to 2 000 persons per year.

The population distribution remains biased towards the non-working-age groups. The dependency ratio stood at 60 per cent in 1976. This compared to 52 per cent for Canada as a whole.

Output and Income

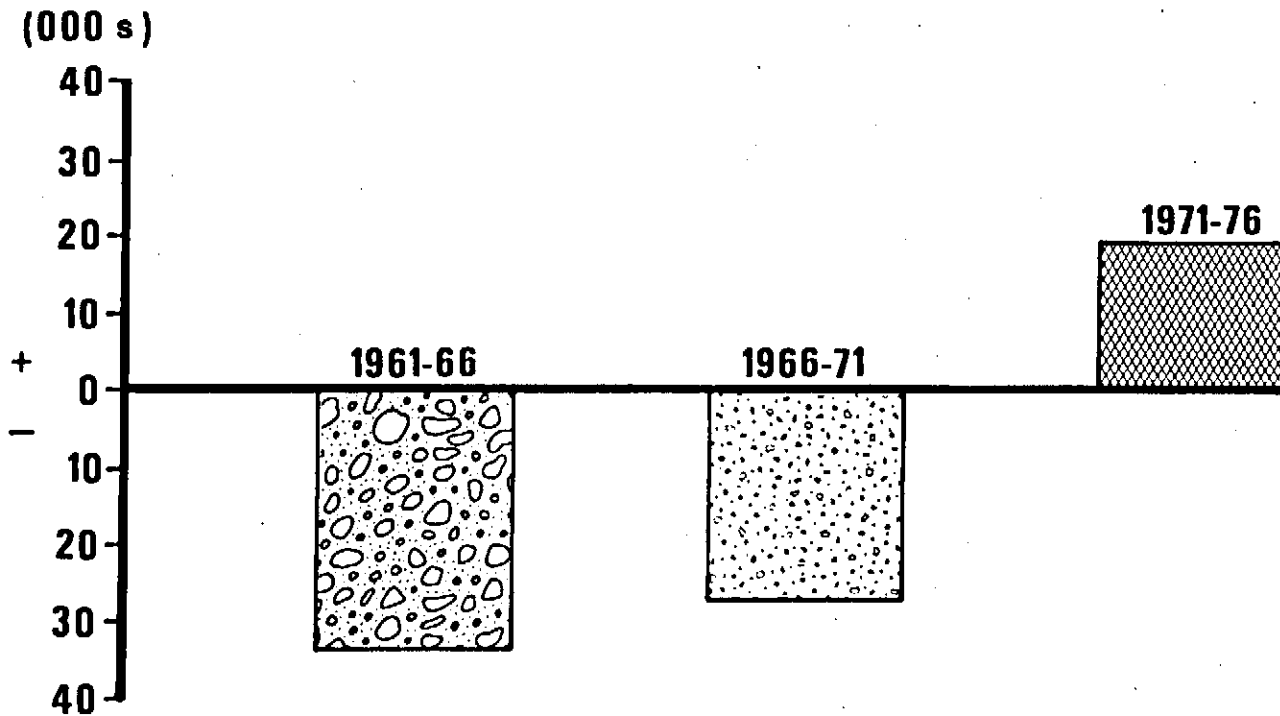
Over the period 1971-78 total gross domestic product in New Brunswick grew at a rate just slightly above that for the nation as a whole. Provincial GDP grew at an average rate of 14.5 per cent per annum as compared to 13.9 per cent for Canada. This growth rate represents an improvement relative to the 1961-71 period when output growth was somewhat slower in New Brunswick than in the rest of Canada. Output growth was most buoyant in the 1971-75 period.

Personal income has grown at faster rates than the Canadian average since 1971. By 1977, personal income per capita stood at 74.9 per cent of the Canadian average, as compared to 72.3 per cent in 1971.

As has been the case in all provinces, the growth in transfer payments accounted for a significant portion of the growth in personal income. By 1977 transfer payments accounted

CHART 1

NEW BRUNSWICK TOTAL NET MIGRATION BY FIVE-YEAR PERIOD 1961-76



for 21 per cent of personal income in New Brunswick, compared to 13 per cent for Canada as a whole. In 1971 transfer payments accounted for 16 per cent of personal income in New Brunswick.

Total earned income increased at approximately the same rate as for Canada as a whole over the 1971-77 period. However, because population growth was somewhat faster than for Canada as a whole, earned income per capita fell slightly to 67.9 per cent in 1977 from 68.2 per cent of the national average in 1971. Some gains in earned income per capita relative to Canada were made over the 1961-71 period, but these stemmed largely from slower population growth, as total earned income grew slower than the national average during this earlier period.

2.2.2 Labour Market

Tables 5(a) and 5(b) set out recent trends in labour market indicators. Positive in-migration and the relatively large numbers of young people reaching labour force age combined to result in a rate of growth in the population of labour force age over the 1971-78 period, which exceeded the Canadian average.

The overall labour force participation rate increased somewhat faster over the 1971-78 period than was the case for Canada. In 1978 the participation rate was 87.8 per cent of the national average, versus 85.7 per cent in 1971.

The provincial labour force grew considerably faster than was the case for Canada: the average annual rate of growth was 3.9 per cent as compared to 3.4 per cent.

In recent years women have contributed to a slightly smaller proportion of the increase in the labour force than has been the case for Canada. Women accounted for 56 per cent of the gain in the labour force over the 1975-78 period, compared to 60 per cent for Canada. In 1978 the female participation rate was 85.3 per cent of the Canadian average, compared to 89.4 per cent for men.

Employment growth, although buoyant by historical standards, has not matched the growth of the labour force. Employment growth averaged 2.8 per cent per annum versus 3.1 per cent for Canada for the 1971-78 period. This compared to a 1.2 per cent annual growth rate over the 1966-71 period. Women accounted for two-thirds of the growth in employment over 1975-78, compared to 64.4 per cent in Canada. Employment growth was somewhat stronger over the 1971-75 period.

TABLE 5

Labour Market Trends
New Brunswick and Canada

Table 5(a)

Average Annual Rates of Growth
Selected Indicators

| | <u>Labour Force</u> <u>Population</u> | | <u>Labour Force</u> | | <u>Employment</u> | |
|---------------|--|----------------|---------------------|----------------|-------------------|----------------|
| | <u>1966-71</u> | <u>1971-78</u> | <u>1966-71</u> | <u>1971-78</u> | <u>1966-71</u> | <u>1971-78</u> |
| New Brunswick | 2.0 | 2.4 | 1.4 | 3.9 | 1.2 | 2.8 |
| Canada | 2.6 | 2.3 | 2.9 | 3.4 | 2.3 | 3.1 |

Table 5(b)
Selected Indicators, 1971 and 1978

| | <u>Unemployment</u> <u>Rate</u> | | <u>Participation</u> <u>Rate</u> | | <u>Employment</u> <u>Ratio</u> | |
|---|------------------------------------|-------------|-------------------------------------|-------------|-----------------------------------|-------------|
| | <u>1971</u> | <u>1978</u> | <u>1971</u> | <u>1978</u> | <u>1971</u> | <u>1978</u> |
| New Brunswick | 6.1 | 12.6 | 49.8 | 55.0 | 46.8 | 48.1 |
| Canada | 6.2 | 8.4 | 58.1 | 62.6 | 54.5 | 57.4 |
| New Brunswick as a percentage of Canada | 98.3 | 150.0 | 85.7 | 87.8 | 85.8 | 83.7 |

Source: Statistics Canada, Labour Force Survey

The unemployment rate increased steadily over the 1971-77 period before declining slightly in 1978 as a result of very strong employment growth. In 1978 the rate stood at 12.6 per cent, compared to 8.4 per cent for Canada. In 1971 the New Brunswick rate was 6.1 per cent, compared to the Canadian rate of 6.2 per cent.

Two of the major underlying factors behind trends in earned income per capita are the proportion of the population employed and the average earnings per employed person. The employment to population ratio has declined somewhat as a proportion of the national average over the 1971-78 period, as is indicated in Table 5(b), while earned income per employee has increased from 82.7 per cent of the national average in 1971 to 85.7 per cent in 1977.

2.2.3 Investment Climate

The growth in investment is depicted in Chart 2. Total capital investment grew at a somewhat faster rate than for Canada as a whole over the 1971-78 period. The provincial growth rate was 14.4 per cent per annum, versus 13.9 per cent for Canada as a whole. The difference in growth rates on a per capita basis was slightly less. However, per capita investment increased throughout the period relative to the national average, to stand at 85.4 per cent in 1978, versus 83.6 per cent in 1971. Investment has been at historically high levels since 1975.

The utilities sector made by far the largest contribution to the growth in investment over the period. The increase in investment in this sector resulted from the ambitious construction program of the New Brunswick Electric Power Commission, which included a 900-megawatt oil-fired generating station and a 600-megawatt nuclear generating plant. Trade, financial and commercial services, institutions and government and residential housing have been the strongest sectors after utilities.

Investment in the important manufacturing sector has shown very little growth over the 1971-78 period, with the exception of a bulge in the 1974-75 period, which resulted from the expansion of the Irving oil refinery in Saint John. Manufacturing investment was at exceptionally high levels over the 1966-71 period averaging 3.1 per cent of total manufacturing investment in Canada. Over the 1971-78 period manufacturing investment has averaged 2.7 per cent of the Canadian total. In 1978 manufacturing investment was only 2.1 per cent of the Canadian total.

Investment in the primary and construction sector has historically been relatively less important to the New Brunswick economy. Some increase did occur over the 1971-78 period, due largely to the expansion at the Brunswick Mining and Smelting lead-zinc mine.

Trends in investment over the 1971-78 period are shown in Table 6.

2.2.4 Sectoral Review

Output

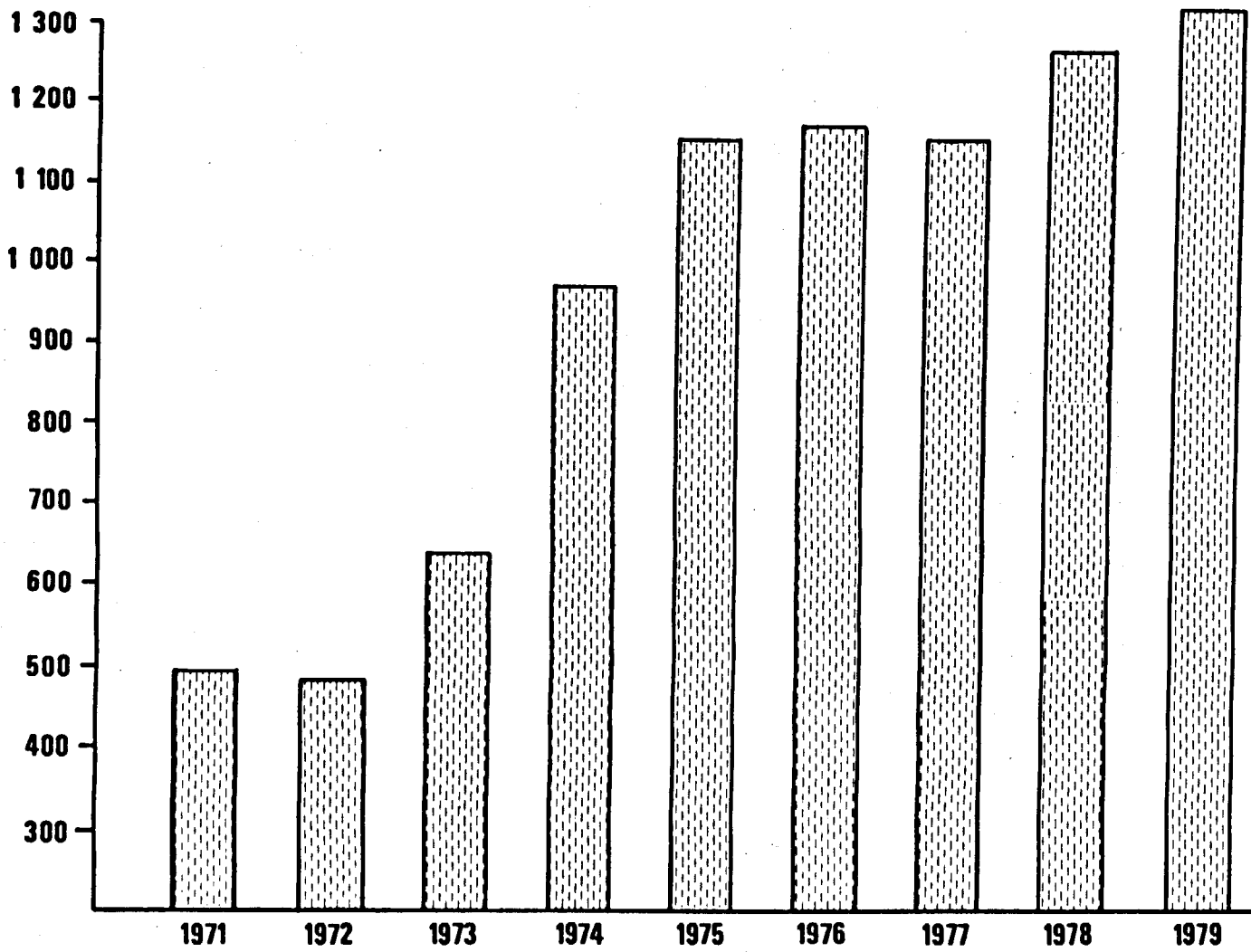
Output in the New Brunswick goods producing sectors increased at an annual rate of 17.9 per cent over the 1971-76 period, somewhat above the national rate of 15.5 per cent. With the exception of fisheries and mining, all the sectors grew

CHART 2

NEW CAPITAL INVESTMENT

NEW BRUNSWICK 1971-79

\$ MILLION



more than the Canadian average. Table 7 illustrates the pattern of output growth over the 1971-76 period.

TABLE 6

Investment by Sector

New Brunswick and Canada

Average Annual Rate of Growth (%)

1971-78

| | <u>Primary & Con- struction</u> | <u>Manufac- turing</u> | <u>Util- ities</u> | <u>Trade, Finance and Commercial Services</u> | <u>Institut- ions and Government Depart- ments</u> | <u>Housing</u> | <u>Total</u> |
|------------------|---|----------------------------|------------------------|---|--|----------------|--------------|
| New Brunswick | 12.8 | 0.3 | 25.2 | 15.0 | 14.1 | 15.1 | 14.4 |
| Canada | 14.8 | 11.8 | 15.6 | 16.7 | 9.4 | 15.3 | 13.8 |

TABLE 7

Output Growth and Structural Change

New Brunswick 1971-76

| <u>Industry</u> | <u>Average Annual Growth Rate 1971-76</u> | | <u>Percentage Share of Goods Production</u> | | | |
|--------------------------|---|---------------|---|---------------|-------------|---------------|
| | <u>N.B.</u> | <u>Canada</u> | <u>1971</u> | | <u>1976</u> | |
| | <u>N.B.</u> | <u>Canada</u> | <u>N.B.</u> | <u>Canada</u> | <u>N.B.</u> | <u>Canada</u> |
| Agriculture | 17.5 | 17.4 | 4.5 | 6.7 | 4.4 | 7.3 |
| Fishing | 9.0 | 13.8 | 2.6 | .5 | 1.7 | .4 |
| Forestry | 15.5 | 14.1 | 5.7 | 1.7 | 5.1 | 1.6 |
| Mining | 12.7 | 24.2 | 5.9 | 9.5 | 4.7 | 13.8 |
| Manufacturing | 16.1 | 12.9 | 47.0 | 58.1 | 43.6 | 52.0 |
| Construction | 22.9 | 17.9 | 27.0 | 19.0 | 33.3 | 21.1 |
| Electric Power | 17.4 | 13.2 | 6.9 | 4.2 | 6.7 | 3.8 |
| Total Goods Producing | 17.9 | 15.5 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Statistics Canada, Survey of Production, Catalogue No. 61-202

The construction sector was the fastest growing of the goods-producing sectors, due to the high levels of investment. In 1976 the construction sector accounted for fully one-third of output in the goods-producing sector. This was up from 27 per cent in 1971 and compares to 21 per cent for the Canadian economy. Since 1976 the indications are that growth in the sector has declined somewhat with the levelling-off of investment.

The electric power sector was a major contributor to overall growth in output over the period 1971-76. Since 1976 this sector has continued to grow, particularly with the large Coleson Cove oil-fired thermal plant coming on stream.

Census value-added in manufacturing grew at an annual rate of 16.1 per cent over the 1971-76 period, compared to 12.9 per cent for Canada as a whole. More recent data on manufacturing shipments indicate that the provincial manufacturing sector has continued to outpace the Canadian average over the 1976-78 period. As is indicated in Chart 3, the growth rate of manufacturing shipments exceeded the Canadian rate for all but one year of the 1971-78 period.

The major contributor to the growth in manufacturing output has been the forest products industries, primarily pulp and paper. Over the 1976-78 period, fish products have also been a source of strength. Manufacturing accounted for 43.6 per cent of total goods production in New Brunswick in 1976, compared to 47 per cent in 1971. Manufacturing as a share of total goods production in Canada declined from 58.1 per cent in 1971 to 52 per cent in 1976.

Output in primary forestry grew by 15.5 per cent per year over the 1976 period, compared to 14.1 per cent for Canada. Recent indications are that the industry has recorded large production increases over the 1976-78 period as a result of heavy demand for forest products.

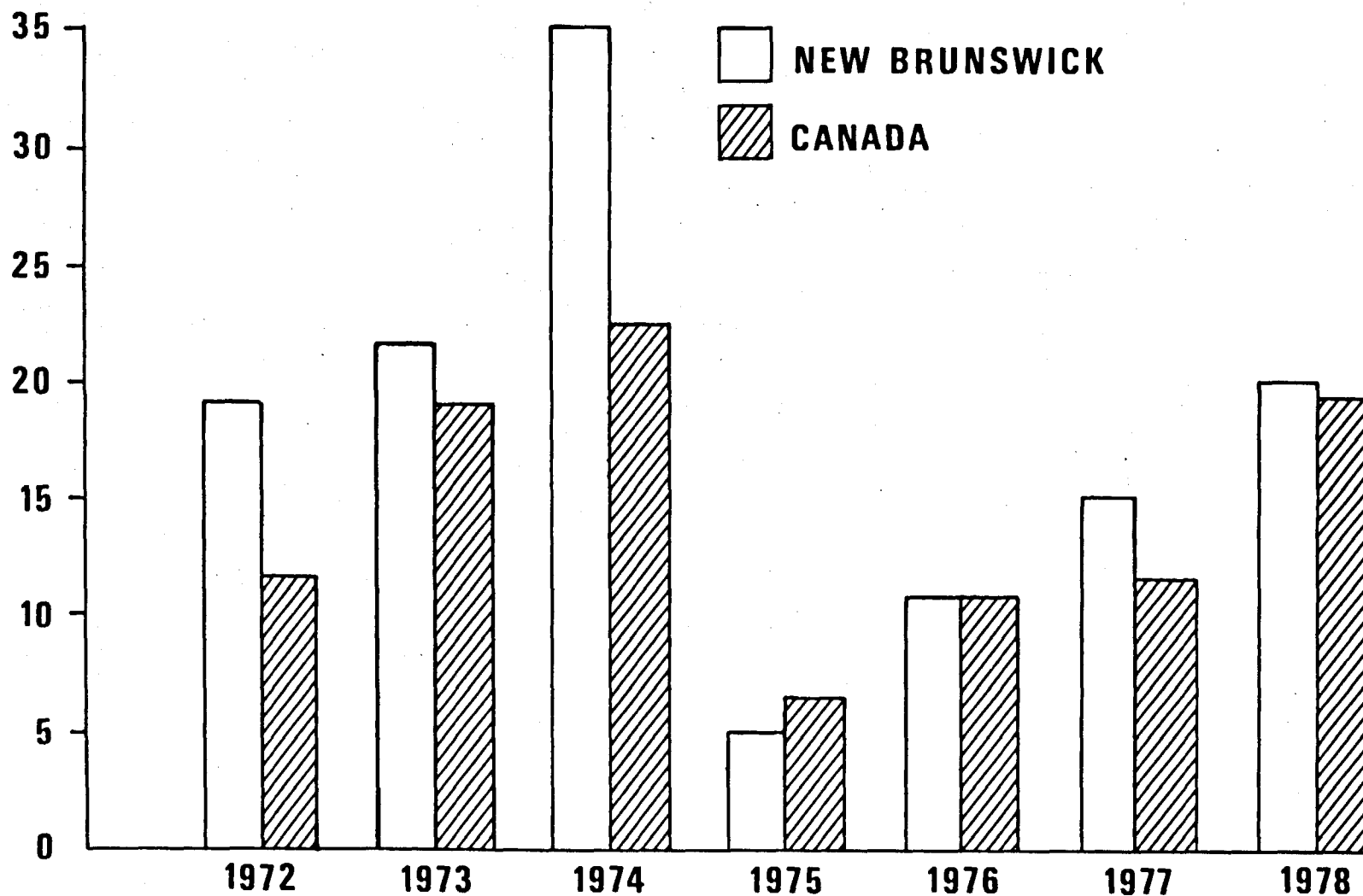
Due primarily to declining stocks, very low rates of growth were recorded in the fisheries. As a result, the share of fisheries in total goods production declined from 2.6 per cent in 1971 to 1.7 per cent in 1976. Over the 1961-71 period, fishing's share of total goods production has remained essentially stable. Recent indications are that the fishing industry output has stabilized. Fishermen's income has increased considerably due mainly to higher fish prices.

With no new mines coming into production since 1971, the growth of the mining industry did not match the average for the goods-producing sector. As a result, mining output declined from 5.9 per cent to 4.7 per cent of total goods production over

CHART 3

VALUE OF MANUFACTURING SHIPMENTS NEW BRUNSWICK AND CANADA 1972-78

(PERCENTAGE CHANGE FROM PREVIOUS YEAR)



the 1971-76 period. Over the 1976-78 period, depressed markets for zinc have been partially offset by buoyant markets for lead, with resultant moderate increases in output.

Agricultural output grew at almost the same rate as total goods production over the 1971-76 period, due in great part to good potato markets in 1975-76. As a result, agriculture's share of goods production fell slightly from 4.5 per cent to 4.4 per cent. Over the 1961-71 period, agriculture's share of goods production declined from 8.5 per cent to 4.5 per cent. Since 1976, agricultural output has recorded very little increase. However, early indications in 1979 are that farm cash receipts are up strongly.

Employment

Table 8 outlines the growth of employment by industrial sector. All of the growth in the primary industries resulted from productivity increases. As a result, employment declined in these sectors over the 1971-78 period, both absolutely and relative to total employment growth.

TABLE 8
Employment by Sector

(000s)

| | <u>New Brunswick</u> | | <u>Canada</u> | | | |
|---|----------------------|-------------------|---------------|-------------------|-------------------|-------------------|
| | <u>1971</u> | <u>1978</u> | <u>1971</u> | <u>1978</u> | | |
| | <u>No.</u> | <u>% of Total</u> | <u>No.</u> | <u>% of Total</u> | <u>% of Total</u> | <u>% of Total</u> |
| Agriculture | 6 | 3.0 | 4 | 1.6 | 6.0 | 4.7 |
| Other Primary | 12 | 6.0 | 10 | 4.2 | 2.7 | 2.5 |
| Manufacturing | 33 | 16.7 | 39 | 16.3 | 21.7 | 19.6 |
| Construction | 15 | 7.6 | 18 | 7.5 | 6.0 | 6.3 |
| Transportation, Communication & Utilities | 22 | 11.1 | 25 | 10.5 | 8.5 | 8.5 |
| Trade | 35 | 17.7 | 45 | 18.9 | 16.1 | 17.4 |
| FIR ¹ | 6 | 3.0 | 9 | 3.7 | 4.7 | 5.4 |
| Services | 51 | 25.8 | 69 | 28.9 | 25.7 | 28.1 |
| Public Admin. | 14 | 7.1 | 19 | 7.9 | 6.3 | 7.0 |
| Total | 197 | 100.0 | 238 | 100.0 | 100.0 | 100.0 |

¹Finance, Insurance and Real Estate.

Source: Statistics Canada, Labour Force Survey

Manufacturing employment grew at about the same rate as total employment over the period, but with almost all the growth occurring in 1978. Manufacturing's share of total employment declined only slightly to 16.3 per cent in 1978, compared to 16.7 per cent in 1971. For Canada as a whole, manufacturing employment declined from 22.7 per cent of the total in 1971, to 19.6 per cent in 1978.

The service sectors of trade, finance, insurance, and real estate, services and public administration contributed the bulk of employment gains over the period. Employment in each of these sectors increased as a proportion of total employment. These sectors, together, accounted for 59.4 per cent of total employment in New Brunswick in 1978, as compared to 57.9 per cent in Canada.

2.2.5 Sub-Provincial Circumstances

As indicated earlier, the trend has been for the major portion of economic activity to take place in the southern urban regions and for a widening of disparities between north and south in income and employment over time. However, employment gains in the northeast region has shown exceptional strength since 1976.

Over the 1971-78 period, about three quarters of the total provincial employment gain has occurred in the three economic regions of the south. These regions have just over 60 per cent of total provincial population.

It appears that considerable migration continues to take place from the rural counties of the north to the south of the province. Despite this, the disparities in employment levels have widened slightly over the 1971-78 period as is indicated by the data on employment/population ratios in Table 9.

The employment/population ratio for northeast New Brunswick has declined slightly as a proportion of the provincial average, and the gap between this region and the urban regions around Saint John and Fredericton, in particular, has increased. However, the employment/population ratio tends to mask the considerable growth in both employment and population which has occurred in the Moncton area.

In times of very buoyant economic growth, as in the 1971-75 period, the disparities in employment and income levels tend to widen. In times of slower economic growth or when demand for the resource-based products of the north is strong, the gap tends to narrow. Over the period 1976-78, strong markets for forest products in particular have resulted in considerable increase in employment in the northern regions. Employment gains in the northeast region, (i.e. the counties of Gloucester and

TABLE 9

Employment/Population Ratio
Economic Regions

| | <u>Ratio</u> | <u>1971 Percentage of Provin- cial Average</u> | <u>Ratio</u> | <u>1976 Percentage of Provin- cial Average</u> | <u>Ratio</u> | <u>1978 Percentage of Provin- cial Average</u> |
|---|--------------|--|--------------|--|--------------|--|
| Westmorland, Albert, Kent (Moncton) | 45.2 | 96.5 | 51.2 | 107.3 | 47.0 | 97.7 |
| Saint John, King's, Charlotte (Saint John) | 50.7 | 108.3 | 52.1 | 109.2 | 53.2 | 110.6 |
| York, Sunbury Queen's (Fredericton) | 49.8 | 106.4 | 54.5 | 114.2 | 55.6 | 115.5 |
| Madawaska, Victoria, Carleton (Northwest) | 42.9 | 91.6 | 44.2 | 92.6 | 46.2 | 96.0 |
| Northumberland, Gloucester, Restigouche, (Northeast) | 40.2 | 85.8 | 36.4 | 76.3 | 41.0 | 85.2 |
| Province | 46.8 | 100.0 | 47.7 | 100.0 | 48.1 | 100.0 |

Source: Statistics Canada Labour Force Survey, and estimates by DREE New Brunswick. The estimates for 1971 are not fully comparable with those for 1976 and 1978 because of revisions to the Labour Force Survey in 1975. However they do provide a picture of general trends.

Restigouche), alone have accounted for over 45 per cent of all provincial employment growth over the 1976-78 period.

2.3 Medium-Term Prospects

The medium-term prospects for the New Brunswick economy are especially speculative at present because of the uncertainties surrounding a number of major projects. On balance, it appears that a somewhat slower growth rate of output than has been the case since 1971 can be expected to 1985. The need for increased labour productivity,

particularly in the primary and resource-based industries, will mean that productivity increases will account for a large portion of output growth. Because of the large increases in the labour force expected for at least the next three years, unemployment is expected to remain at or near the present high levels.

On a sectoral basis, the outlook for agriculture, fisheries, mining and the related processing industries is for growth rates in excess of recent trends. For mining in particular, the outlook is especially bright with expansions expected in zinc, potash and tungsten. Output increases in the logging and forest products sector, the major contributor to the growth of manufacturing production in recent years, will be constrained by resource limitations over the medium term.

Activity in the non-resource-based manufacturing and commercial services sectors is not expected to increase at the rates of the recent past, primarily because of slower growth in provincial and national markets. A major factor here will be the expected slower growth of transfer payments in the future as changes in income support schemes such as unemployment insurance and social welfare are felt. Government expenditures are expected to contribute less stimulus to the economy as all government levels practice restraint. This will influence growth in the non-commercial services and public administration sectors.

The outlook for the construction sector, the strongest sector over the 1971-76 period, is somewhat uncertain. However, a backlog of demand for new housing exists and new investment intentions in the mining, transportation and commercial sectors indicate that investment levels will remain near their present very high levels. However, unless major construction projects go ahead, the construction sector is not likely to provide significant stimulus to growth in the medium term.

3. DEVELOPMENT PROBLEMS AND ISSUES

3.1 Energy

The New Brunswick economy is considerably more energy intensive than is the Canadian economy as a whole. This is the case for a number of reasons. First, the economy is based on the resource and resource-processing industries, which are relatively energy intensive. The development of this energy-intensive economy was encouraged by the availability in years past of abundant sources of hydro power. Second, many industries appear to consume relatively high amounts of energy in the production process, perhaps partially as a result of employing outdated and energy-inefficient plants and equipment. In the case of pulp and paper mills, which consume almost two-thirds of all energy consumed by manufacturing in the province, consumption of purchased energy is almost 50 per cent above the Canadian average for this sector. Another factor here is that New Brunswick mills generate less of their own needs internally. Third, because of the relatively long distances to markets faced by New Brunswick producers, the energy requirements for transportation are relatively great.

New Brunswick, in keeping with the other Atlantic provinces, is considerably dependent on oil for its energy needs. As a result, energy costs and the price of electricity, a relatively large portion of which is oil generated, have been rising faster than in many other provinces since 1973. Accordingly, New Brunswick industry has lost some of the advantage it possessed with respect to energy costs. As world energy costs move in the future toward international oil prices, the energy intensiveness of provincial economic activity could become a significant constraint to development. More analysis is needed on the impact of higher energy costs on the competitiveness of specific sectors. However, as an example, it is known that electricity makes up two-thirds of the operating costs of a zinc refinery. Electricity rates can obviously be a major factor in the location and viability of this type of project.

Currently, considerable emphasis is being placed by the public and private sectors on developing alternatives to oil.

The Pointe Lepreau nuclear plant, when completed in 1981, will result in approximately 20 per cent of the province's generating capacity using nuclear power as the energy source. This promises to add some stability to the cost of electricity. Currently, additions to the province's hydro-generating capacity are under way. There is the potential to increase hydro generating capacity through the redevelopment of existing sites, and the development of new sites. An addition to the oil-fired

plant at Dalhousie will be able to burn New Brunswick coal. This would double the demand for provincial coal. Additional work is also under way to develop means of increasing the use of coal in oil-fired plants.

New Brunswick peat has potential as a replacement for oil in thermal generation of electricity, and a feasibility study of a 50-megawatt plant will be conducted this year.

The production of methane from wood waste has considerable potential, as it is perhaps the most efficient way for many forest products producers, particularly the smaller and older mills, to convert from oil-fired to wood-fired energy production. An interesting linkage is that recent research has indicated that potash, used as a catalyst, can increase methane production from wood.

Considerable opportunities exist in the forest products industry to replace oil with wood waste as an energy source. Activity in this area has been limited to date, primarily because of the availability of cheap residual fuel oil, but the situation, with respect to oil price, is changing rapidly. The use of the programs of Energy, Mines and Resources (F.I.R.E and ENFOR) has been limited.

As a result of proposals before the National Energy Board, there is potential for supplies of natural gas or propane by the period 1983-85.

It appears important that there emerge from these various developments a coherent plan for the development of energy sources, which will take into account overall demand, the sensitivity of various industrial sectors to energy costs and the cost and availability of potential sources.

3.2 Urbanization

The pattern of economic development and resource exploitation, in addition to geographic and cultural factors, has resulted in a relatively scattered settlement pattern. New Brunswick, with three dominant urban centres, can be compared to Newfoundland and Nova Scotia, where a single urban centre dominates.

The standard measures of urbanization, outlined in Table 10, indicate that the level of urbanization in New Brunswick remains below the national average. However, because of the recent trend for a large proportion of population growth to occur on the unincorporated fringes of urban areas, these statistics are not very meaningful. Most of the population growth in the province over the 1971-76 period occurred in or near the major urban

centres of Saint John, Moncton and Fredericton in response to the employment opportunities created in these centres.

TABLE 10

Distribution of Population: Urban, Rural and Rural Non-Farm

New Brunswick and Canada
1971 and 1976

| | <u>1971</u> | <u>1976</u> |
|----------------|-------------|-------------|
| New Brunswick | | |
| Urban | 54.5 | 52.3 |
| Rural | 2.6 | 1.7 |
| Rural Non-farm | 42.9 | 46.0 |
| Canada | | |
| Urban | 76.0 | 75.5 |
| Rural | 5.4 | 4.4 |
| Rural non-farm | 18.6 | 20.1 |

Source: Statistics Canada, Catalogue Nos. 92-608, 92-709, 92-807

Employment and population growth has been most rapid in Moncton and area, followed by Fredericton. Table 11 provides estimates of growth for the areas of economic influence of the major cities.

Moncton, traditionally a transportation and distribution centre for the Atlantic provinces, has emerged into a well-balanced economy in recent years with the development of the secondary manufacturing, education and public administration sectors. Fredericton, as the seat of provincial government and a major university centre, has grown rapidly in recent years and acquired a sizeable light manufacturing sector. Port and port-related activities, plus growth in construction, heavy manufacturing and utilities have stimulated the growth of Saint John and area.

The secondary manufacturing and service industries promise to provide the major source of employment growth in the future. Growth in these sectors occurs most readily in urban areas, which are attractive places in which to live and work and can provide the necessary amenities.

The downtown areas of many of the urban centres have deteriorated in recent years. This has been due, in part, to the trends toward development in unincorporated areas just outside city limits.

TABLE 11

Population Growth 1971-76

Major Urban Areas* - New Brunswick

| | <u>Percentage Increase</u> |
|-----------------------|----------------------------|
| Moncton | 15.0 |
| Fredericton-Oromocto | 10.2 |
| Bathurst | 7.7 |
| Saint John | 5.8 |
| Edmundston | 0.4 |
| Campbellton-Dalhousie | 7.7 |
| Caraquet-Shippegan | 8.9 |
| Chatham-Newcastle | 3.7 |
| Province | 6.7 |

* The areas have been defined to roughly approximate the labour market areas and include both incorporated and unincorporated areas within a radius of 56-80 kilometres.

Source: Statistics Canada, Census of Canada

Currently, efforts are under way to strengthen the attractiveness of the province's major urban centres as locations for business and industry, and as a means of strengthening the linkages within provincial regions. In addition to the large urban centres in the south of the province, efforts have been made to reinforce the role of Bathurst and Edmundston as the dominant urban centres of the northeast and northwest regions respectively. Major downtown developments are either under way or in the planning stages for Saint John, Edmundston, Bathurst, Dalhousie, and Moncton.

3.3 Employment Creation Policy

While, as seen earlier, provincial economic growth, as measured by gross provincial product, has matched that for Canada as a whole since 1971, employment growth has not kept pace with the Canadian average.

This employment growth, matched with labour force increases that exceeded national rates, has resulted in high unemployment rates, particularly for new entrants to the labour force in the 15-24 age group.

No gains have been made in earned income per capita relative to the national average, as relative gains in earned income per employee have been offset by relative declines in the proportion of the population employed.

The development strategy of the Canada/New Brunswick General Development Agreement recognizes that limited employment growth is possible in the primary industries because of technological factors and the need for increased productivity. Although growth has been rapid in recent years, it is recognized that resource-based manufacturing, in particular forest products, and manufacturing output destined for provincial and regional markets have limited potential in relation to the employment creation needs, because of resource availability and the size and growth of local markets.

Diversification of the manufacturing base is viewed in the development strategy as the major means of providing employment for an expanding labour force. To date, however, diversification efforts have met with limited success. Major factors here are the business recession which adversely affected the North American and European investment climate over the 1975-77 period and the failure of several firms established with the aid of government incentives. As a result, over three-fifths of manufacturing employment remains in the resource-based sectors of food processing, wood and paper, a proportion little changed from 1961.

In recent years New Brunswick, in keeping with other provinces in Canada, while continuing its effort to diversify the manufacturing base through attracting new industries and products, has placed increased emphasis on working with existing businesses to increase their production and profitability.

The activities of the New Brunswick Development Corporation and the federal-provincial Multiplex agency were consolidated into the operations of a reorganized provincial Department of Commerce and Development in 1976.

Considerable emphasis has been placed on small business development as a means of attaining the employment creation objectives for the manufacturing sector and the economy generally, and has met with considerable success. However, the potential of existing business and small business in particular to contribute to solving the sizeable unemployment problem is limited. Also it appears that the majority of jobs created by the existing industrial base does not meet the aspirations of the increasingly well-educated labour force or provide sufficient employment opportunities for women.

The opportunities for government intervention to stimulate economic growth are expected to improve the outlook to 1985. Given the limited prospects for increased employment in the resource and resource-processing sectors, the economic development strategy, pursued under the GDA, will have to further emphasize employment creation. The development efforts which put infrastructure in place can now be capitalized on by increased emphasis in the future on direct assistance to industry. The prospect of high levels of investment activity nationally in the 1980s increases the attractiveness of such a policy.

3.4 Transportation

Transportation plays a relatively important role in the export-based New Brunswick economy. Access to tidewater forms a major comparative advantage for many export industries. New Brunswick exporters are basically price takers on the world markets for forest products, minerals and fish. Given this reality, one of the most important means of improving the competitiveness of producers are measures designed to improve the quality of transportation facilities and to lower transportation costs to markets. The Port of Saint John is the major port of exit for New Brunswick exports. Currently, and despite major improvements scheduled for this year, certain facilities are inadequate for existing commodity traffic. The lack of all-weather loading facilities for potato exports results in excessive handling costs and damage to the product. In addition, increases in cargo, particularly potash shipments, will require additional handling facilities. A federal-provincial study of the long-term requirements at the Port of Saint John is currently under way.

Additional port facilities may result at Chatham-Newcastle from the dredging of the Miramichi Channel. Increased resource exports may require additional facilities at the two ports in the northeast, Belledune and Dalhousie.

An all-weather highway system free from spring weight restrictions is necessary to provide low-cost highway transport to U.S. and central Canadian markets as well as efficient movement of raw materials to processors. Examples of the latter are the opportunity to transport fish landed in Nova Scotia to processing plants located in the northeast, and the possible need to transport wood from areas of surplus to areas of shortage.

A major federal-provincial priority, in recent years, has been the completion of an all-weather highway system linking major centres. Considerable investments have been made in highway construction and improvement, and this system will soon be completed.

3.5 Provincial Fiscal Situation

The budget for the Province of New Brunswick, 1979-80, estimates a small surplus on ordinary account for fiscal 1978-79. This surplus, due primarily to higher revenues than originally forecast, as a result of unexpectedly strong employment growth, follows three consecutive deficits on ordinary account. The surplus expected for 1978-79 plus an ordinary account surplus forecast for 1979-80 will help restore the province's cash position and protect its credit rating in the bond market. The costs of servicing the debt have escalated greatly in recent years as a result of the increases in the debt itself and the devaluation of the Canadian dollar.

On ordinary and capital accounts combined, the province has run heavy deficits, especially since fiscal 1974-75. Another deficit is forecast for 1979-80 with net direct debt as a percentage of gross revenues forecast to reach about 62 per cent of gross revenues, up from 60 per cent in fiscal 1974-75. The province also acts as the guarantor of the debt incurred by the New Brunswick Electric Power Commission. The indebtedness of the commission has risen considerably since 1974-75 as a result of a large capital spending program. Total direct and guaranteed debt of the province has risen as a proportion of provincial gross domestic product from 42 per cent in fiscal 1974-75 to 56.2 per cent in fiscal 1977-78.

As is indicated in the Atlantic Region report, the province's fiscal capacity has declined quite sharply in recent years relative to the all-province average. The province is expected to derive about 49.8 per cent of gross ordinary revenues and capital revenues from Canada in fiscal 1979-80. The foregoing serves to illustrate the limited fiscal flexibility possessed by the Province of New Brunswick. There is little money available with which to undertake new programs.

The need since fiscal 1975-76 to restrain expenditures in order to bring them in line with revenues has seen economic development expenditures under considerable pressure from spending on social services. It should be noted that the province has introduced, over this period, reductions in personal and business income and property taxes. However, total budgetary and non-budgetary expenditures on the economic development, transportation and municipal areas have declined as a proportion of total expenditures since 1975-76. The 1979-80 budget demonstrates the commitment of the province to economic development as expenditures here increase by 23.6 per cent compared to an overall increase of 10.9 per cent, and less than 8 per cent for social programs.

This emphasis on economic development spending has been achieved concurrently with reductions in federal contributions to social programs such as medicare and post-secondary education. In fiscal 1979-80, cutbacks or deferrals in contributions to such areas as the Social Services Financing Act, the Bilingualism Development Program and the Community Services Grant Program have resulted in reduced federal payments.

3.6 The Export Sector

As indicated earlier, the province relies heavily on the United States market as an outlet for its exports. This dependence on a single market, in addition to the fact that the bulk of exports are of the raw or semi-processed variety, has made for considerable instability in the provincial economy.

The devalued Canadian dollar, in combination with the tariff cuts resulting from the current MTN negotiations, offer significant opportunities for New Brunswick exports.

On balance, the tariff cuts and other trade liberalization measures from the MTN, should potentially result in upside adjustments in provincial economic activity. The potential for further processing of the province's resources should be improved.

A reduction in trade barriers, combined with a Canadian dollar devalued, with respect to European and Japanese currencies, offers the opportunity to diversify export markets and reduce the present dependence on the United States.

The exploitation of these opportunities will require an improved marketing effort on the part of producers and a reduction in the fragmentation which characterizes much of the present marketing activity.

4. APPROACHES TO ECONOMIC DEVELOPMENT

4.1 Federal

With the introduction of equalization payments in 1957, an explicit and comprehensive federal policy relating to regional disparities was established. The emphasis of the equalization program is on redressing disparities, particularly disparities between provincial revenues and services, rather than on economic growth per se. Nonetheless, it was hoped that these transfer payments to the poorer provinces would indirectly stimulate economic growth by increasing the level of spending on needed public services and by releasing provincial funds for development purposes.

In the 1960s a continued concern with the problem of regional disparities resulted in a number of federal programs designed to directly attack the structural causes of economic stagnation. The Agricultural and Rural Development Act (ARDA) and the Fund for Rural Economic Development (FRED) were introduced in 1961 and 1966 respectively to deal with rural poverty. The Atlantic Development Board (ADB), set up in 1962, was designed to improve the infrastructure of the Atlantic provinces. In 1965, the Area Development Incentives Act (ADIA) initiated a program of tax incentives and capital grants to attract industry to depressed areas. Two programs were undertaken under the FRED legislation in New Brunswick, with the major one being the development program for northeast New Brunswick.

It became apparent that the increasing number of federal regional development programs could be more effective if they were employed in a coordinated attempt to respond to the needs and to build upon the underlying economic strengths of low-income regions. Thus, in 1969, the Department of Regional Economic Expansion was established with the twin objectives of assisting economic expansion and social adjustment. These complementary objectives remain at the heart of federal regional development policy. When the department was established, or shortly thereafter, it was provided with two new program instruments: the Regional Development Incentives Act (effectively replacing the Area Development Incentives Act) which continues to provide the basic authority for the regional development incentives program; and the Special Areas program (effectively replacing the Atlantic Development Board), which was initially used extensively as a means of assisting the provision of needed infrastructure. Under the Special Areas program in New Brunswick, funds were utilized for the provision of infrastructure to improve the growth potential of the province's two major cities, Saint John and Moncton.

A policy review completed in 1973 led to the introduction of the General Development Agreements (GDAs) and their subsidiary agreements, to the decentralization of DREE, and to a modified industrial incentives program. The General Development Agreements became the framework for efforts to encourage coordinated federal and provincial action aimed at the realization of each region's potential for economic development. As DREE's perspective is long term, the GDAs were established with a ten-year time horizon. Each GDA provides a statement of federal-provincial development objectives in the province, sets out a broad strategy on the basis of an analysis of the province's socio-economic circumstances and outlines guidelines and criteria for the implementation of the strategy through subsidiary agreements.

4.2 Provincial

In the case of New Brunswick, the federal-provincial development strategy outlined in the GDA and its subsidiary agreements effectively encompasses the provincial development strategy. The essential elements of the current provincial economic development strategy were first publicly enunciated in a speech by the Premier in 1972. This strategy, which contains sectoral as well as geographic dimensions, formed the basis for the initial federal-provincial economic development policy adopted by New Brunswick and DREE.

The sectoral strategy was based on an assessment of future employment-creating potential in each sector of the provincial economy. The policy adopted was that efforts should be concentrated on the secondary manufacturing sector, particularly those secondary manufacturing industries which can export their products to markets outside the province. The chief policy instrument was the federal Regional Development Incentives Act (RDIA), complemented by the province's own industrial development programs and incentives.

The emphasis was placed on industrial promotion efforts designed to attract firms and entrepreneurs to all regions of New Brunswick to produce products for national and export markets. An important provincial instrument was the New Brunswick Development Corporation, a Crown corporation, originally established in 1963 as an industrial promotion agency. Also, the federal-provincial Multiplex Corporation, an industrial promotion agency, was established in 1970, with the objective of establishing an integrated complex of metal-working companies in the Saint John area.

The geographic strategy was partly dictated by the considered need to develop new manufacturing industry. Priority was given to the province's two largest urban centres, Saint John

and Moncton, as the most promising places to attract new manufacturing plants. The Canada-New Brunswick Special Areas Agreements of 1970 and 1971 provided for federal-provincial expenditures on infrastructure improvement projects designed to make these cities more attractive to new industry. In addition, the strategy directed development effort to the resource sectors and the economically disadvantaged areas of the province by means of the FRED and ARDA programs.

This development strategy, and the related programs, remained in effect from about 1972 to 1974. Following DREE's internal policy review in 1972-73 and consultations between New Brunswick and DREE, a General Development Agreement (GDA) between New Brunswick and Canada was signed in 1974.

The purpose of the GDA is "to facilitate joint federal-provincial cooperation in initiatives for the economic and socio-economic development of New Brunswick to achieve the objectives stated hereinafter in accordance with the strategy agreed to in or pursuant to this Agreement". The agreement states the following joint objectives:

1. "... to reduce the gap in earned income per capita between New Brunswick and the national average."
2. to raise per capita incomes "while minimizing net migration from the province".

The agreement also states that "to meet these objectives, economic and socio-economic policy should be aimed at achieving a faster rate of growth in provincial output by raising productivity, increasing the number of viable employment opportunities, and encouraging the development of a skilled and versatile labour force. More specifically, these objectives will be pursued through economic and socio-economic policies designed to:

- (a) increase the output and productivity of the primary industries;
- (b) increase value-added in New Brunswick by processing local natural resources;
- (c) further diversify the economy into activities not based on natural resources;
- (d) encourage the development of viable diversified communities."

The GDA modified the province-DREE development strategy in three main respects. First, there was to be relatively less

concentration on manufacturing, although the importance of this sector was still emphasized and the RDIA program remained relatively unchanged. Second, there was to be correspondingly more emphasis on the resource sectors. Third, reducing migration and the per capita earned income gap between New Brunswick and Canada were made additional explicit objectives, along with raising output through increasing employment and productivity.

In regard to geographic aspects, "...the general development strategy will encourage and assist the realization of potential for development throughout the province.... The distribution of the province's natural resources is such that most areas are in a position to capitalize on developments in one or more of the resource-based industries". Since secondary manufacturing does best in certain centres, efforts will be made to improve the attractiveness of urban centres for such industry. The former provincial "growth centre" approach, reflected in the Special Areas agreements for Saint John and Moncton, was diffused to include other urban centres in the province as well. However, the objectives and development priorities for the various regions of the province are only now beginning to be developed in cooperation with the regional industrial commissions established in 10 regions of the province.

The subsidiary agreements are the means by which the general strategy is refined and implemented.

The General Development Agreement strategy assigned a high priority to "diversification of the manufacturing base into items of higher value requiring modern technology and skilled labour". The strategy also stated that manufacturing and processing industries geared to the province's maritime location or utilizing processed natural resources would be emphasized, and that encouragement would also be given to "innovative small manufacturers".

However, while a continuing effort has been directed at diversification based on attracting firms and entrepreneurs new to the region, increased emphasis has been placed on providing assistance to existing businesses in order to help them realize their potential contribution to the economy. As indicated earlier, in 1976 the activities of the two industrial promotion agencies, the NBDC and Multiplex were consolidated into a new Department of Commerce and Development. Industrial promotion activity remains a priority but now takes place within the reorganized Department of Commerce and Development. Particular emphasis has been placed, by the provincial government, on the development of small business as a means of achieving development goals. As a complement to the RDIA incentives, a program of

financial assistance to small business is funded under the General Development Agreement. In addition, the province has extended the program to cover the three large urban centres.

The regional industrial commissions have as a primary objective the provision of assistance to local business as a means of stimulating the economic development of the region. In addition, the provincial government has lowered income and business taxes applicable to small businesses. The small business corporate income tax rate applicable to businesses with less than \$150 000 taxable income is now 9 per cent, the lowest of any province.

The increased emphasis on the resource industries has been put in place through a greatly expanded planning effort which has attempted to identify in a systematic way the potentials and problems of the resource sectors. Major planning studies have been undertaken in agriculture, forestry, fisheries and tourism, and a development strategy has been adopted for the minerals sector, which is viewed by the province as having the greatest development potential. Subsidiary agreements have been put in place, with the exception of fisheries, to assist in the implementation of these plans. Furthermore, the subsidiary agreements have provided, in most cases, the resources necessary to continue and refine the planning exercise.

The province has developed a mining tax which is somewhat less harsh than that of other provinces and is designed to encourage exploration and mine development and further processing within the province. Important features of the mining tax include a provision for 25 per cent of exploration or processing development costs to be deducted from tax payable and a provision for capital cost allowances associated with further processing investments to be deducted from mining taxes payable. The province placed a high priority on the recent federal-provincial review of resource taxation.

The province has recently indicated that it plans a major review of provincial development strategy. This review should identify in a comprehensive manner the major development opportunities and constraints facing the province in the 1980s and the most appropriate government interventions.

5. ECONOMIC DEVELOPMENT OPPORTUNITIES

5.1 Agriculture and Related Industries

Primary agriculture possesses very strong linkages to the economy.

Among the goods-producing industries, agriculture and agricultural processing activity is second only to the forest industries in terms of total impact upon the provincial economy.

The factors of land and climate provide New Brunswick with a competitive advantage in the production of a diverse range of agricultural products including potatoes, apples, blueberries, strawberries, milk and milk products, pork and beef.

A considerable rationalization of the industry has taken place in recent years. As a result, the province now possesses a core of highly efficient farms. In fact, with the exception of smaller farms with less than \$15 000 capital stock, New Brunswick farmers are as productive as any in the nation on the same size of farms.

Estimates indicate that if New Brunswick were to obtain a level of self sufficiency in those food products that can be grown in the province, improved farmland would have to increase by over 50 per cent of its present level by 1985, assuming existing levels of technology. If present levels of food exports are to be maintained, then the expansion would have to be even greater.

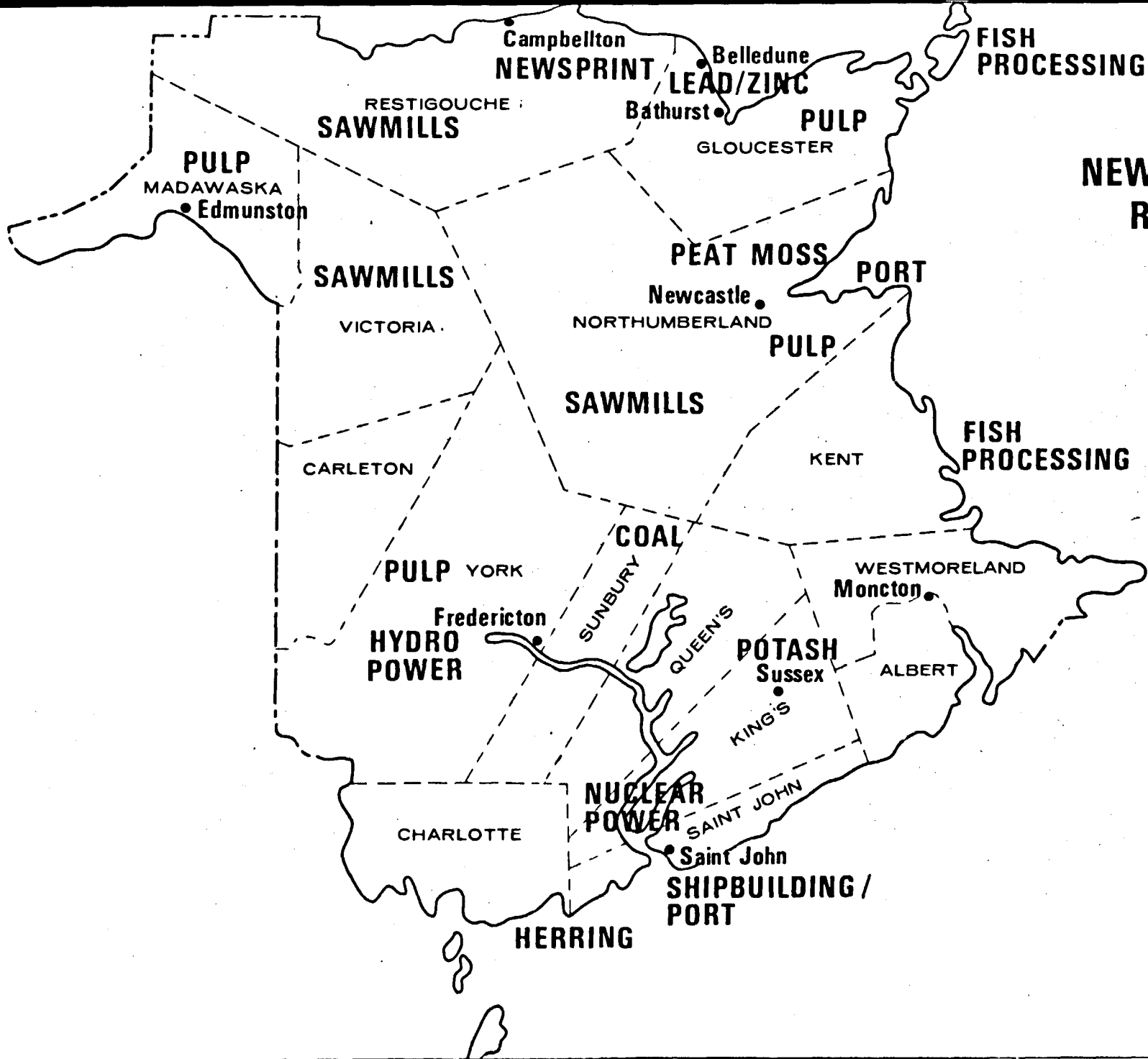
New Brunswick would appear to have an ample supply of land for agricultural production, as there are approximately 1.5 million hectares of Class 2 and 3 agricultural land, of which 0.5 million are in use.

Projections of population growth and the consumption of farmland by urbanization indicate that many regions of Canada will be heavy net importers of agricultural products. New Brunswick has the available land base to supply Quebec and some of the Ontario markets.

The development of agricultural resources subsidiary agreement under the Canada-New Brunswick GDA provides \$34.6 million for the exploitation of opportunities over the 1978-83 period.

This subsidiary agreement, the second for the agriculture sector in New Brunswick, is aimed at contributing toward a significant increase in the contribution of the industry to provincial income. The target is an annual increase of \$15 to \$20 million in gross domestic product from the sector by 1983. The production increases are directed toward both the

NEW BRUNSWICK RESOURCES



Agriculture has traditionally been centred in the southern and western portions of the province. Because the emphasis is on expanded production through increased efficiency, the geographic distribution of the industry cannot be expected to change a great deal. However, opportunity does exist to increase agricultural production in certain areas outside the traditional agricultural regions. Examples are hogs in the northwest, beef in the northeast and vegetables in the southeast.

5.2 Fishing and Fish Processing

Among the goods-producing industries, the fishing and fish processing industry is least important with respect to total contribution to provincial gross domestic product. However, in certain regions of the province, notably the Gloucester Peninsula in the northeast, and Kent County and Charlotte County, the industry is the major or sole source of income and employment.

The New Brunswick industry possesses some important comparative advantages which provide the basis for opportunities. These include a low-cost industry in world terms, with access to the rich Atlantic fishing grounds, a plentiful supply of trained labour and relatively modern on-shore processing facilities.

The industry is faced with three major opportunities. There is the potential to at least double the output of groundfish products by 1985. Because groundfish represents only about 10 per cent of the output of the industry, the impact will be approximately a 10 to 15 per cent increase in industry output and employment (person-hours of processing time). Currently the groundfish industry is largely confined to the Gulf of Saint Lawrence where landings are not expected to increase dramatically. Accordingly, the New Brunswick industry will have to acquire the capability to fish competitively offshore. This will involve, initially, the use of larger conventional ships and in the longer term, the acquiring of freezer trawlers if this becomes the industry trend. This opportunity is constrained by seasonality and location, but these problems could be offset by the proper selection of ports and the development of an adequate transportation system from landing to processing sites.

The closure of the North Sea herring fishery has provided an opportunity to increase the export of frozen and cured herring products to Europe. However, there is a need to improve the quality of the product if the present foothold in the European market is to be maintained over the longer term. Additional ice-making capability is needed to provide icing of the catch on ships and thus improve landed product quality. In addition, there is currently a shortage of cold-storage capacity for processed herring products.

There is a potential, with the withdrawal of the foreign fishing effort, to expand the shrimp fishery, particularly off the coast of Labrador.

In northern and eastern New Brunswick, there appears to be significant under-utilization of processing capacity. However, in southern New Brunswick processing facilities are inadequate to process available herring landings for food.

The problem of seasonality is a fundamental one for the industry because of its adverse impact on profitability. Opportunities to extend the processing season for groundfish include the use of ice-breakers, and ice-free ports for landing catches, the trucking of the catch of New Brunswick fishermen from Nova Scotia ports and increased frozen storage. With respect to herring, there are opportunities to expand into the production of various cured herring products in the period outside the three-month frozen herring fillet production season.

There is a need to improve the marketing effort if these opportunities are to be realized. About 60 per cent of the industry's output is exported and 70 per cent of this goes to the U.S. market, making for an excessive dependence on a single market area. The expected levelling-off of United States imports has serious implications for New Brunswick.

Currently, the industry is characterized by a fragmented marketing effort. Most groundfish processors depend upon brokers for marketing which has resulted in a slowness to adapt to changing markets.

A coordinated effort to diversify markets and products with emphasis on the eastern European, Japanese and the Canadian markets would appear to be required. New opportunities will arise as a result of recent tariff negotiations.

Because the fishing fleet is currently operating below capacity, the requirements for vessels are in the nature of replacements and modernizations, and not net additions to the fleet. At least in the short term, a possible alternative to vessel replacement is to "sub-contract" harvesting to foreign vessels. In addition to these factors, because there is a surplus of secondhand fishing vessels worldwide, the impact on the boat-building industry is not expected to be large in the medium term. However, there are opportunities for the manufacture of fishing equipment which warrant further study.

5.3 Forest Industries

The forest industries are the cornerstone of the New Brunswick economy, accounting for about 30 per cent of the output of the goods-producing industries. Employment in the wood products and paper and allied industries accounts for about 25 per cent of manufacturing employment.

While the forest products industry is situated throughout the province, it forms the backbone of the economy of the northeast region. In this area, the pulp and paper industry alone accounts for over 40 per cent of manufacturing employment.

The New Brunswick industry has traditionally had lower wood costs than competing regions, with the exception of the southeastern United States. The higher quality pulp which can be made from the softwood species of eastern Canada, commands a premium price which helps offset wood cost disadvantages. The New Brunswick industry's tidewater location results in relatively low water transport costs to U.S. and European markets. The New Brunswick industry has historically had low wood-transport costs because of the relatively short distances between the resource and conversion facilities. The industry benefits from well-developed infrastructure, roads, ports, and so on. However, as indicated earlier, the wood cost advantages are in danger of disappearing, due to fibre shortages in relation to demand.

According to the Canada Land Inventory, potential forest growth in New Brunswick is among the highest in eastern Canada. Opportunities exist to increase, through intensive forest management, the quantity and quality of the resource as a means of lessening the upward pressure on wood fibre costs to the conversion facilities. Despite the efforts in intensive management, the province may still face a medium-term supply shortage.

The current Canada-New Brunswick forestry subsidiary agreement has placed considerable emphasis on silviculture activity. Subsidiary agreement funds have financed the development of a reforestation program capable of replanting 12 120 hectares per year. The industry is currently replanting approximately 12 120 hectares of its freehold land per year. The continuation of the reforestation program on Crown lands at a level of 12 120 hectares per year will cost in excess of \$6 million per year in current dollars.

Significant amounts of mainly provincial public funds have been expended for budworm protection. The costs have reached \$8 to \$10 million per year, with industry contributing one-third and the province the remainder.

Currently, the provincial government is reassessing its forest resource policy through a number of joint industry-government task forces. A resolution of forest policy, particularly in the areas of fibre allocation and forest management, is needed for meaningful federal-provincial planning to continue. Other opportunities in the primary sector relate to the need to increase harvesting efficiency and improve resource utilization through accelerated mechanization and labour training. A good beginning has been made in these areas under the subsidiary agreement.

Productivity in primary logging is only 65 to 70 per cent of the Canada average. This differential is not completely offset by lower wage rates, putting the New Brunswick industry at a disadvantage with respect to the labour component of wood costs.

The opportunity exists to undertake an extensive program of modernization, rationalization and new product development in the New Brunswick pulp and paper industry. The benefits can be outlined as follows:

- (1) improvements in manufacturing efficiency and productivity;
- (2) improved matching of conversion facilities to the available resource and markets, resulting in an improved utilization of wood fibre;
- (3) reduced pollution and eventual compliance with federal-provincial standards;
- (4) reduced reliance on outside purchases of energy;
- (5) increased integration resulting in improved efficiency and lower operating costs; and
- (6) increased processing resulting in higher value-added and employment.

Much of the industry requires modernization to remain competitive and to retain its share of existing markets. Modernization, in the absence of any significant moves to production of higher valued products, will result in some declines from the present levels of employment. A modernization program would be viewed as a 15- to 20-year effort. In the case of some of the older mills, a complete rebuilding of production facilities may be required. Substantial sums are involved, with a recent estimate for a modernization and rationalization program being in the area of \$660 million.

The resource supply situation, coupled with the fact that the older mills will ultimately need complete rebuilds, and the very large minimum economic size of new pulp and paper mills, limit the options for rationalization and expansion. Resource inventorying financed under the subsidiary agreement will be completed this year. In the future, options for the processing sector will have to be carefully assessed to be sure that the resulting fibre demand matches the available resource.

The expectation of unfavourable resource costs has been the key factor in limiting investment in pulp and paper processing facilities. Several of the New Brunswick mills are extremely old and inefficient.

However, significant investment has been and is taking place in some mills. Included here are the \$98-million expansion and modernization program at Frasers in Edmundston, which will result in a complete rebuilding and small expansion programs at Saint Anne Nackawic, Acadia, MacMillan Rothesay and Consolidated Bathurst. Closures have been limited to technologically obsolete operations and have resulted in the loss of close to 500 jobs, or 10 per cent of the industry work force, over the past two years.

None of the New Brunswick pulp and paper mills meet federal-provincial pollution abatement requirements. Accordingly, all mills face heavy expenditures in this area. These expenditures are viewed by the mills as being "deadweight" (non-productive) as most of the expenditures which offer a pay back have been undertaken. Many of the older mills will not find these anti-pollution expenditures economically feasible.

New Brunswick pulp and paper mills generally utilize more energy in the production process than do mills in the rest of Canada, and purchase more energy from outside sources. This, combined with the widening gap in energy costs between New Brunswick and the rest of Canada, places producers at an increasingly disadvantageous position. Significant opportunities exist to increase energy self-sufficiency through such things as the burning of wood wastes and bark.

Increases in research and development above the current levels would appear necessary if long-term increases in efficiency and profits are to be attained. On a Canadian basis, spending on research and development (R & D) as a proportion of pulp and paper sales has declined in recent years. Very little work is done on unique New Brunswick problems. Potential candidates for an R & D effort include techniques for reducing wood and harvesting costs, intensive forest management, new processes for reducing energy and pollution costs, budworm control methods and the development of new products suited to the New Brunswick resource base.

Pulp and newsprint account for almost all the production of the New Brunswick industry. Many producers are residual suppliers on world markets of these low-valued products, and are thus the first to feel the crunch in times of poor markets, and the last to recover when markets improve. About 95 per cent of the production of these two products is exported, the major markets being Europe and the U.S.A. Tariff and non-tariff barriers for these products are generally minimal, but significant barriers do exist on higher valued products.

The fundamental problem facing the sawmilling industry is the shortage of quality sawlogs. The average diameter of sawlogs has been declining and there is a high incidence of decay. As an example of the problem, the sawlog supply on a sustained yield basis is estimated at 141 million cubic metres of 127-millimetre minimum small-end diameter sawlogs. The industry has the capacity to saw 197 million cubic metres with all but a few large mills operating on a one shift per day basis. Many smaller mills have trouble achieving sufficient supply for a year-round operation and operate only seasonally. Employment in the industry will decline as rationalization and modernization proceed and many of the smaller mills go out of business.

Due in part to this wood supply problem, in recent years, the softwood lumber industry has operated far below production capacity, with actual production being about 60 per cent of rated capacity. Of the 120 sawmills currently operating, approximately 25 to 35 of the large sawmills have the opportunity to remain viable. These mills, operating on a two shift per day basis, could more than fully utilize the allowable cut of softwood sawlogs. Hardwood lumber output has averaged only 50 per cent of production capacity of 23 million cubic metres. However, actual production and wood availability appears to be in balance for hardwood.

Despite extensive modernization expenditures and the establishment of large mills in recent years, labour productivity has declined as a proportion of the Canadian average. The primary factor here seems to be problems with sawing the increasing numbers of small and decayed logs.

New Brunswick sawmills produce a wide variety of softwood and hardwood lumber, with the most important being softwood dimension lumber in construction grades. About 60 per cent of output goes to Atlantic province markets and the remaining 40 per cent to the northeastern United States. Most New Brunswick lumber is shipped green, and additional kiln drying capability would broaden the market for lumber and aid in the growth of the secondary wood products industries. With one or two exceptions, the New Brunswick industry lacks the expertise and resources to mount an effective marketing effort. Market

prospects appear good over the medium term, especially in light of an increasing shortage of softwood lumber in the northeastern United States.

An opportunity exists to modernize and rationalize the existing sawmilling industry with the following benefits:

- (1) increased output of softwood lumber, but with no increase in productive capacity; and
- (2) increased efficiency from (a) greater throughput per mill, (b) improved handling and sawing of smaller and lower quality logs, and (c) greater integration with the pulp and paper industry.

The secondary wood products industry in New Brunswick produces a wide variety of products in a large number of small plants, primarily for the local market. The products are diverse and include such items as millwork products, roof trusses, wooden boxes and barrels, wooden pallets, preserved wood, wood handles, fencing, particle board and prefabricated and mobile homes.

The secondary wood products industry serves the local provincial market essentially, and as such opportunities for expansion are limited by the growth of the local market. In addition, the rate of growth of the residential construction market is expected to decline in the 1980s, with fewer housing starts because of reduced family formation. Tariffs on manufactured wood product exports to the U.S. have limited New Brunswick producers largely to the local market. U.S. tariff reductions from the recently concluded MTN talks have been limited to particle board and various other wood products not presently forming a major part of provincial production.

However, opportunities do exist to:

1. develop products and markets to utilize the small dimension and low-quality lumber which is increasingly prevalent on the New Brunswick scene, examples would be in the area of components manufactured for furniture, laminated wood products, and pallets. As a result of the MTN negotiations, the U.S. tariff on wooden furniture parts will be reduced.
2. develop higher valued products and potential markets for the province's particle board industry.

5.4 Mining

Although the mining industry has recorded only moderate growth in production and employment since 1971, it continues to

rank third behind forestry and agriculture and related industries among the goods-producing industries, in terms of contribution to gross provincial product.

The area surrounding Bathurst in northeast New Brunswick contains some of the richest and most extensive deposits of lead-zinc ore in the world. Work has resumed, after a one-year postponement because of depressed markets, on the expansion of the Brunswick Mining and Smelting lead-zinc mine. This expansion, when completed in early 1980, will make this mine the largest of its kind in Canada and result in a one-third increase in New Brunswick's base-metal production.

An opportunity exists, with the completion of the mine expansion, to establish a 100 000 metric tons per year zinc refinery and to expand the existing lead refinery. The construction of the zinc refinery at a cost of \$200 million would result in the creation of over 400 direct jobs and result in the further processing of an important resource. A federal-provincial examination of this opportunity concluded that the project was commercially viable over the long term and would confer significant economic benefits on the province and nation.

The major constraint to the development of a zinc smelter is the uncertainty of the world zinc market. However, the medium- and long-term demand for zinc concentrate and metal remains good. But, a surplus of refining capacity relative to mine production implies that the margin between metal and concentrate price may well shrink in the future. Historically, the profitability of refining has been less than that of mining. On the other hand, this development will favour the integrated producer with its own source of concentrate.

Another constraint relates to the practice of many foreign countries to subsidize the construction of zinc refineries. Many of these plants, without access to a guaranteed supply of concentrate, rely for their existence on protectionist measures.

Tariffs on zinc metal exported to the U.S., which would be the major market for a New Brunswick zinc smelter, and to Europe are high in relation to value-added in converting concentrate to metal and are a major disincentive to imports.

The major end uses for zinc are in galvanized steel, as an alloy with aluminum for die castings and with copper for brass. The loss in the zinc castings markets is expected to be offset by strong growth in the corrosion protection applications of zinc in automobiles and construction. The U.S. now manufactures only 40 per cent of its consumption of zinc metal.

DREE and the Province of New Brunswick have recently concluded an agreement to cost share, with Brunswick Mining and Smelting, the engineering and design work for the proposed smelter. Completion of this work, expected in two years, would enable construction to move ahead quickly when market conditions improve.

As indicated earlier, development of the ore bodies in the Bathurst area has been constrained because of the low metal-recovery rates possible from these complex ores with conventional processing techniques. The current Canada-New Brunswick minerals subsidiary agreement has financed research into processing technologies. The results of this research are promising and may lead to the piloting of a new processing technique.

Three potash deposits are in varying stages of development in the Sussex area of the province. The Potash Company of America, after the completion of a \$106-million mine development, expects to be mining potash at the rate of three quarters of a million metric tons (KCl) annually by late 1981, and employing 250 people. A second deposit, recently purchased by Denison Mines Ltd., is undergoing geological and engineering studies. The company proposes to spend about \$150 million on mine development to bring this deposit into production by 1983 with employment of about 400. An announcement on the development of the third deposit may be made shortly.

The potash finds at Sussex, favourably located with respect to water transport to the United States eastern seaboard, offer potential for an integrated chemical complex; that is, production of fertilizer compounds and other industrial chemicals based on imported phosphate rock and domestic sulphuric acid and potash. This potential is based on the possibility, resulting from potash export to the eastern seaboard, that phosphate rock can be back-hauled from Florida and that there is an availability of by-product sulphuric acid from the lead smelter.

The requirement to move potash from the Sussex area to markets on the United States eastern seaboard will likely require the development of a bulk handling facility at the Port of Saint John.

New Brunswick's coal production has been on the decline in recent years, but capacity has recently been expanded by the construction of a new dragline at the Minto coal field. Extensive deposits of coal also exist in the Kent County area. In addition, the Canada/New Brunswick minerals subsidiary agreement has financed a comprehensive drilling program to determine the extent of the province's coal deposits. The high sulphur and ash content of New Brunswick coal constrains its increased use as an energy source for economic and environmental reasons. A number of experiments designed to clean coal are under way. There is an opportunity to construct, at a cost of

\$2 million, a coal desulphurization plant to clean coal. In addition, this experiment has the potential to reduce ash content and lower transport costs to users' sites.

A recent announcement has been made that a tungsten/tin/bismuth/molybdenum mine at Mount Pleasant in Charlotte County is being developed to the production stage. Estimated development costs are in the order of \$80 million with expected mining employment of at least 150.

New Brunswick possesses extensive deposits of peat moss, and although only 15 per cent of known acreage is currently exploited, produces 25 per cent of Canadian production, ranking second to Quebec.

There is potential for the development of industry to process the peat into various products. An inventory of the resource, sponsored under the minerals and fuels subsidiary agreement, is the first step in determining the potential for the manufacture of peat products and the use of peat as a feedstock for the generation of steam and electricity.

Mineral exploration activity, as measured by claims staked, has been buoyant recently as a result of exploration for uranium in the southern part of the province.

5.5 Non-Resource-Based Manufacturing

The non-resource-based manufacturing sector can be divided into two segments. These are the industries serving primarily local, provincial and regional markets, and the industries whose products are directed to export markets or to replace imports on the national market.

The local and Atlantic provinces market will continue to offer production opportunities, not only in consumer markets, but also in industrial and governmental markets. However, for many products the share of the Atlantic provinces' market, which would have to be captured by a prospective producer, is so large as to preclude viability.

Increased production activity for these markets will depend on aggressive marketing and product development and continued improvement in efficiency and profitability. The industrial development subsidiary agreement has provided some assistance to producers in these areas.

Much of the growth in production for provincial and regional markets will continue to occur in the Moncton area which is strategically well placed to service the maritime provinces' markets.

The availability of low-cost water transport through the Port of Saint John provides opportunities for industries serving the United States eastern seaboard and Europe. However, attempts at establishing firms to serve national and export markets have met with limited success in recent years.

As a means of increasing the attractiveness of the province to potential investors, considerable serviced industrial land has been financed under the industrial development subsidiary agreement, with the result that the cost and availability of industrial land is no longer a serious constraint to manufacturing development.

Opportunities for the diversification of the manufacturing base change with changing market and technological circumstances. Increasingly, the effort at industrial diversification will have to be based on more and better industrial intelligence respecting potential opportunities, clients and New Brunswick's locational advantages.

The development of a heavy industrial complex at the deepwater port of Lorneville remains a priority. Potential opportunities remain speculative, but include fertilizer with the availability of potash, chemicals with the potential availability of natural gas, and cement production for export to the eastern United States.

5.6 Shipbuilding and Ship Repairs

The major opportunity in non-resource-based manufacturing is the potential expansion of the shipbuilding facilities at Saint John to construct LNG (liquefied natural gas) carriers, Arctic-class ships and other large vessels.

The Saint John yard has the advantage of an ice-free year-round port, some of the most modern facilities in Canada and a highly professional management team.

A proposal has been made for a two-phase expansion program costing \$50 million, which would entail lengthening and widening the inner dry dock and would place it in a position to credibly bid on the construction of LNG carriers for use in the Arctic and other large vessels. It is estimated that the construction of LNG carriers could increase the work force to 2 500 from the current level of 1 600. The Department of Industry, Trade and Commerce has offered the company \$10 million toward the \$17-million essential first phase of the expansion, aimed primarily at providing ship repair capacity.

This lengthening of the dock would enable the company to regain lost repair work and employ 350.

5.7 Transportation and Construction

The transportation and distribution of natural gas potentially offers major opportunities to New Brunswick. Considerable speculation surrounds the numerous possible scenarios.

Three proposals for the transportation of natural gas are currently before the National Energy Board and all have significance for New Brunswick.

Petro-Canada proposes an Arctic gas pilot project which involves shipping liquefied natural gas from the Arctic to an east coast port where it would be gasified and piped primarily to Ontario and Quebec markets.

Q & M Pipelines and Trans-Canada Pipeline propose an eastward extension of the gas pipeline from Montreal to Quebec, and through New Brunswick and Nova Scotia. Under the Q & M proposal, initially the majority of the gas would be exported to the United States through St. Stephen. These proposals would initially use western gas, and later Arctic gas.

Both competing proposals would have a significant impact on construction activity. The Q & M proposal forecasts 5 500 person-years of construction in the transmission and distribution areas over the period 1980-82.

Potentially, numerous other opportunities could result as spin-offs from these projects.

Under the Q & M proposal, significant quantities of natural gas would be available in New Brunswick beginning in 1983. The availability of natural gas opens up numerous industrial possibilities such as a steel mill using natural gas in the reduction of iron ore pellets, fertilizer production given the availability of potash, and the development of an industry engaged in converting users to gas from other energy sources. Also, plastic pipe is increasingly being used for distribution and this could be fabricated locally.

Initially in 1983, natural gas available in Nova Scotia and New Brunswick is expected to displace the equivalent of 1.6 million litres of oil per day, about one-tenth of present consumption. This will build up to 3.2 million litres of oil per day by 1992.

The Trans-Canada Pipeline proposal includes an alternative, which would see surpluses of propane transported from Quebec to the Maritimes. This would be an interim measure

to build up markets necessary to support an eventual gas pipeline.

There is also the possibility of shipment of oil from the Arctic, perhaps by tanker to Saint John, if and when oil is discovered in commercial quantities.

6. SUMMARY AND CONCLUSIONS

The New Brunswick economy has made significant gains since 1971, both relative to the period of the 1960s, and compared to the Canadian economy as a whole. The growth of provincial output over the 1971-78 period exceeded the growth for Canada by a slight margin.

However, output growth was extremely unbalanced. Over the 1971-78 period, capital investment outpaced the growth at the national level. Historically, high levels of investment have been maintained since 1975, and have resulted in the construction sector being the largest contributor to output growth in the goods-producing sector. Investment activity, itself, was heavily skewed towards investment in the utilities sector as a result of a large expansion program by the provincial power commission. Manufacturing investment showed very little absolute growth over the period, and declined throughout the period as a proportion of the Canadian total.

Provincial manufacturing output has outpaced the growth recorded for Canada as a whole. Most of the growth has originated with the forest products industries and more recently, the fish products industries. As a result, the New Brunswick economy has increased its already heavy export orientation.

Although employment growth has been buoyant compared to the 1960s, it has not been as strong relative to the rest of Canada, as has output growth. Output growth has been weighted toward the capital-intensive industries of electric power and construction. In addition, much needed productivity gains have accounted for much of the output growth in the resource processing industries.

Labour force growth, buoyed by a reversal of the historic trend of net out-migration and rising participation rates, has exceeded the national rate of growth.

The unemployment rate increased quite dramatically over the 1971-78 period. The unemployment situation has become especially severe for youth and women, in part because of the sectoral pattern of growth.

Considerable disparities continue to exist between New Brunswick and Canada. In fact, earned income per capita has fallen slightly over the period as a proportion of the Canadian average. Gains in relative earned income per employee have been offset by relative declines in the population of working age actually employed.

Employment and income disparities, between the northern rural regions and the southern urban regions of the province, have widened slightly over the 1971-78 period, in keeping with well-established trends. Since 1976, however, employment growth in the northeast of the province has been exceptionally strong.

The medium-term outlook is for somewhat slower growth than has been experienced since 1971, and for an unemployment rate near its present high level.

The stronger sectors are expected to be agriculture, fisheries, mining and the related processing industries. Forest products production will be constrained by resource limitations.

A number of major development problems emerge from the economic circumstances facing the province. Recent increases in energy prices threaten the competitiveness of the resource-based energy-intensive economy. Considerable effort is being directed toward developing alternatives to oil. It would seem important that a coherent plan for the development of energy sources emerge.

The historic patterns of economic and social development have resulted in a rather scattered settlement pattern. There is a need to strengthen the attractiveness of the province's major urban centres as locations for business and industry, and as a means of strengthening the linkages within and between regions.

Diversification of the province's manufacturing base is viewed in the federal-provincial development strategy as the major means of providing needed employment opportunities. To date, diversification efforts have produced limited results, and three-fifths of manufacturing employment remains in the resource-processing industries.

More recently, the diversification policy has placed increased emphasis on assisting existing business, and in particular, small business. It is unlikely that these businesses can produce sufficient employment to significantly offset the high unemployment levels.

Access to tidewater is a major comparative advantage of the New Brunswick economy. Improvements to water transportation facilities are one of the means of improving the competitiveness of New Brunswick exporters, who are generally price takers on world markets. It appears that improvements to port facilities will be required at several ports in the province if opportunities are to be realized.

In recent years, provincial indebtedness has grown considerably. This is due, in large part, to the need to guarantee the debt of the provincial power commission. In addition, the province's fiscal capacity has declined quite rapidly in relation to the all-province average. This is largely caused by the increased fiscal capacity of western Canada, as a result of its rich resource-based economy. However, for 1979-80, the province has budgeted an increase for economic development spending equivalent to three times the increase on the social side, demonstrating its commitment to economic development.

The fact that New Brunswick exports are excessively reliant on the U.S. market, and for the most part are of the unprocessed or semi-processed variety, makes for considerable instability in the provincial economy. An improved marketing and product development effort is required to diversify markets and increase processing, in conjunction with the opportunities offered by the devalued dollar and reduced trade barriers.

An opportunity exists to expand the production of a range of agricultural products in which New Brunswick possesses a competitive advantage, due to land and climatic factors. These products include seed and tablestock potatoes, blueberries and other small fruits, selected vegetables, and pork and beef. Opportunities exist in both local and export markets, and for both fresh and processed products. The major requirements are improvements in productive efficiency, marketing, quality control and distribution.

Opportunities exist to increase fisheries output, and in particular, groundfish, herring and shrimp production. The major requirements will be in the area of fleet modernization, an improved marketing and quality-control effort and initiatives designed to reduce the seasonality of production and increase profitability.

The mineral sector offers perhaps the most promising potential. An expansion of zinc production is under way, and two potash mines will be in production by the early 1980s, with possibly others to follow. A recent announcement has been made on the development of a tungsten/molybdenum/tin/bismuth deposit. With improved international base-metal prices, there is the potential for the development of a zinc refining capacity in northeast New Brunswick.

An opportunity exists to modernize and rationalize the provincial pulp and paper industry in order to improve its competitive position, and enable it to more fully utilize the available resource. The major constraint is an emerging shortage of wood fibre. A continued intensive forest management effort

and demand of wood. An opportunity exists to rationalize the sawmilling industry in order to increase output and productivity. The fundamental problem facing the industry is a shortage of quality sawlogs.

The major opportunity in the non-resource-based manufacturing sector is the potential to expand shipbuilding and dry dock facilities in Saint John to enable the construction of Arctic-class and large vessels to handle the production expected from oil and gas development. The major constraints relate to the uncertainty of the Arctic market and the high costs of Canadian versus foreign yards. A potential exists to develop a heavy industrial complex at the deepwater port of Lorneville, near Saint John. There are diverse opportunities to expand manufacturing production for local and regional markets. In this regard, federal government procurement policy offers a means of stimulating manufacturing growth.

Finally, and on a more speculative note, the several proposals now before the National Energy Board to transport gas to the Maritimes by water and/or pipeline could have significant impact in terms of construction employment, fabrication of LNG carriers and associated marine equipment, and the industrial spinoffs resulting from the availability of natural gas.

