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ECONOMIC DEVELOPMENT PROSPECTS IN BRITISH COLUMBIA

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



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ECONOMIC DEVELOPMENT PROSPECTS
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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 Background.....	3
2.2 Factors.....	3
2.2.1 Population.....	3
2.2.2 Labour Force and Employment.....	5
2.3 General Economic Indicators.....	5
2.4 Sectoral Review and Prospects.....	7
2.4.1 Agriculture.....	7
2.4.2 Fishing.....	9
2.4.3 Forestry.....	10
2.4.4 Minerals.....	15
2.4.5 Transportation.....	20
2.4.6 Construction.....	21
2.4.7 Power Generation.....	21
2.4.8 Service Sector.....	21
2.5 Sub-Provincial Distributions.....	22
3. DEVELOPMENT PROBLEMS AND ISSUES.....	24
3.1 Development Problems.....	24
3.1.1 Resource Dependence.....	24
3.1.2 Lack of Diversification.....	25
3.1.3 Changes in the Renewable Resource Base.....	25
3.1.4 Transportation and Communications Constraints.....	26
3.1.5 Labour Relations Climate.....	26
3.1.6 Limited Opportunities for Native People.....	27
3.2 Development Issues.....	27
3.2.1 Tariff and Non-Tariff Trade Policy.....	27
3.2.2 Resource Management.....	27
3.2.3 Transportation Policy.....	27

3.2.4	Regional Development Programming.....	28
3.2.5	Energy Policy.....	28
3.2.6	Pipeline Compensation.....	28
3.2.7	Native Land Claims.....	29
4.	FEDERAL AND PROVINCIAL INSTRUMENTS.....	30
4.1	Provincial Development Strategy.....	30
4.2	Provincial Instruments.....	30
4.2.1	Provincial Budgets and Fiscal Capacity.....	30
4.2.2	Agricultural and Rural Development.....	31
4.2.3	Industrial Development.....	31
4.2.4	Other.....	32
4.3	Federal Instruments.....	32
4.4	Federal-Provincial Instruments.....	33
5.	ECONOMIC DEVELOPMENT OPPORTUNITIES.....	35
5.1	Synopsis of Comparative Advantages.....	35
5.2	Specific Opportunity Areas.....	36
5.2.1	Agriculture Industry Opportunities.....	38
5.2.2	Fishing Industry Opportunities.....	38
5.2.3	Forest Industries Opportunities.....	39
5.2.4	Mineral Sector Opportunities.....	41
5.2.5	Energy Opportunities.....	44
5.2.6	Manufacturing Opportunities.....	45
5.2.7	Northern Transportation Opportunities..	46
5.2.8	Service Sector Opportunities.....	47
6.	SUMMARY AND CONCLUSIONS.....	50

1. OVERVIEW

The recent strength of the British Columbia economy has been based on stronger exports related to a depreciated Canadian dollar and to a period of modest increases in labour costs, making exports from British Columbia more competitive in world markets.

The outlook to 1985 is clouded by international uncertainty. There is, however, a general basis for optimism and no absolute shortage of economic development opportunities, although there are specific constraints. It is unlikely that growth rates will attain the levels of the late sixties and early seventies in British Columbia, or indeed, in most other regions of Canada, given the changing world economy.

Diversification of the British Columbia economy has proceeded at a slower pace than had been hoped and there is a growing recognition that further diversification will not be easily attained. The immediate outlook, for 1979 and 1980, must be cautious given the high probability of fewer housing starts in the United States in late 1979 and early 1980 and the unsettled world energy situation.

Opportunities exist in British Columbia, particularly those relating to its comparative advantage in energy supplies and the varied resource base. The production of energy for domestic and export markets will represent a continuing opportunity for British Columbia. While certain renewable resources are at or approaching their exploitable limit on a sustained yield basis (such as the fisheries and forests) improved management and increasing efficiency should permit an expanding range of investment and employment opportunities.

Public policy decisions, in such areas as transportation, trade and tariffs and the role of Crown corporations will be important factors influencing the investment climate. The results of labour-management discussions and negotiations will also play an important role both in terms of capital investment and the attractiveness of British Columbia as a destination for people on the move.

The most apparent opportunities occur in the minerals sector, both mining and processing; however, these are highly dependent on the performance of the international economy. Opportunities in forestry and fishing are more certain of attainment prior to 1985.

Externally generated opportunities, associated with increasing discretionary income and the transfer of accumulated assets, particularly from neighbouring provinces and states, may

well occur in the travel and retirement industries. With a lower valued dollar, British Columbia becomes an attractive alternative for both domestic and international travellers and particularly in southern areas, for retirees from east of the Rocky Mountains.

A less obvious opportunity in British Columbia lies in the research and development field. With increasing attention on resource management and technological efficiency, there should emerge expanding opportunities for building on the existing research expertise in the province, that will include ocean related research.

Regional development will continue to be a concern both in communities and regions of rapid growth, such as Kamloops, Prince George and the Okanagan Valley and in areas of slower growth, such as the northwest and the Kootenays. Public policy will undoubtedly continue to focus on measures to encourage balanced growth to the degree possible.

2. ECONOMIC DEVELOPMENT FACTORS

British Columbia possesses a rich and varied resource base in its forests, minerals and fisheries. Dependence on forestry and minerals has been a prevailing concern for successive governments of British Columbia since the Second World War. Economic diversification, both sectorally and regionally, continues to be a major objective.

2.1 Background

By 1971, the British Columbia population had reached nearly 2.2 million, following record annual growth during the late sixties. New residents from other provinces and countries arrived at record rates as the economic momentum of the Canadian economy picked up.

The demand for Canada's exports, especially wheat, forest products and minerals, contributed to the growth of both the national and British Columbian economies through the early seventies. The provincial economy, however, remained dependent on primary resource extraction and processing and therefore suffered when the international markets reflected the effects of the energy crisis.

2.2 Factors

The British Columbia economy is influenced by inter-relationships among a variety of factors including changes occurring in demographic structure; labour force trends and characteristics; the viability of resource endowments in the province; and the demand for provincial products and services. This section covers the human resource factors of population and labour force, as an introduction to general economic indicators and as a background against which to review the provincial performance.

2.2.1 Population

The population of British Columbia in mid-year 1978 was 2 530 000, third among Canadian provinces. A characteristic feature has been the long-term trend of rapid population increase. In the period 1971 to 1978 British Columbia experienced the second highest percentage increase in population among the provinces in Canada: 15.9 per cent. British Columbia's share of the Canadian population increased from 10.1 per cent to 10.8 per cent. Only neighbouring Alberta increased its population by a higher percentage than did British Columbia.

In the early 1970s migration regularly accounted for 70 per cent or more of the annual population gain, but by the late 1970s natural increase and net migration were approximately equal.

The age structure of the provincial population is characterized by a higher proportion of the province's population being in the 65 years or over age group (9.8 per cent versus 8.7 per cent for Canada). A lower proportion are in the youngest age groups, from 0 to 14 years (24.1 per cent versus 25.6 per cent). The working age population from 15 to 65 in British Columbia makes up a proportion comparable to the national average, that is, 66.1 per cent compared to 65.7 per cent.

The Lower Mainland and southern Vancouver Island areas, comprising only 3.6 per cent of the province's land area, account for two thirds of the provincial population. Outside the heavily populated southwestern corner of the province, the remaining one third of the provincial population is distributed over 96 per cent of the land surface under three basic patterns: (1) a dispersed rural and agriculturally based population pattern in the Peace River area, parts of the Cariboo-Chilcotin plateau, and a few southern valleys; (2) a linear population pattern in association with transportation routes and resource-processing activities that follow the province's numerous north-south mountain valleys; and (3) a scattered, point population pattern in the middle and northern coastal region and in the more isolated northern areas of the province related to native settlements and high-grade resource development.

The native population of British Columbia (Status and non-Status) is estimated to account for approximately 5 per cent of the total. There is a diversity of native Indian heritages not found elsewhere in Canada. Reserves are widely dispersed and locations range from metropolitan Vancouver to isolated coastal communities and settlements near the Yukon border.

There have been some recent signs that a significant shift in the spatial distribution of population growth is underway. In contrast to the urbanization trend occurring elsewhere in Canada, the populations of the Vancouver-centered Lower Mainland and the Victoria urban area grew by only 8.9 per cent and 12.6 per cent, respectively, between 1971 and 1976, in contrast to the remainder of the province which experienced an 18.8 per cent increase. The period saw a general strengthening of the urban hierarchy with key regional centres, such as Prince George, Kamloops, Kelowna, Nanaimo and Cranbrook, all experiencing growth rates in excess of the provincial levels. A

few important regional centres grew more slowly or declined as a result of specific local conditions during the period, including Prince Rupert, Nelson and Dawson Creek.

2.2.2 Labour Force and Employment

During the period 1971-1978, the labour force of British Columbia increased by 293 000. The participation rate rose from 58 to 63 per cent, fourth highest among the ten provinces. Much of this increase is attributable to an increase in the participation in the labour force by women.

Employment grew by 271 000 between 1971 and 1978, an increase of 33 per cent. This compares to the national increase in employment of 25 per cent and was the second highest increase in employment in Canada in percentage terms. Since 1975, the unemployment figure in British Columbia has been near the 8.5 per cent level, more than a percentage point higher than in 1971.

Labour-management relations have often been strained in British Columbia. In the 1967-77 period, person-days lost because of strikes and lockouts amounted to 5.4 days per thousand in British Columbia compared to the national figure of 3.6 days per thousand.

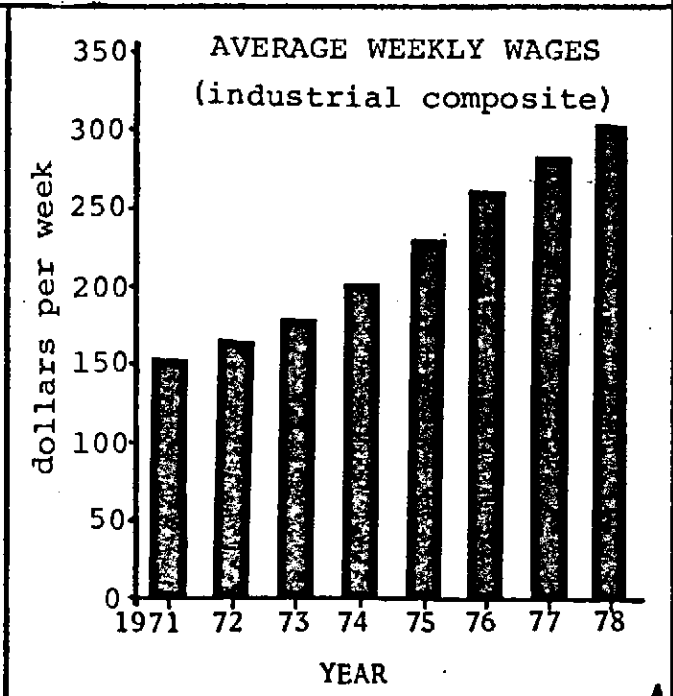
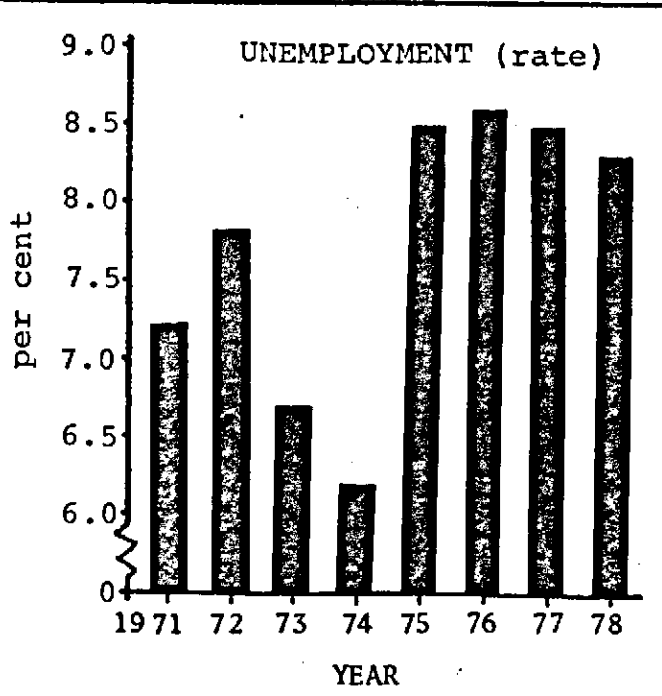
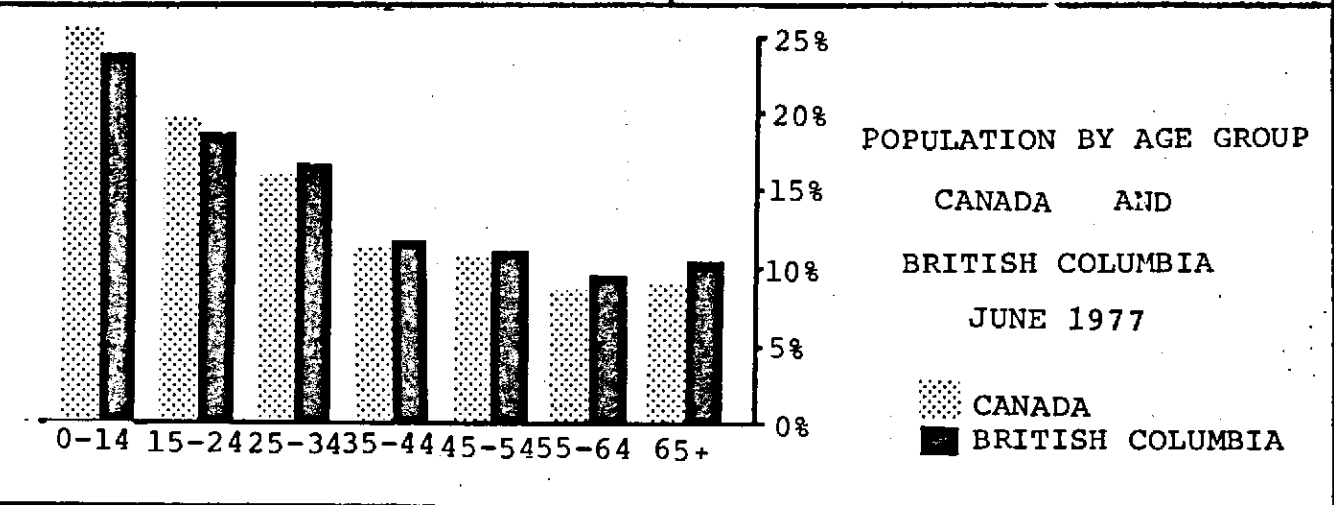
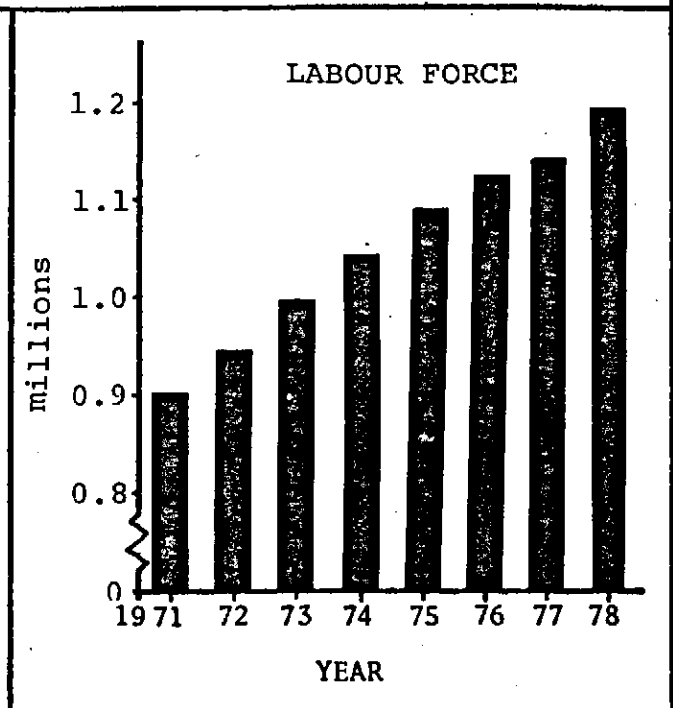
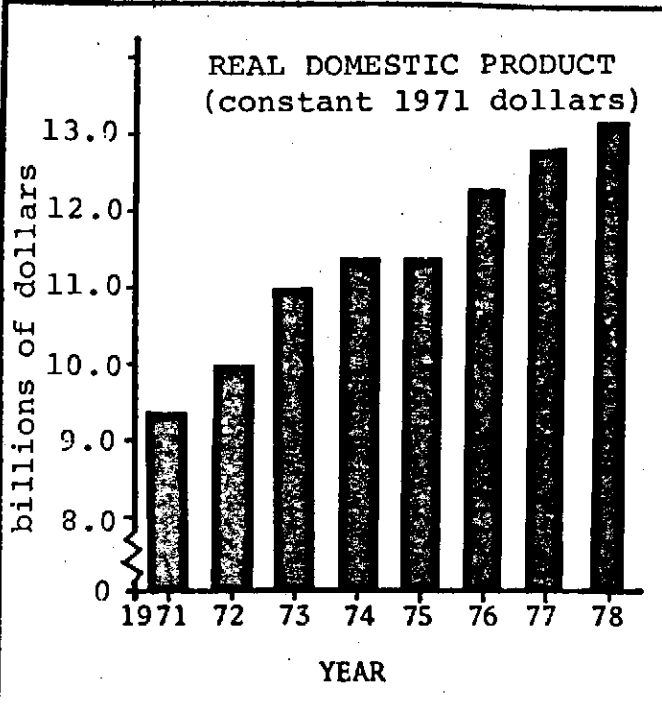
2.3 General Economic Indicators

Real domestic product (RDP), expressed in constant 1971 dollars, has grown from \$9.3 billion in 1971 to \$13.4 billion in 1978 (see Chart 2.1). Year-to-year performance during that period was highly variable ranging from a 10.6 per cent increase in RDP in 1973 over 1972 to a low of 0.5 per cent in 1975 over 1974. Recent estimates by the Conference Board in Canada indicate real growth of 4.4 per cent for 1978 and predict a 2.9 per cent increase in 1979. These figures, while modest by comparison to figures of the sixties and early seventies, are above estimates and predictions for the country as a whole.

Personal income figures for British Columbia remain high, relative to Canada. In 1978, per capita personal income was estimated to be \$5 014, an increase from \$3 745 in 1971 (both figures in 1971 dollars). The comparable estimate for 1978 for Canada is \$4 594.

Investment in capital and repair expenditures reached an estimated \$8.1 billion dollars in 1978 and accounted for 12.7 per cent of such investment in Canada. Investment in British Columbia has held fairly constant at 12-13 per cent of the national total since the early seventies.

BRITISH COLUMBIA SELECTED INDICATORS 1971 TO 1978



Housing starts were lower in British Columbia in 1977 and 1978, declining to an estimated 28 000. Forecasts for 1979 suggest an increase.

The following sections describe what has happened in specific sectors of the provincial economy and indicate some possible trends through 1985. In looking towards the future, some assumptions were made relative to exchange rates, labour-management relations and general investment climate. Assumptions have been that the Canadian dollar will stabilize at a level of approximately 90 cents U.S., that wage and salary settlements will permit a competitive relationship to be maintained, and that the investment climate will retain its attractiveness.

2.4 Sectoral Review and Prospects

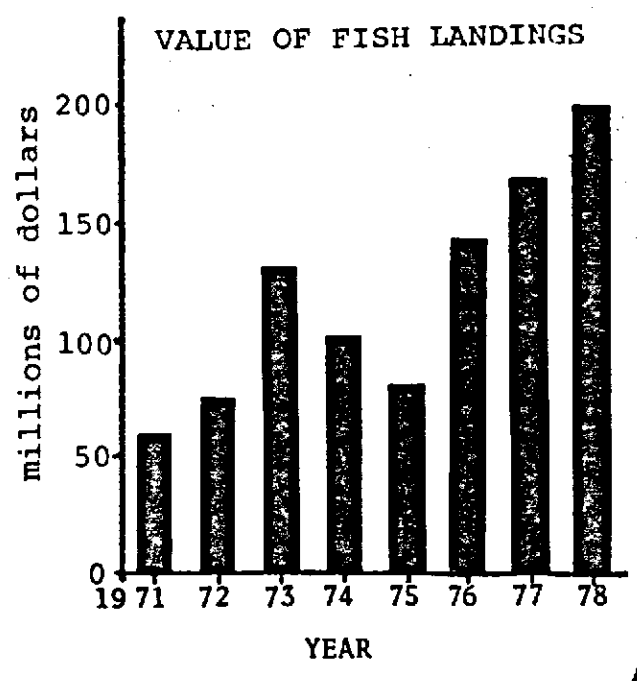
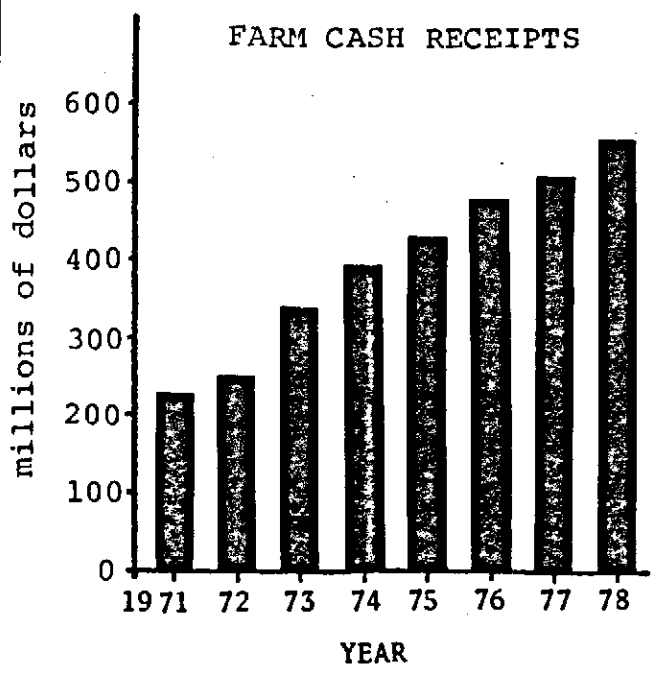
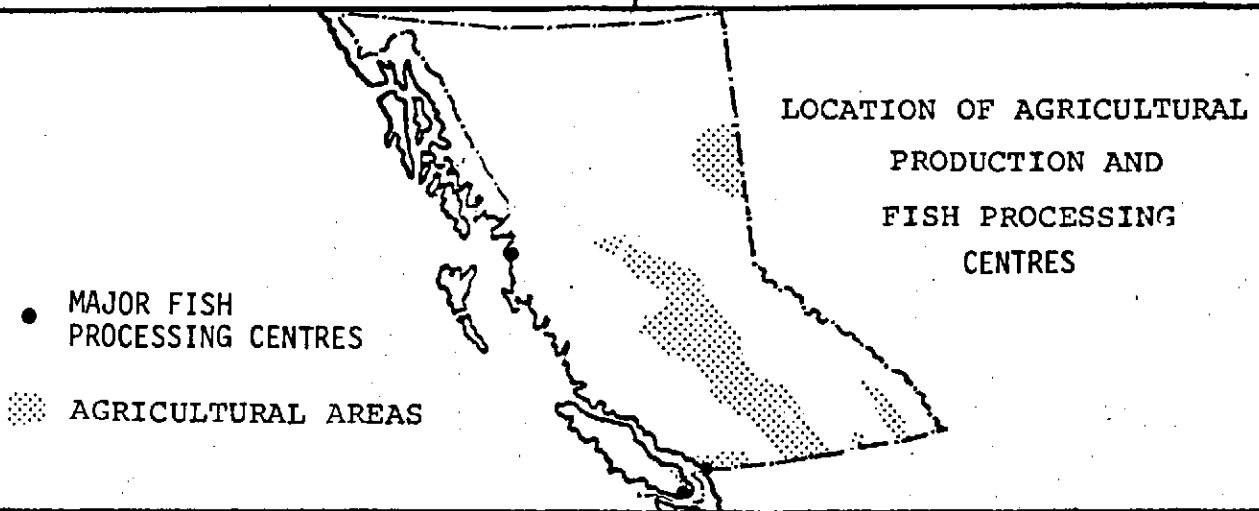
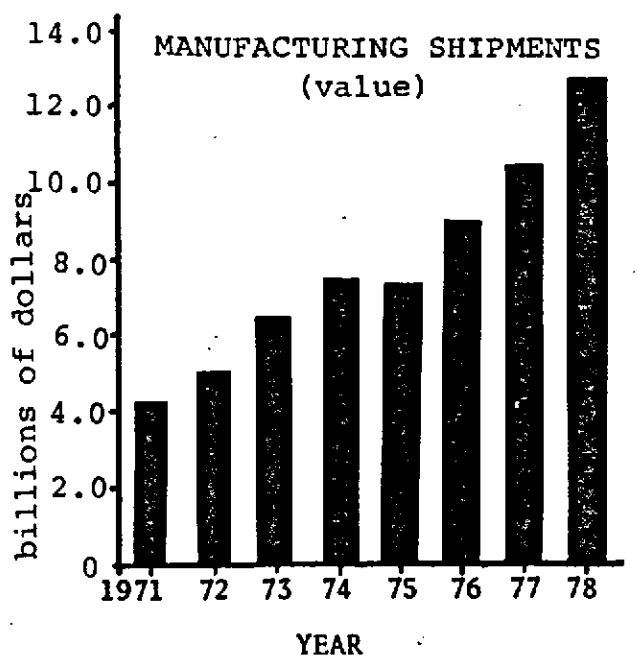
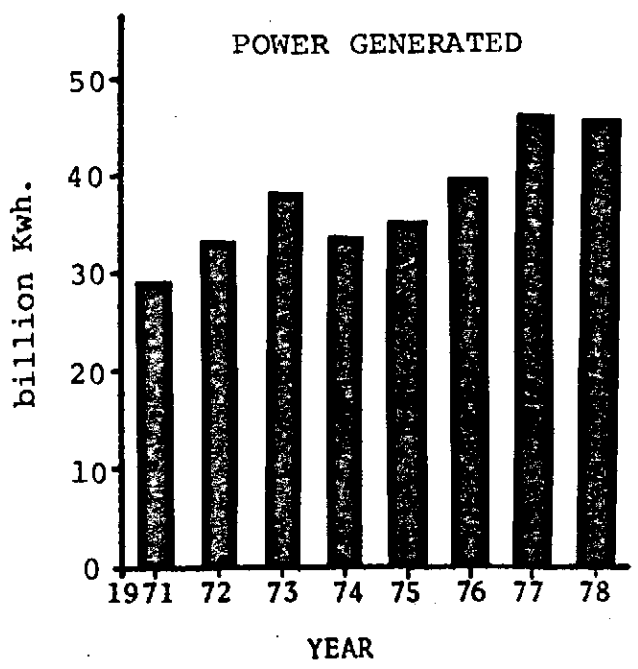
2.4.1 Agriculture

Specialized agriculture is important in selected sub-regions of the province (see Chart 2.2). The lower Fraser Valley (dairy and market crops), the Okanagan (tree fruits and vineyards), the Cariboo (livestock) and the Peace River country (grains and livestock) all have significant agricultural production in a regional context. Within the provincial economy, agriculture provides 2 per cent of employment and 2.8 per cent of British Columbia's value-added in the goods-producing sector (in 1976).

Expansion of agricultural production in the province is constrained by land availability, with less than 4 per cent of the province's land area classified as being in the three most productive categories of the seven-class Canada Land Inventory Classification System. In addition, some of these lands are near urban centres and are under pressure for urban use. Currently, the Agricultural Land Reserve legislation offers some protection.

Prospects for the sector are for stable growth with some potential for import substitution and for further processing. Livestock production will be a strong component of growth. The agricultural frontier of the Peace River area is bringing between 6 and 8 thousand hectares of new land to cultivation annually. This may be expected to continue in the medium term.

BRITISH COLUMBIA SELECTED INDUSTRIAL INDICATORS 1971 TO 1978



2.4.2 Fishing

The fishing industry, centred upon the salmon fishery and related processing, underwent a major structural change in the 1970s with the emergence of the herring fishery as a major activity. In 1971, herring accounted for approximately 2 per cent of the value of all fish landed. By 1977, this had increased to 26.3 per cent. Chart 2.3 indicates the changing structure of the fishing industry in British Columbia.

Advances made in harvesting technology have increased the need for government action to protect the resource base. The Salmonid Enhancement Program, the restriction of entry through vessel licensing, and tighter control of fishing seasons are all examples of federal government actions directed toward protecting and improving the resource base over time. In addition, the establishment of the 200-mile limit and the treaty negotiations with the United States (designed to set limits on the rights of fishermen from each nation to catch only specified species in the territorial waters of the other country) will influence the future development of the fishing industry in British Columbia.

CHART 2.3

Fishing Industry in British Columbia
1968, 1971, 1973 & 1977
(Current \$, millions)

	1968	1971	1973	1977
Wholesale Value				
Salmon	100.0	96.9	221.6	229.8
Herring	0.3	2.3	34.6	97.1
Other Fish	20.7	20.9	28.8	42.0
TOTALS	<u>121.0</u>	<u>120.1</u>	<u>285.0</u>	<u>368.9</u>
Fishing Vessels, by Size				
Under 10 tons	5 386	4 272	4 174	4 556*
10 to 25 tons	1 740	1 870	1 831	2 144*
Over 25 tons	560	556	599	689*
TOTALS	<u>7 686</u>	<u>6 698</u>	<u>6 589</u>	<u>7 389*</u>
Licensed Fishermen	12 133	11 015	11 717	13 764
Fish Processing Employment	3 442	2 599	3 702	3 830*

* 1976 figures the most recent available

2.4.3 Forestry

Forest products accounted for over 51 per cent of the selling value of manufactured factory shipments in British Columbia in 1977. The forest sector was also responsible for exports from British Columbia totalling \$3.8 billion, representing more than 60 per cent of all provincial exports. In 1977 the general pattern of forest-based shipments was as follows:

	<u>B.C. Consumption</u>	<u>Rest of Canada</u>	<u>U.S.</u>	<u>UK & EEC</u>	<u>Japan</u>	<u>other</u>
Lumber	5%	16%	65%	6%	6%	3%
Pulp	18%	-	29%	30%	11%	12%
Paper	16%	1%	50%	12%	3%	18%
Plywood & Veneer	18%	64%	-	17%	-	1%

Source: B.C. Forest Service

Until recently the concentration of output has been in the Lower Mainland and southern Vancouver Island. Investment since the mid-1950s has become more dispersed to the interior. Plywood and veneer, however, remain concentrated in Vancouver and Victoria, where relatively old mills, originally designed to use large diameter peeler logs, must now retool to adapt to smaller, second growth timber.

Chart 2.4 shows major indications of the forest industries in British Columbia. Of greatest significance is the fact that the industry is only now recovering to the levels recorded in the record year of 1973. Also, employment growth has not matched the growth in production.

Recent developments in provincial policy stem largely from the Pearce Royal Commission on Timber Policy in British Columbia, which reported in September 1976. The provincial government has now embarked on a decentralization of the Forest Service to a system of timber supply areas (TSAs) for purposes of establishing a new system of timber tenure. Timber extraction will be determined by annual allowance cut (AAC) based on depletion, replacement and the forest management practices of licensees. Intensive forest management will be a major factor.

Each sector of the forest industry is considered separately (see Chart 2.5).

Chart 2.4

The Forest Industry in British Columbia 1968, 1971, 1973 and 1977

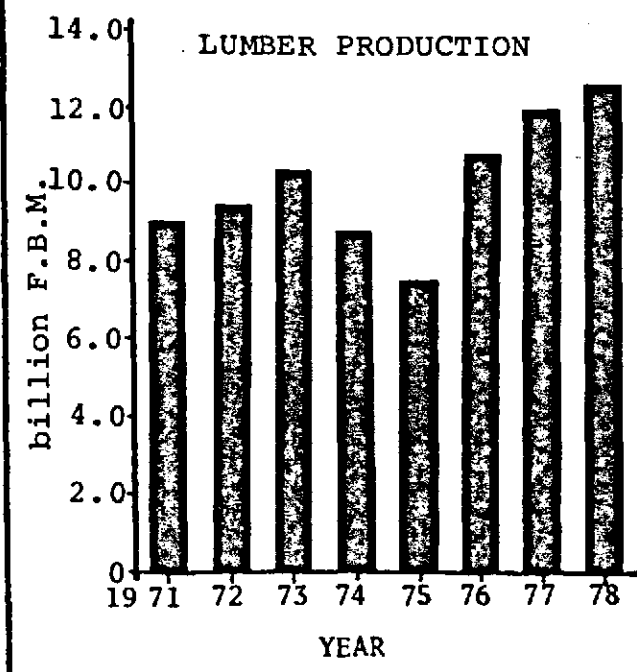
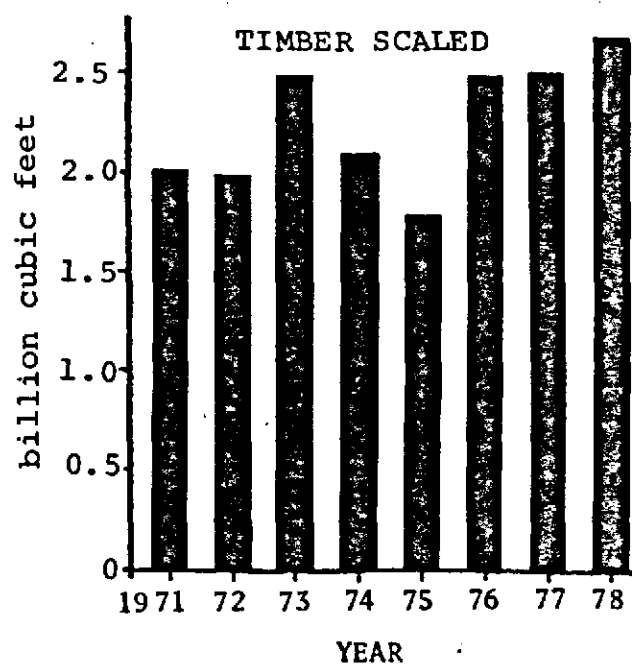
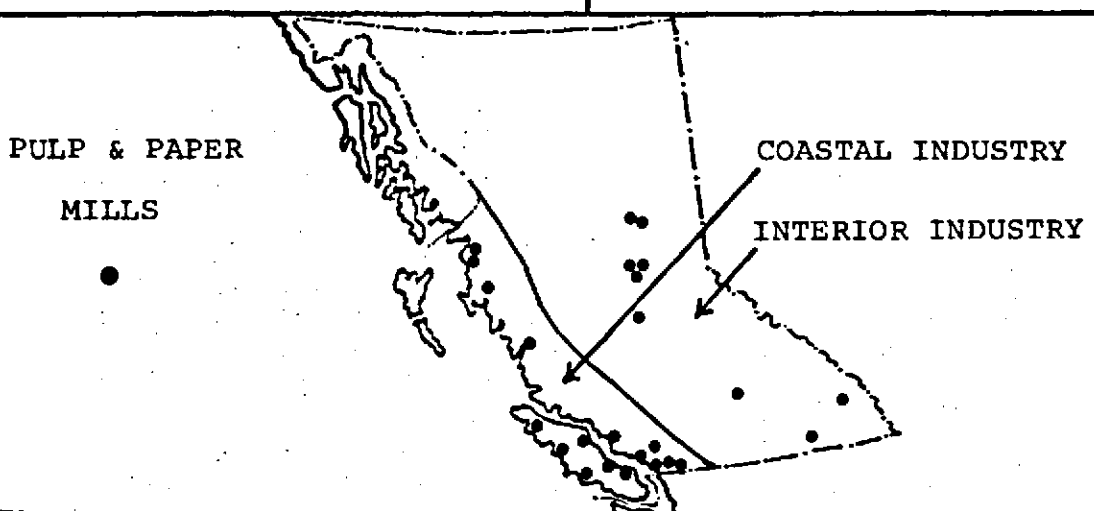
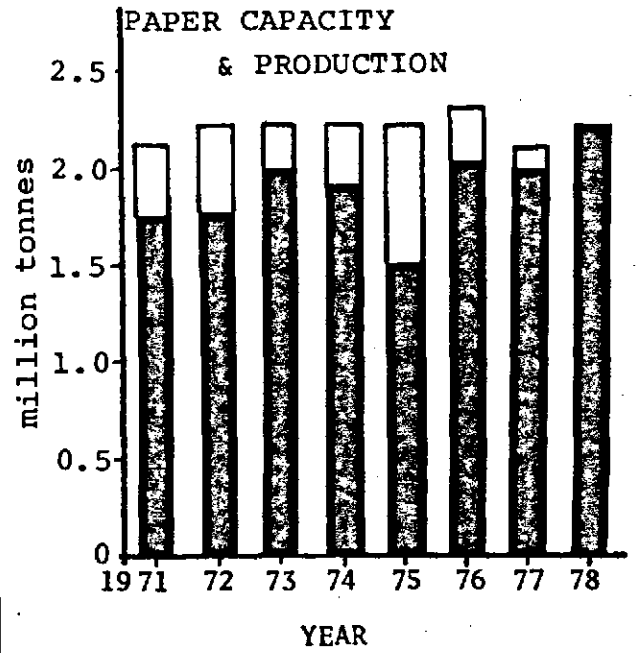
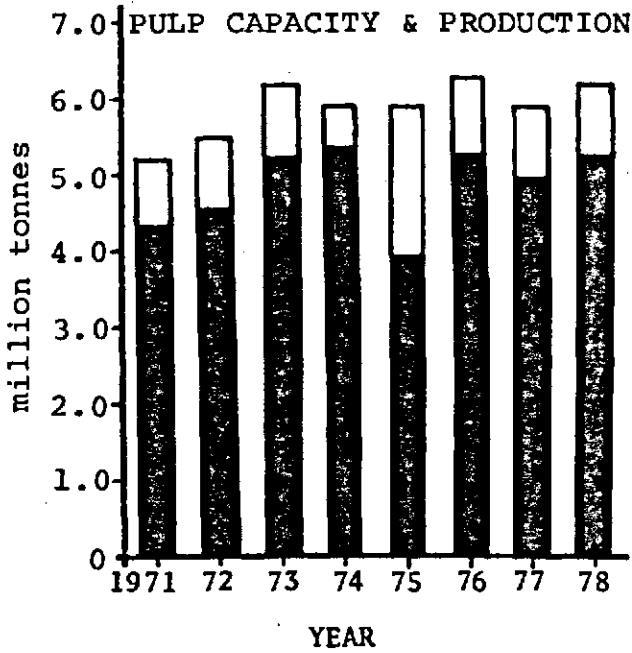
		1968	1971	1973	1977
Timber Scaled	(million m ³)	47	56	69	69
Logging Employment	(Number)	20 680	18 714	22 906	20 464**
Lumber Production	(million m ³)	18 356	21 002	24 406	28 289
Value of shipments	(\$ million)	809	931	1 738	1 946**
Sawmill employment	(Number)	26 005	29 476	35 242	31 514**
Plywood and Veneer Production	(million m ² , 0.95 cm basis)	166	172	202	216
Value of shipments	(\$ million)	190	214	334	407**
Plywood/Veneer employment	(Number)	7 549	7 342	8 479	7 643**
Pulp Production	(000 metric tons)	3 971	4 384	5 336	5 341*
Paper Production	(000 metric tons)	1 552	1 826	2 025	2 162*
Value of pulp and paper shipments	(\$ million)	557	660	971	1 713**
Pulp and paper employment	(Number)	13 074	16 031	17 344	17 950**
Forest Industries Total Employment	(Number)	67 308	71 563	83 971	77 571*

* 1973 preliminary

** 1976 data is latest available.

Sources: B.C. Review of Economic Activity, Statistics Canada

THE FOREST INDUSTRY IN BRITISH COLUMBIA 1971 TO 1978



(a) Logging

The volume of timber scaled is a function of the total demand for forest products. This sector has adjusted well to the methods of interior logging which depend on the harvesting of smaller trees and the use of large equipment. On the coast the traditional log booms with their attendant losses of logs are giving way to barge movement of logs in open waters. The prospects for this industry are for the continued introduction of new capital-intensive equipment.

(b) Lumber

The fortunes of British Columbia's lumber industry depend to a large extent upon the demand for housing in the eastern United States where about half of all production is sold. 1978 was a particularly good year as both the volume and value of production and exports increased, assisted by the declining value of the Canadian dollar. In 1979 some softening of markets and prices may be anticipated. However, with forecasts of strong demand for housing in both the United States and Canada in the early 1980s, the prospects for lumber producers are encouraging to 1985.

(c) Plywood and Veneer

The plants in British Columbia are located both on the coast and in the interior. The coastal plywood and veneer industry has the oldest investment and that investment is based on a large diameter peeler log resource that is rapidly disappearing. Activity is concentrated in Vancouver and southern Vancouver Island. With markets concentrated largely in Canada and Britain the prospects to 1985 are reasonably good and could improve if changes in British building codes occur that will permit wider acceptance of Canadian home construction methods and materials.

(d) Pulp and Paper

From a period of weak markets, poor prices and large inventories, a dramatic improvement in the markets for pulp and paper occurred in 1977 and 1978. Most mills are now operating at full capacity. With a lower valued Canadian dollar the products are competitive in world markets and producers are enjoying high profits. The world market is anticipated to remain strong to 1985 but British Columbia producers will be affected by wage settlements, the value of the dollar and the continued modernization of plants. A number of older pulp and paper investments, located mainly on the coast, are in need of

upgrading. New production capacity in the United States and South America may provide intense competition in traditional markets.

2.4.4 Minerals

External economic circumstances are critical for the mineral industry of British Columbia, since some 90 per cent of British Columbia's mineral output is exported, primarily to the United States and Japan. For example, the metallurgical coal industry is tied largely to Japanese steel production. In coal as well as with other mineral products, the extent to which provincial producers succeed in diversifying their markets will be an important aspect of the industry's development pattern.

The mineral industry in British Columbia was a major engine of economic growth in the late 1960s and early 1970s. In the period 1968 to 1978 the value of production rose from under \$400 million to almost \$2 billion (see Chart 2.6). The figures may be misleading. For instance, the volume of crude petroleum production in 1978 was only 60 per cent of that in 1968, and natural gas production was up by only 21 per cent in the same period. However due to price increases, their combined value rose by almost 600 per cent. By 1973, copper emerged as the major metallic mineral produced in the province when sales peaked at \$583 million. By 1978, following a major slump in world demand and prices, the value had recovered to \$418 million but production was still only 86 per cent of that of the peak year. Starting in 1970 the coal industry has grown steadily and in 1978 produced 9.4 million tons mainly for export with a value of some \$414 million.

The lower valued Canadian dollar has had a salutary influence on industry profitability and has promoted expansion plans. These may be offset by a compensating increase in the costs of new mining equipment, much of which is imported into Canada.

Both markets and capital are difficult to obtain for development of new mines, many of which would depend on large low-grade ore reserves. Strong unions and shortages of certain skilled trades are a cause for apprehension among existing and potential large-scale capital-intensive producers. Environmental concerns can also seriously delay new developments. In Chart 2.7, the value and volume of minerals produced in British Columbia is summarized for the period 1968 to 1978.

THE MINERAL INDUSTRY IN BRITISH COLUMBIA 1971 TO 1978

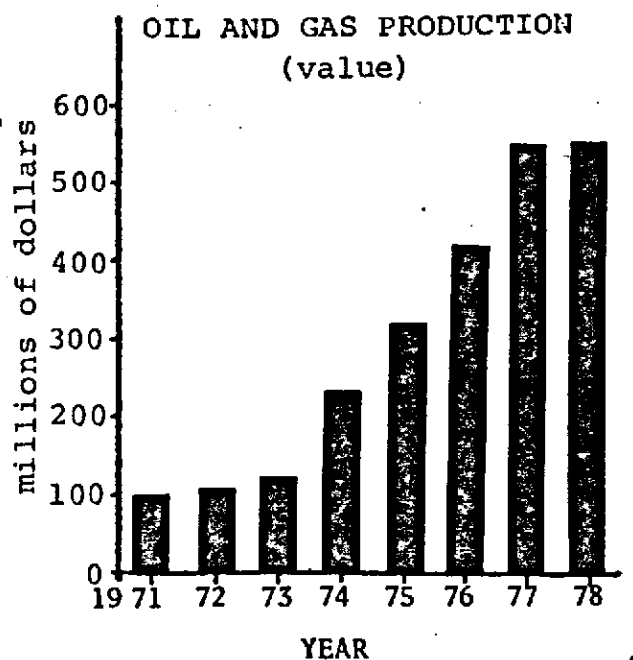
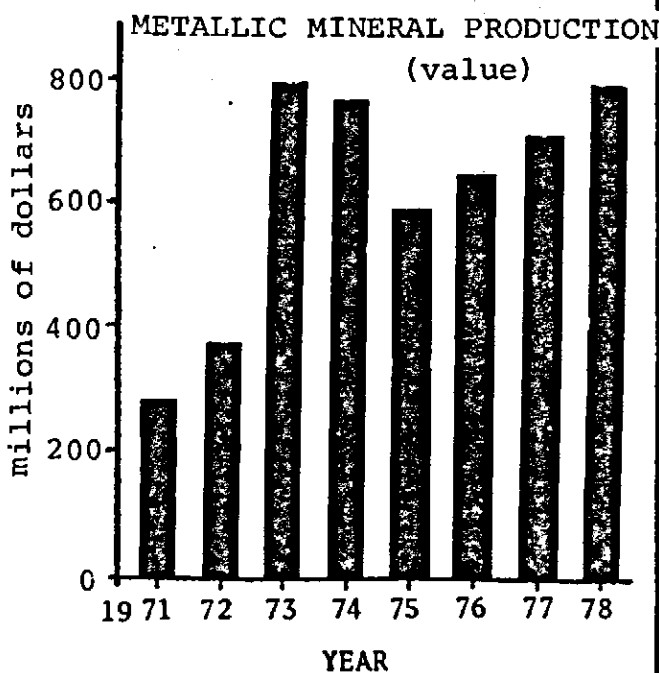
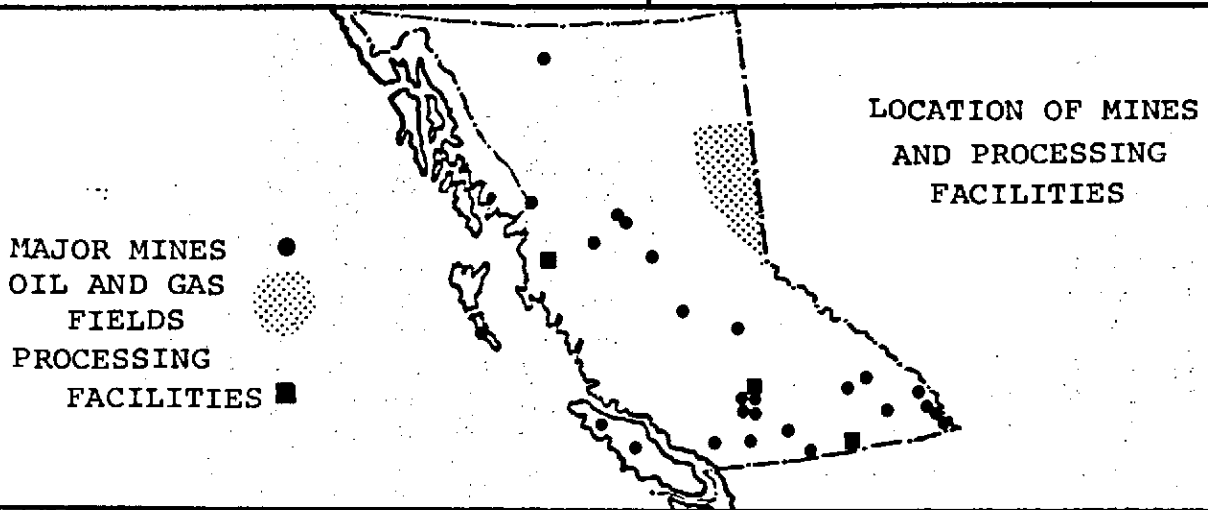
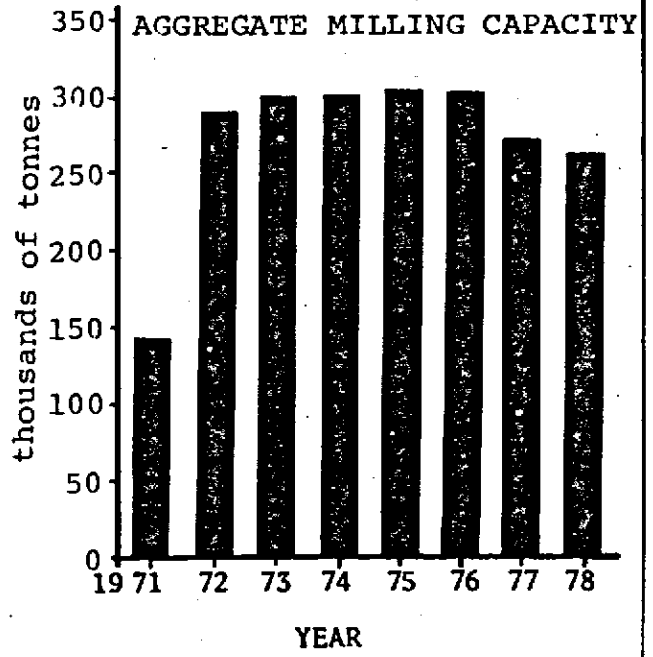
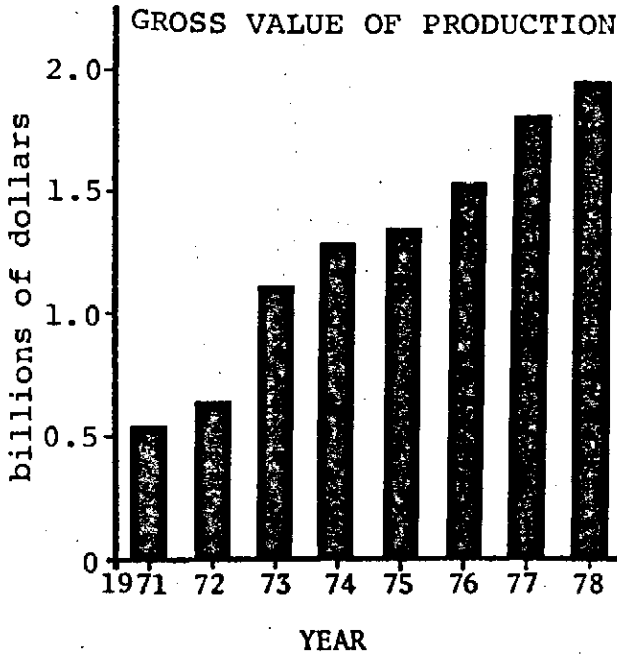


Chart 2.7

The Mineral Industry in British Columbia 1968, 1971, 1973 and 1978

Commodity	Unit	1968		1971		1973		1978*	
		Quantity	Value \$ Million	Quantity	Value \$ Million	Quantity	Value \$ Million	Quantity	Value \$ Million
Copper	million kg	73.0	87.3	127.3	131.0	317.6	582.8	274.6	418.2
Molybdenum	million kg	9.0	32.6	9.9	37.0	13.8	51.9	13.3	160.7
Zinc	million kg	135.8	43.6	138.5	49.7	137.4	62.6	102.0	55.4
Lead	million kg	105.1	32.8	112.9	34.7	84.9	30.5	71.3	45.4
Gold	thousands kg	3.9	4.7	2.7	3.0	5.9	18.4	6.4	44.9
Silver	thousands kg	221.8	16.5	238.7	12.0	237.0	19.6	221.6	41.3
Asbestos	thousands tonnes	67.6	14.8	79.0	17.8	98.9	21.1	72.1	47.3
Structural Materials	-	-	45.2	-	59.9	-	73.7	-	128.6
Coal	million tonnes	0.9	7.6	4.1	45.8	6.9	88.0	9.4	414.0
Crude Oil	million m ³	3.5	50.1	4.0	66.5	3.4	68.3	1.9	136.9
Natural Gas to Pipeline	billion m ³	6.3	24.5	7.7	31.9	10.8	54.8	7.7	384.6
All Other Materials	-	-	45.3	-	38.7	-	37.7	-	68.6
TOTAL	-	-	405.0	-	528.0	-	1 109.4	-	1 945.9

No. of Major Mines	26	29	30	30
Aggregate Daily Mill Capacity in Tonnes	90 000	143 000	270 000	263 000
Mine Employment	12 376	14 942	16 532	16 867**
Smelting and Refining Employment	3 283	3 481	3 390	3 590**

* Preliminary figures subject to minor revision

** 1977 employment

Among individual mineral commodities, the following comments apply:

(a) Copper

The slump in prices seems to have ended as the world copper inventory has fallen. Rising world prices and a lower value Canadian dollar have helped producers, many of whom have contracts in United States dollars. A number of large new open pit mine developments appear to be possible if long-term contracts can be secured. Political instability among other copper producing countries favours new Canadian mine development, particularly in British Columbia.

(b) Molybdenum

Produced in part as a by-product of copper mining, high molybdenum prices have carried many copper producers through difficult periods in recent years. The continued expectation of high prices has stimulated reopening of some production capacity in the province and will further improve the prospects for copper mine developments.

(c) Lead and Zinc

Mine production in British Columbia is dominated by one large operation at Kimberley. Recently improving prices have stimulated re-evaluation of this sector to such an extent that several new small and medium-size producers could emerge before 1985.

(d) Precious Metals

Most gold and silver is produced as a by-product to copper and base-metal mining. High prices have already led to increased exploration activity and it is likely that a number of small, former or new producers will come on-stream in the early 1980s if price increases continue to outpace costs.

(e) Coal

British Columbia's metallurgical coal is produced in the Crow's Nest coal field, which is in the southeast of the province. Steel production in Japan, Canada's major customer, has slumped in recent years but production levels have been maintained, in part through diversification to new markets. The prospects for continued expansion are good in the long term, but it is unlikely that new metallurgical coal production capacity will be built on the same scale as previously planned before 1985. Limited development of the northeast coal field may begin in the early 1980s if markets can be found. For thermal coal,

the prospects are brightening considerably for increased sales to eastern Canada and Pacific Rim countries and for greater use of domestic resources. Development of large-scale production capacity could begin before 1985. Underground coal mining developments could be hampered by a lack of skilled production personnel.

(f) Crude Oil

All production comes from northeast British Columbia. Production peaked in 1970 at 4.0 million m³ but has now fallen to less than half that level. However, higher prices and increased exploration activity have prolonged the productive life of developed resources and make previously uneconomic resources viable.

(g) Natural gas

Peak gas production was recorded in 1973 and since then has fallen gradually. All production is from the northeast. The recent rapid escalation in gas prices has led to a boom in exploration activity that has been reinforced by several significant discoveries. The potential for increased production to 1985 is considered favourable.

(h) Manufacturing

Manufacturing activity is heavily concentrated in a small number of industrial groups that are involved in primary resource processing. With the exception of forest products and mineral processing, most activity takes place near Vancouver.

Estimates of employment in manufacturing in British Columbia indicate a growth from 144 000 in 1971 to 174 000 in 1978. In that same period the province increased its share of Canada's manufacturing employment from 8.2 per cent to 8.9 per cent. Employment is overwhelmingly concentrated in resource-based manufacturing activities. Approximately 43 per cent of manufacturing employment occurs in the wood industries and the paper and allied manufacturing groups. A further 13 per cent is involved in food and beverage manufacturing.

Non-resource-based manufacturing in British Columbia enjoys some notable advantages including available energy at competitive prices, proximity to ports and ocean transportation to the Pacific Rim and other world markets, and a concentrated local market in the Lower Mainland. Nonetheless, manufacturing is confronted with severe constraints. British Columbia is a high-cost area for manufacturing as labour costs are among the highest in Canada, and serviced industrial land in the Lower

Mainland is expensive. The local market cannot normally support large-scale manufacturing facilities. The distance and cost of moving goods to major markets often places the province at a competitive disadvantage.

Although there has been a slight shift in share of Canada's manufacturing towards British Columbia, the rate of growth in other sectors, particularly services, has exceeded the growth rate of employment in manufacturing. Significant changes in the structure or distribution of manufacturing may not occur in the period to 1985 although no decline in activity is foreseen.

2.4.5 Transportation

Completion of the southern route across the province complemented the Trans-Canada Highway and the Yellowhead Pass routes. Together these represent the major road links to the rest of Canada. New construction in the 1980s will ease some of the seasonal restrictions imposed upon road traffic in the Fraser Canyon. Also, upgrading of the northern road network will continue to improve access and safety.

British Columbia is served by three major railways and a number of smaller systems. Activity to 1985 will focus on double tracking and the reduction of difficult grades and curves on the most heavily used lines. Some spur lines may be constructed to serve new resource developments.

In 1977, over 50 million tonnes of export cargo were loaded at British Columbia's ports. Of this, coal accounted for 24 per cent and grain 15 per cent on a tonnage basis. In addition, about 11.25 million tonnes of cargo were loaded in coastal shipping. To 1985, port facilities will be expanded and improved at Vancouver and Roberts Bank, at Prince Rupert and at Nanaimo.

With steady traffic growth to 1985, expansion of the present coastal ferry service, on 12 routes with 23 vessels in service, will be necessary to serve domestic and commercial needs as well as growing travel industry demands. Some problems may persist in relation to northern coastal services.

British Columbia had over 200 land-based airports, 63 water-based facilities and 23 heliports in 1978 that were used by 99 licensed air carriers. Of these, Vancouver International Airport was by far the most important facility handling almost five million passengers and 60 million kg of freight in 1977. Upgrading to achieve higher capacity and safety standards will continue to 1985.

In the period to 1985 pipeline construction activity will continue at high levels as new natural gas resources come into production. The Alaska Highway gas pipeline project involves a total of 875 km of construction in British Columbia, much of which could be completed before 1985. Several major oil transshipment pipeline proposals are being studied that could result in construction activity before 1985 in northern British Columbia.

2.4.6 Construction

Rapid growth of the early 1970s has given way to consolidation in many industrial sectors; recently, capital expenditures have been directed towards upgrading facilities rather than towards new construction. Some workers have left the province and moved to take advantage of the construction boom in Alberta. British Columbia housing starts in 1978 fell by 12 per cent from the previous year.

The prospects for improvement are varied as major pipeline, highway, port and rail construction activity increases steadily to 1985; home construction may not recover before 1981 or 1982. Because of high seasonal unemployment levels, it is anticipated that future contract negotiations will not result in the lengthy disputes that were characteristic of labour relations in the early and mid-1970s.

2.4.7 Power Generation

The province is committed to utilizing water resources to the extent that 96 per cent of all electricity is generated from hydro-electric sources. Net exports account for almost 11 per cent of total electricity generated. In the past decade production increased at an average compound rate of 9 per cent whereas consumption increased at under 6 per cent.

2.4.8 Service Sector

The British Columbia economy has generated a high level of tertiary employment to provide services required by the primary and secondary sectors and meet the needs of an increasingly urban-centred population. More than 81 per cent of the employment growth in British Columbia between 1971 and 1978 occurred in tertiary occupations, accounting for 221 000 new jobs. This sector is expected to continue to lead the primary and secondary sectors in employment creation throughout the 1980s.

2.5 Sub-Provincial Distributions

The Lower Mainland and southern Vancouver Island, containing the metropolitan areas of Vancouver and Victoria, provide the only large local market in British Columbia. Vancouver in particular is ideally located to derive continued benefits from expanding western Canada involvement in Pacific Rim trade. A key factor is access to tidewater harbours with extensive bulk-handling and general cargo facilities.

The northeast has important natural gas and metallurgical coal resources although oil reserves are limited. Exploration activity will remain high. The forest resources of this region appear to be near the limit in terms of sustaining new economic activity. This is one area of British Columbia with an expanding agricultural sector. Development of the metallurgical coal resources will depend upon demand generated by international steel industry requirements. Of equal importance is the need to invest heavily in townsite development, transportation infrastructure for access and routing to tidewater, and port upgrading. Obtaining skilled mine labour will be a critical factor.

Northwest British Columbia is also isolated, sparsely populated and lacking in infrastructure. Near the coast there is a large native population. Key factors in regional development will be improvements and expansions to transportation infrastructure, the quality of potential mineral deposits, strength of forest resources and the availability of skilled labour.

The coastal region of British Columbia is dependent upon marine transportation. Many coastal communities, often with a predominantly native population, lack regular or frequent freight and passenger services that would permit development. The resources of the coastal region were among the first to be developed and are now almost fully committed. The major centre for north coast development will continue to be Prince Rupert. This port city is the terminus of important northern transportation routes and the location for construction of bulk-handling facilities.

The central interior, centred on Prince George, is influenced by similar factors to those of the northern area but to a less extreme degree. Transportation is an important component, but despite the distance, the region is well connected to Prince Rupert, Vancouver and to Alberta. The resource base is diverse, with important forestry, mining and agricultural components, the latter primarily cattle ranching. Some potential exists for higher value-added processing in all these sectors.

The Kamloops, Okanagan Valley and Shuswap region of the province is well served by transportation links and has some climatic advantages, particularly for agriculture and tourism. A key factor in the development of the region is water, since much of the area is arid and requires irrigation to reach its potential. One of the major potential resource opportunities in British Columbia exists in the thermal coal deposits of the Hat Creek area.

The southeast remains relatively isolated in spite of a long history of development. The metallurgical coal resources of the Crow's Nest coal field are the basis of mining operations that currently export to world markets, the largest of which is Japan. Transportation, including port facilities, may be a constraining factor in the region's future development, as could be the shortage of skilled labour to work in underground mines. Land for townsite development is generally scarce and development costs are high, but lower than total infrastructural packages required to open the northeast.

3. DEVELOPMENT PROBLEMS AND ISSUES

A review of factors underlying the pattern of economic development in British Columbia and of sectoral trends and prospects indicates that there is optimism through to the mid-1980s for the provincial economy. Potential opportunities are widespread and the timetable for their development will be governed largely by world demand and price. Economic growth will also take place in an environment of development problems and issues particular to the province.

3.1 Development Problems

3.1.1 Resource Dependence

British Columbia's economy continues to be characterized by dependence on the natural resource sectors and the export of partially processed raw materials. Although this is where the province's comparative advantages lie, it is not without problems. The health of the provincial economy reflects world-wide economic conditions in a direct sense. Demand for lumber products, metallurgical coal and copper concentrates, all of which are important provincial exports, depends respectively upon housing starts in the United States, the buoyancy in the Japanese steel industry, and the perception of the reliability of Third World producers by industrial countries.

Externally-induced changes in the demand for British Columbia's natural resource exports quickly work their way through the economy. In their extreme form, these result in boom or bust conditions at the local level. This community dependence upon an undiversified economic base has been documented in a DREE study that indicated that 99 communities in British Columbia can be classified as single-industry communities. Fully 70 of these are dependent upon wood-based industries, and another 19 rely upon metal mines and refining.

Increasingly stiff competition in the resource fields adds a new dimension to the problems that arise from too great a dependence upon natural resources. Whereas previously, British Columbia producers established their markets with a strong comparative advantage, there is reason to believe that this advantage could be eroded and with it some market share. Lumber, pulp, and paper producers will face strong competition from expanding operations in the southeast United States, South America and Asia. Mineral producers, particularly in the Third World, already challenge British Columbia firms in export markets for copper, while lower-cost producers of metallurgical coal -- notably Australia -- may serve to limit demand for British Columbia output.

3.1.2 Lack of Diversification

The corollary of resource dependence is lack of industrial diversification. Only a few areas of British Columbia have a diversified economic base and thereby enjoy somewhat more stable economic conditions. In this respect the Lower Mainland with Vancouver as its focus, southern Vancouver Island and the Okanagan Valley may be singled out as benefiting from a broader economic base associated with non-resource-based manufacturing, agriculture, government services, tourism, the retirement industry, and the provision of a range of higher-order urban services.

The provincial government has placed a high priority upon the goal of industrial diversification. This has normally conveyed the idea of higher value-added manufacturing but also includes the introduction or expansion of tertiary activities, such as tourism, institutions, research and development, trade and commerce, transportation and retirement services.

Labour costs in British Columbia are among the highest in Canada as is the cost of serviced industrial land. The limited local market cannot support many large-scale manufacturing facilities. The cost of moving goods long distances to major Canadian markets, places the province at a disadvantage while foreign markets tend to be inaccessible because of market protection or price relationships. However, certain non-resource manufacturing industries in British Columbia do have opportunities for development, often associated with a provincial comparative advantage in energy, technology, or skills. Two important aspects of the latter are the potential for ocean marine industries and for market access to Pacific Rim countries in particular.

The Regional Development Incentives Act and subsidiary agreements under the General Development Agreement are mechanisms that at present encourage private sector diversification of the provincial economy.

3.1.3 Changes in the Renewable Resource Base

These changes, representing reductions in the physical supply of resources and altered perception of the limits to growth, are leading to increased involvement by senior governments in management policies and programs relating to resources.

The forest resource is an example, where the actions of senior governments to upgrade aging plants, to minimize the costs of meeting environmental standards and to assist intensive forest management have recently emerged in recognition of resource changes. Increasingly, the timber supply will be made up of smaller, second growth materials. At current levels of timber exploitation based on sustained yield, the opportunity for greenfield investment will be limited. A possible exception may be associated with poplar exploitation in the north when appropriate technology is available.

In the fishing sector, there is already sufficient catching capacity to endanger existing fish stocks by threatening their ability to replenish. Changes in the fishing industry may well result from the greater exploitation by Canadians of the 200-mile limit and from the benefits that will begin to accrue in the mid-1980s from the federal Salmonid Enhancement Program.

The other major renewable resource, hydro-electric power, will continue to encounter environmental concerns at the construction stage. In addition to already announced facilities, major opportunities for hydro development are focused in the northwest portion of the province.

3.1.4 Transportation and Communications Constraints

British Columbia's mountainous topography has always created challenges for the economical development of surface transportation. High initial capital costs, continuing high charges for maintenance of the right of way and relatively higher operation and maintenance expenses for operators are characteristics of the transportation industry in British Columbia.

3.1.5 Labour Relations Climate

Labour in British Columbia is highly unionized. In January 1978, out of 995 000 total paid workers, 451 000 were union members. At 45.3 per cent, this was the highest in Canada and has held steady since 1963. Difficult labour negotiations in British Columbia have frequently led to strikes that have disrupted communities and in some cases the provincial, regional and national economies. It has already been pointed out that British Columbia had proportionately the highest record of days lost due to strikes and lockouts of any region in the country during the 1967-77 period: 5.4 days per thousand, compared to a national figure of 3.6 days per thousand.

3.1.6 Limited Opportunities for Native People

The population of native ancestry, both Status and non-Status Indians, is estimated to account for 5 per cent of the provincial total and in northern British Columbia to exceed 15 per cent. Opportunities for native people are difficult to obtain reflecting factors of geographic isolation and cultural preferences.

3.2 Development Issues

A number of policy issues currently perceived will have an important bearing on the direction of economic development in British Columbia in the 1980s. Many issues are of joint concern to the federal and provincial governments, while others fall predominantly in one sphere or the other.

3.2.1 Tariff and Non-Tariff Trade Policy

Generally the British Columbia government favours a liberalization of Canada's trading position. British Columbia would like Canada at the Multilateral Trade Negotiations to de-emphasize domestic tariff protection for end-product manufacturing in order to obtain concessions on barriers to intermediate processing of its natural resources.

3.2.2 Resource Management

The provincial government has adopted a strong stand on provincial responsibility for the management of natural resources and the associated right of taxation. With the exception of the fisheries, which are under federal jurisdiction, this is the case. However, federal involvement with resources is encountered with the interprovincial movement of the resource and with external trade. Federal efforts to engage in cost-shared jointly-managed development programs affecting the resource sectors continue to be viewed as an intrusion into the provincial domain. Federal management of fisheries resources in the Queen Charlotte Islands was recently in conflict with provincial forest jurisdiction. This conflict emphasized the difficulties of multiple resource management in the province.

3.2.3 Transportation Policy

Considerable effort is devoted to ensuring that a user-pay concept is employed in implementing transportation policy. Certain hard historical facts, however, operate to weaken such efforts. The high dependence on coastwise ferry movements for

domestic and travel industry and the need to overcome difficult topographic conditions in many areas mitigate against adoption of such a policy, particularly if concerns for isolation and frontier expansion are of immediate importance.

3.2.4 Regional Development Programming

At times British Columbia has suggested that regional development policies have the effect of subsidizing inefficient industry and regions at the expense of efficient ones. The published position of the British Columbia government indicates a preference to see the federal government make direct transfers to residents of disadvantaged regions.

There has, however, been continued provincial interest in joint development initiatives in 1977, 1978 and 1979 and a number of federal-provincial agreements germane to British Columbia's future have been introduced in the industry, agriculture, travel industry and forestry sectors. The provincial position has not always been consistent with the fact that even in a province as rich as British Columbia there are serious constraints associated with development opportunities that can often best be overcome through joint federal-provincial cooperation in specific regions or sectors.

3.2.5 Energy Policy

The British Columbia government, faced with a broad range of energy alternatives within its boundaries, has not made a policy decision on the direction of energy development in the 1980s and beyond. Nonetheless, the provincial government has publicly noted the need for such a policy, both for long-term considerations and more immediate emergency measures related to shortages that may be brought on by events governing world oil and gas supplies.

British Columbia has opted to avoid the nuclear alternative, preferring to develop hydro-electric energy sources, and possibly thermal coal generation at a later date. Environmental opposition to these forms of energy development could slow the pace of development.

3.2.6 Pipeline Compensation

The provincial government takes the view that British Columbia will not share equitably in the industrial benefits accruing from the project, nor will the province receive financial assistance on the same basis as Yukon, of the sort

legislated for Yukon, to offset increased service costs and socio-economic, environmental impact costs. Although these premises remain debatable the province is using them in requesting a transportation and communication package for northern British Columbia.

3.2.7 Native Land Claims

The province has expressed the opinion that native land claims are a federal concern. In the absence of a clear policy, native land claims could disrupt major economic development initiatives such as the Alaska Highway natural gas pipeline. The Nishga land claims in the Nass River area are the most sensitive at present although other claims have also been made.

4. FEDERAL AND PROVINCIAL INSTRUMENTS

4.1 Provincial Development Strategy

Although no formal provincial development strategy has been documented, there are indications that it includes the following elements:

- (a) provincial autonomy, particularly in resource rents and management;
- (b) a strong emphasis on fiscal restraint and responsibility;
- (c) larger share of federal economic program funding, perhaps based on provincial contributions by sector;
- (d) a desire to see federal "transfer" payments restricted mainly to transfers to individuals in disparate regions;
- (e) a greater provincial role in international trade negotiations and discussions such as the recently concluded Multilateral Trade Negotiations;
- (f) a generally positive attitude towards trade liberalization with, however, protections for some industries, particularly in resource processing;
- (g) a user-pay approach to transportation policy, except in instances of isolation and frontier expansion;
- (h) industrial diversification away from dependence on primary industries, but not at the expense of key resource developments; and
- (i) support for free enterprise economy with some emphasis on small business.

4.2 Provincial Instruments

4.2.1 Provincial Budgets and Fiscal Capacity

The present administration places importance upon presenting and implementing a balanced budget. Budget surpluses have occurred in the last three years, amounting to an estimated \$145 million in 1978-79, \$140 million in 1977-78, and \$76 million in 1976-77.

The 1979-80 provincial budget expenditures and revenues are forecast to be in balance at \$4 567 million. This represents a 5 per cent increase over levels of the previous year, before allowance for the effect of the 1978-79 surplus.

In the 1970s, British Columbia has shown a variable trend in terms of fiscal capacity. The index of fiscal capacity declined from 122.0 in 1972-73 to 106.8 in 1975-76, but rose again to reach 117.5 in 1978-79. The latter leaves British Columbia second among the provinces in fiscal capacity. Fiscal effort is also high. Data for 1975-76 indicated a fiscal effort index value of 106.1.

In 1978-79, 64.1 per cent of provincial government expenditures in British Columbia were devoted towards social services, virtually the same as the per centage for Canada. Expenditures on industrial development (natural resources, agriculture, trade and industry, tourism) were 10.7 per cent of the total expenditures -- reportedly the highest in Canada and nearly twice the national figure. There is a possibility that this margin reflects definitional differences.

Provincial revenues from natural resources are expected to account for \$619 million in 1979-80. This represents 13.6 per cent of total revenues, and is anticipated to be led by petroleum and natural gas (\$331 million), forests (\$223 million), and mining (\$44 million).

4.2.2 Agricultural and Rural Development

The British Columbia Ministry of Agriculture is responsible for agricultural development, marketing and financial services to agriculture. It has direct dealings with the federal government departments of Agriculture Canada and Regional Economic Expansion.

The ministry also administers financial assistance programs including Farm Income Assurance and Agricultural Credit designed to reduce risks and costs for farmers.

4.2.3 Industrial Development

In recent years industrial development has been almost exclusively the responsibility of the Ministry of Economic Development. This ministry's Business and Industrial Development Branch has a trade and industry division, small business assistance division, and an industrial locations division. The Policy Planning Branch incorporates a number of divisions dealing with policy planning, economic analysis, financial analysis and program implementation, trade and tariffs and others. This branch has traditionally been the contact point for negotiations

under the General Development Agreement. More recently, following a restructuring in 1978, there has been a perceptible shift to the Ministry of Finance in terms of policy planning, whereas program delivery is moving into the hands of relevant line departments, including the newly created Ministry of Tourism and Small Business Development. This last mentioned ministry is currently under the Minister of Economic Development.

The British Columbia Development Corporation (BCDC) is a provincial Crown corporation, the goals of which are to encourage and promote economic development in British Columbia by providing, primarily, financial assistance to industry, and raw and serviced land and buildings. The corporation also engages in identification and coordination of capital projects, such as the Duke Point Industrial Park.

A number of other Crown corporations exist that have an impact on economic development. A list of the relevant Crown corporations includes British Columbia Hydro and Power Authority, British Columbia Railway, British Columbia Ferry Corporation, Ocean Falls Corporation and the recently formed British Columbia Resources Investment Corporation, which holds substantial interests in Canadian Cellulose, Kootenay Forest Products, Plateau Mills and Westcoast Transmission, as well as oil and gas exploration rights to 900 000 hectares of Crown land. In recent years there have been several instances where enterprises have been sold to the private sector.

4.2.4 Other

The province has employed legislative and regulatory powers to pursue its resource policy. A new Forests Act was introduced in 1978, along with a Ministry of Forests Act and a Range Act. Changes were also made to tax mining profits in lieu of royalties, as a means of stimulating mineral development. Also in 1978 the government reorganization saw creation of the Ministry of Energy, Mines and Petroleum Resources, bringing together all matters related to energy and minerals.

4.3 Federal Instruments

Direct federal instruments have important implications for economic development thrusts in British Columbia. National trade, energy, transportation, agricultural and regional economic development policies and programs among others all have a significant bearing.

Federal policies and initiatives influence development from the highly specific, such as west coast ferries assistance, to the general, such as federal government procurement policies.

Federal policies in agriculture affecting British Columbia include the feed freight assistance program, which is important to maintain a viable poultry and livestock industry. The fishing sector is affected by a number of high profile federal programs including Salmonid Enhancement, restricted-entry fisheries regulations, the 200-mile limit and international fishing treaties. The new Fisheries Act has implications for a number of resource uses including forestry, fishing and recreation.

Federal transportation policies and port development initiatives are important for major development initiatives related to remote forest resources, metals and coal. They are equally important in terms of bulk handling of Western Region commodities, especially in respect of grain shipments.

4.4 Federal-Provincial Instruments

In March 1974, Canada and British Columbia signed a ten-year General Development Agreement (GDA) in order to facilitate joint federal-provincial cooperation in initiatives for the economic and socio-economic development of British Columbia. The agreement's objectives are to promote balanced development throughout the province, encourage an equitable distribution of the benefits of such developments, and provide measures to improve opportunities to realize development potential. The GDA recognizes that the economy of British Columbia is one in which the resource and resource-processing industries have been the primary generators of growth, and that the province's economy has experienced erratic swings in the level and type of employment, and in the amount and duration of new investment activity.

Development priorities identified in the GDA have led to the signing and implementation of subsidiary agreements in British Columbia for Fort Nelson infrastructure, northern highways (3), northwest coal development studies (2), agriculture and rural development, industrial development, travel industry development and intensive forest management. These joint initiatives in which the Department of Regional Economic Expansion plays a primary or coordinating federal role are complementary to the department's unilateral programming initiatives under the Regional Development Incentives Act, and the Special ARDA program in which provincial financial involvement is minimal.

The joint federal-provincial approach to economic development has frequently resulted in the participation of several departments and agencies at both levels of government,

with the northeast coal agreements being prime examples of interdepartmental cooperation from which other mutually beneficial relationships have developed. Energy, Mines and Resources has also been active with its Uranium Reconnaissance Program which accelerated exploration.

The industrial development subsidiary agreement is identified as providing a most important instrument for industrial coordination and cooperation in the form of the Industrial Development Committee. The Industrial Development Committee established under the agreement brings together senior officials from the provincial Ministry of Economic Development and the British Columbia Development Corporation and the federal departments of Industry, Trade and Commerce, and Regional Economic Expansion and the Federal Business Development Bank. This committee has two major roles: the direct management of the industrial development agreement, and coordination of a wide range of federal and provincial program elements in pursuit of the objectives of the agreement.

5. ECONOMIC DEVELOPMENT OPPORTUNITIES

5.1 Synopsis of Comparative Advantages

British Columbia is Canada's gateway to the Pacific and enjoys the advantage of ocean transportation, via the ice-free ports of Vancouver and Prince Rupert, for itself and for the other western provinces, to major Pacific Rim markets. Additionally, there is access to the major populations and economies of the Pacific coast of the United States, especially the important California market.

Over two thirds of the province's population lives in the southwestern coastal zone with its mild climate. High overall education levels and the variety and quality of available skills (with a few specific exceptions) make British Columbia particularly attractive. High wages and salaries even in relationship to high costs have always been an incentive for in-migrants to British Columbia.

In many resource sectors, British Columbia has a strong comparative advantage. There is no overall shortage of water, and the greater utilization of water resources for hydro-electric power generation puts British Columbia in the desirable position of having potential energy surpluses in the future. Water supplies, furthermore, make irrigation of arid farmland possible.

A secure total energy position for the province, with few areas experiencing energy shortages in the short run, is viewed as a major attraction for further industrial development. British Columbia may not be faced with having to consider nuclear power sources for many years.

There are other significant sectoral advantages that British Columbia enjoys in both the national and international context. Among these is the availability of operational expertise in the natural resource-based industries. In the forest sector, the size and variety of the resource base together with a rapid regeneration potential (by Canadian standards) in coastal areas are of the greatest importance. The general predominance of softwoods is a significant advantage.

The mineral industry is characterized by large low-grade metallic resources and extensive thermal and metallurgical coal resources, many of which are amenable to less complex surface mining. In this industry the reliability of producers in satisfying long-term sales contracts is a significant advantage.

The enlarged fishing grounds resulting from the 200-mile coastal limit, offer the potential for groundfish development, and a consolidation of the west coast fishermen's hold on the traditional salmon fisheries.

Agriculture has a comparative advantage in that the potential for more effective land management and irrigation, if developed, can offer considerable productivity gains that are largely unavailable elsewhere in Canada.

The manufacturing industry has a comparative advantage in that energy supplies are large, competitive and secure, particularly in an international context. Particular advantages for additional manufacturing lie in those areas associated with the technology of natural resource extraction and harvesting. Also, as the provincial market expands in size, a transportation generated cost advantage to local manufacturers over eastern Canadian manufacturers may emerge.

In the tertiary sector, the international comparative advantage for tourism and recreation activity resulting from a lower valued Canadian dollar, enhances the already favourable position that the province enjoys as a vacation destination area. Vancouver, as Canada's third largest metropolitan area, offers a wide range of higher-order services especially in the commercial and financial area, thereby giving British Columbia an advantage in many key sectors of the western Canadian economy.

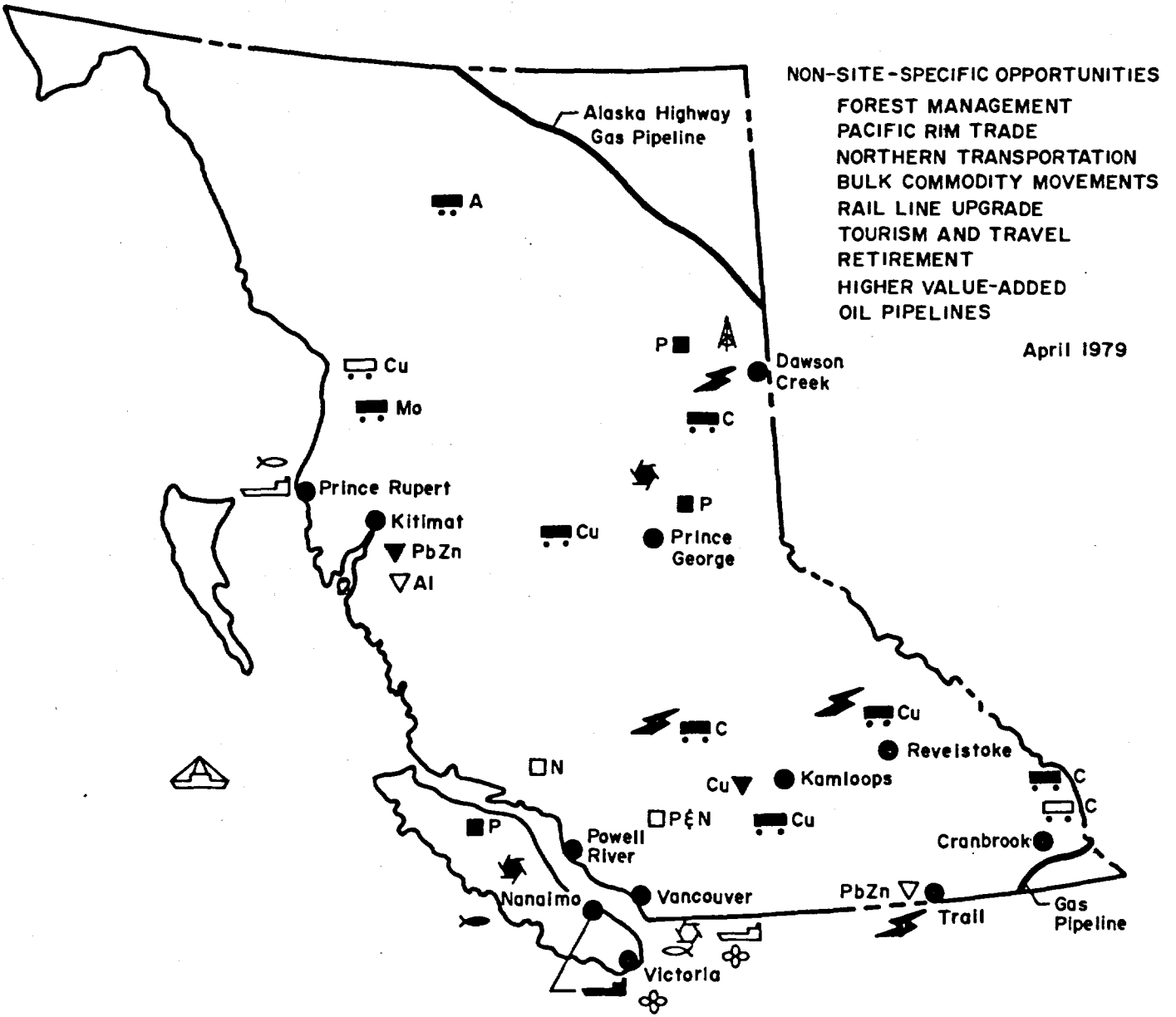
The following map (Chart 5.1) provides a graphic overview of the range of economic development opportunities in British Columbia in the 1980s.

5.2 Specific Opportunity Areas

When the focus on opportunity identification in the 1980s is refined to the sectoral level in British Columbia, there are in most cases encouraging prospects. While this is the situation, particularly with the key primary sectors of forestry and mining, there are also notable opportunities in the energy sector, in transportation initiatives and the service sector. Fishing and agriculture, of lesser importance in the overall economy, also afford selective opportunities. In the case of non-resource based manufacturing, some prospects are foreseen based on provincial comparative advantages.

CHART 5.1

BRITISH COLUMBIA



NON-SITE-SPECIFIC OPPORTUNITIES
 FOREST MANAGEMENT
 PACIFIC RIM TRADE
 NORTHERN TRANSPORTATION
 BULK COMMODITY MOVEMENTS
 RAIL LINE UPGRADE
 TOURISM AND TRAVEL
 RETIREMENT
 HIGHER VALUE-ADDED
 OIL PIPELINES

April 1979

LEGEND

- | | |
|---------------------------|----------------------|
| A - Asbestos | - Fish Processing |
| Cu - Copper | - Fishing |
| Mo - Molybdenum | N - Newsprint |
| - Sawmill | - Power |
| P - Pulpmill | C - Coal |
| PbZn - Lead/Zinc Smelting | - Gas and Oil |
| Al - Aluminum Smelting | - Shipbuilding |
| - Port | Cu - Copper Smelting |
- New Projects (shaded symbol)
 ○ Expansion or Modernization (open symbol)

OPPORTUNITIES

5.2.1 Agriculture Industry Opportunities

Opportunities in agriculture and associated food processing, while not large in the provincial context, may be locally significant. There is a major opportunity that is currently being exploited with government assistance to upgrade the province's severely restricted agricultural land base. Programs are under way to improve land utilization by means of coordinated resource management planning, irrigation and drainage schemes.

Better land management will improve the capacity of the underdeveloped land resource, thereby expanding the livestock industry, notably beef and swine, and through import replacement at the processing stage, satisfy a greater share of the provincial market.

A significant acreage of new agricultural land is being brought into production through land clearing in the Peace River region, with a direct impact on grain output potential.

The small but diversified agriculture industry in British Columbia may be expected to provide opportunities in food processing and packaging to serve local markets and, in the case of regional specialities such as tree fruits, berries and wines, to penetrate national and international markets.

5.2.2 Fishing Industry Opportunities

The fishing industry in British Columbia affords an example of the growing importance of resource management. In spite of cyclical variations the general trend has been towards higher landed values, reflecting both rising fish prices and increased markets for new products.

The fishing industry has experienced a revival in the latter 1970s based on a number of factors. As a resource management device, restriction on entry to nearly all fisheries has raised average returns to fishermen, while limiting employment gains. Fish prices have been on the rise, particularly in the salmon fishery that dominates the British Columbia catch. However, the most important factor in the improved economic performance of the west coast fishery has been the growth of the herring roe fishery. Roe herring is a seasonal delicacy exclusively marketed in Japan. The increased use of herring for food offers potential as a diversification from the present dominant use of herring mainly for roe.

The establishment of a 200-mile fishing limit on January 1, 1977, has provided an important opportunity for the confined development of commercial fisheries on the west coast. Specific opportunities may exist in the fishing of species such as rock cod, previously harvested by foreign vessels. In addition, the extended fishing limit will provide access to large quantities of underutilized and lower-value groundfish and other species; domestic and international markets can be expected to improve for these products as they become low-cost substitutes for other high-cost meat and fish products.

Another major opportunity in the longer term, particularly beyond 1985, is the growth in the west coast salmon fisheries that will result from the Salmonid Enhancement Program. This program is intended to double the current level of salmon stocks over the next 30 years. Although income effects from the program are expected to be widespread, employment effects will be largely restricted to salmon processing. This reflects the fact that overcapacity in harvesting capability has occurred as a result of technological improvements in primary fishing. Overcapacity also exists at present in salmon processing operations. Employment gains may result from lengthening the processing season and the greater utilization of plant capacity in existing and selected new facilities.

Opportunities in the fishing industry will continue to be sought in terms of markets for shellfish and marine kelp products. Shrimp fishery development has potential; however supplies on the west coast of Vancouver Island have in the past failed to support a long enough season.

The fishing industry has sufficient opportunities open to it that, in spite of specific overcapacity problems, a significant economic stimulus could be felt by a number of coastal communities already associated with the industry. The fishing industry therefore is one sector capable of providing opportunities outside the metropolitan areas.

5.2.3 Forest Industries Opportunities

The forest industries will remain the dominant economic force in the province; however, opportunities in the future will be more limited than in the past. Greater concern for managing the forest resource and a realization that the physical limits to exploitation are being reached will combine to slow the pace of growth and promote rationalization of the industry structure.

In order to face anticipated competition from traditional as well as new competitors in the principal product areas of lumber, pulp, and paper, British Columbia will be challenged to achieve a continual improvement in the management

of forest resources. The industry will also need to consolidate its world markets and if possible penetrate new markets, to increase its product lines, to improve the productivity of processing operations, and to improve access to remote timber supplies.

Intensive forest management provides an immediate opportunity to ensure the long-term supply of timber. Improvements in the timber supply offer potential jobs, export earnings and contribution of production to the gross national product. Forest management initiatives on a major scale are necessary to redress the balance of a diminishing supply through insufficient sustained-yield measures in the past. Sound forest management practices such as juvenile spacing, stand thinning and reforestation will enable the forest industry to maintain or even increase its output levels and improve its competitive position over time.

Against the background of a tighter supply picture, there are opportunities for forest industry development. Many of these will focus on productivity improvements, pollution abatement, and energy conservation, and will make use of previously unusable or inaccessible timber supplies. The potential for direct employment creation does not appear to be high, particularly in logging, sawmilling, and plywood and veneer manufacturing where productivity improvements will continue to be made. Some employment growth may occur in the pulp and paper sector through a number of mill expansion programs. The stimulus to indirect employment from the forest industry will, however, continue to be high.

In the Lower Mainland region much of the sawmilling capacity is old and needs upgrading or replacement. Throughout the province, but principally in the coastal regions with the diminishing availability of first growth timber, conversion of loghandling, sawmilling, veneer and plywood operations to small-log technology is continuing.

Almost all the major pulp and paper facilities in the province have modernizations in progress. These will generally increase capacity through replacement of obsolete equipment and expansion. Plans for new mills are quite uncertain at the present time. A new plywood mill is under construction at Williams Lake, while a plywood plant modernization project is underway at Port Alberni.

Sawmill construction, modernization and expansion programs are underway or announced for a number of interior and Vancouver Island locations, including Mackenzie, Fort Nelson, Fort St. James, Vanderhoof, Smithers, Castlegar, Fraser Lake, Williams Lake, Quesnel, Port Alberni, Tahsis, Nanaimo and Duke

Point near Nanaimo. The latter projects have been stimulated by the federal-provincial development of a deep-water port and industrial park at Duke Point. Prince George, Prince Rupert and Ocean Falls have also been suggested for new sawmill capacity. Of considerable importance to interior sawmills is the construction of a loading facility at North Vancouver to facilitate the export of wood chips, surplus to the requirements of the province's pulp industry.

The forest resources are capable of sustaining limited additional pulp production, both through the utilization of wood chips and sawdust and, in a more limited way, by accessing new timber resources. While many existing pulp mills are likely to undergo further expansions, particularly in light of the high capital costs associated with new plants, the number of "greenfield sites" is much more limited, perhaps being restricted to Vancouver Island, the central interior, and the Peace River-Liard regions. Results of an updated forest inventory make the last mentioned more doubtful. Market conditions are likely to encourage a conservative expansion of pulp capacity. Continued pulp mill upgrading will take place among the older mills on the coast, as they adapt to environmental standards and introduce energy conserving technology. After nearly a decade in which no growth took place, plans for increased newsprint production at two coastal newsprint mills, Elks Falls and Powell River, have been announced. These represent a 25 per cent increase in provincial newsprint capacity. In addition plans have been announced to modernize newsprint machines at Port Alberni.

Continuing prosperity in the province's forest industry will require that market development opportunities are aggressively pursued. The forest companies will need to consolidate their hold on traditional markets in the United States, Japan and Europe, while opening up new markets around the Pacific Rim, with the European Common Market and elsewhere. New opportunities may emerge through greater utilization of wood wastes for energy, animal feeds, and pulp manufacture, and new product development, such as finger-jointed studs from uneven length dimension lumber.

5.2.4 Mineral Sector Opportunities

The period 1968-73 saw unprecedented growth in the productive capacity of the mineral industry. This was followed by a period of retrenchment when soft markets, low prices and rapidly escalating construction and operating costs precluded major additions to capacity. A number of significant opportunities could be developed if the recent improvement in world mineral markets is maintained.

In the Highland Valley, southeast of Kamloops, the Highmont open pit copper-molybdenum property is being developed at a cost of \$150 million to create some 400 permanent jobs when it opens in 1981. In the same area, the Valley Copper mine could be brought into production at a cost of over \$250 million, creating employment for some 900 persons.

Three open pit copper producers are or will be involved in changes to operations near Houston, Logan Lake and Princeton. Some new employment may be generated. At Stewart, the Granduc underground copper mining operations, closed in 1978 as a result of low metal prices, will resume operations in mid-1980 with employment of about 330 persons.

The Goldstream property north of Revelstoke will likely be brought to production in the early 1980s with about 250 permanent employees. An open pit molybdenum mining operation to employ 120 at Boss Mountain, northeast of 100 Mile House may come into production in 1982. Work has begun to bring the Sam Goosly silver/copper property near Houston to production. The open pit mine will employ 200 when full production is reached in late 1980.

At Kitsault, southeast of Stewart, an open pit molybdenum mining operation that closed in 1972 is being reactivated. Mill capacity will be doubled and production will start in mid-1982. Road construction and townsite development will bring the construction labour force to 450 in total. Permanent employment on this project will be about 500 persons.

The uranium mining potential in British Columbia improves as exploration continues. The provincial government is still in the process of formulating uranium development policy. No large scale uranium mining in British Columbia is anticipated prior to 1985. The Letain Lake asbestos deposit located some 100 km southeast of Cassiar could be brought to production in the mid-1980s.

Since the mid-1960s the desirability of copper smelting in British Columbia has been identified. With one small specialized exception, all copper concentrates leave the province for further processing. There is an opportunity for a smelter to be brought into production with the most likely location being in the Highland Valley. Past studies would indicate that a world-scale smelter and refinery operation would cost about \$200 million, employ some 500 persons and produce 125 000 tonnes of refined copper per year. An associated molybdenum processing facility is also possible.

The potential construction of a lead-zinc smelter in British Columbia to process concentrates produced in Yukon is under investigation. Kitimat appears to be a favoured location for the facility which might have an annual production capacity of 150 000 tonnes of zinc and 75 000 tonnes of lead, and employ as many as 500 persons.

An eight-year expansion and modernization program for mining and smelting operations at Kimberley and Trail costing \$425 million is in progress. Annual refined zinc capacity will increase by 10-20 per cent to 270 000 tonnes, and refined lead capacity by some 20 per cent to 180 000 tonnes per year. It is not anticipated that there will be a matching increase in employment.

The aluminum smelter at Kitimat was completed in 1955 and now a major upgrading is under construction. No details have been announced, but upgrading the potlines alone could take up to seven years to complete and cost some \$60 million, resulting in improved efficiency and reduced emissions of pollutants.

Metallurgical coal resources development opportunities may well emerge in both northeast and southeast British Columbia where extensive deposits have been identified. If developed in the northeast, the Sukunka underground mine, south of Chetwynd, could possibly produce at a rate of 3.0 million tonnes by 1985, employing some 900 persons. Initial production at 1.0 million tonnes per year is forecast for 1981. To the south, in the same coal field, annual production of 5 million tonnes by a combination of surface and underground mining methods from two areas could occur by the mid to late 1980s, employing 1 700 persons. There are a number of other potential long-term metallurgical coal developments in northeast British Columbia. To bring new mines on-stream will require, depending on the rate and scale of development, large capital expenditures for rail and port construction, townsite development and other essential infrastructure.

The northeast coal is of higher quality than that mined in the southeast. All British Columbia's present production of metallurgical coal comes from the southeast where two major companies produced over 9 million tonnes for export via Vancouver in 1978. Three other properties in the southeast with a combined production potential of about 8 million tonnes are being evaluated. Already in hand are planned underground expansions totalling 2.5 million tonnes per year at the existing operations of Kaiser Resources and Fording Coal, and plans are well advanced for a new 2 million tonne underground mine to be operated by Kaiser Resources Ltd. In total, all new mines and expansions would generate about 3 800 direct jobs if markets permitted their development.

Thermal coal resources occur in many locations in British Columbia and in the long term offer a significant development potential for the province. Most of present production is from one mine in the southeast which ships thermal coal to Ontario and to Japan. Expansion at the Byron Creek Collieries Ltd. property will see an increase to about 1.4 million tonnes of annual production, requiring an addition of perhaps 40 employees.

In the northeast, some interesting thermal coal resources have been found that could be brought to production after metallurgical coal mining has established the industry and supportive infrastructure in the area. In the south, the Hat Creek, Merritt and Similkameen coal fields are all less than 500 km by rail from tidewater, whereas in the north, the Bowron River and Groundhog coal fields are far less accessible, while the Telkwa coal field is small. Only the Hat Creek coals are likely to see any development activity within the next decade and here there may be some environmental considerations to overcome.

At Hat Creek it is estimated that perhaps 1 000 direct jobs could be created at full production. Thermal coal energy generation could be advanced if the environmental barriers to certain hydro developments prove to be too great. Also, in favour of Hat Creek is the lower capital cost per unit of installed generating capacity versus hydro-electric sites, but this is offset to a large extent by higher operating costs. Other thermal coal resources are found on Vancouver Island and in the Queen Charlotte Islands. The historic Comox and Nanaimo coal fields on Vancouver Island are subject to renewed interest as a result of higher oil prices. One mine employing some 235 persons near Campbell River could be developed.

5.2.5 Energy Opportunities

British Columbia has indicated that nuclear power generation will not be an element in the provincial energy picture prior to the 1990s. Some oil and gas-fired thermal generating capacity is in place which is mainly utilized at peak periods. Opportunities lie in additions of new coal-fired thermal plants and new hydro-electric developments.

As of mid-1978, five major hydro-electric projects were either under construction or had additional generating capacity installed. On the Peace River in northeast British Columbia, the final addition of 300 000 kilowatts capacity was being added at the W.A.C. Bennett Dam. Further downstream the Site One project will bring two generating units into production in 1979 and a further five in 1980, adding 700 000 kilowatts aggregate to the provincial power grid.

On the Columbia River the Mica Dam has been completed but additional generating capacity to a total of 868 000 kilowatts is still to be added before the ultimate generating capacity is reached. Downstream, the Revelstoke Dam, a

\$1.5 billion project, is under construction and is due to begin producing power in 1983. The ultimate generating capacity at this site will be 2 700 000 kilowatts. In the southern area, the Seven Mile Dam on the Pend-d'Oreille scheduled to come on-stream in 1980 will ultimately have a generating capacity of 810 000 kilowatts.

Major hydro-electric development opportunities exist in many parts of British Columbia with the notable exception of Vancouver Island and the Queen Charlotte Islands where thermal coal resources may be exploited for power generation when the need arises; alternatively an underwater cable or gas line may be employed. All energy development opportunities face environmental constraints and in fact these could be a major determinant in the sequence in which hydro-electric and thermal coal energy developments take place.

The potential for increased oil production in British Columbia is not great despite higher levels of exploration activity. The outlook for natural gas is perhaps more optimistic as the deep basins of northeast British Columbia are further explored. Opportunities for coal liquification or gasification may emerge in the 1980s.

5.2.6 Manufacturing Opportunities

British Columbia has historically experienced difficulties in diversifying its manufacturing sector. Manufacturing and producing activities remain heavily concentrated in the resource-based industry groups: wood manufacture, paper and allied, food and beverages, petroleum products and primary metals.

High rates of growth in non-resource based manufacturing occurred in the 1970s in the transportation equipment, machinery, printing and publishing, electrical products and metal fabricating groups. While per centage gains were significant, these industries continue to represent only a small portion of manufacturing activity in the province.

Manufacturing opportunities may emerge in the area of import replacement of heavy machinery and equipment for resource development. A decline in the Canadian dollar has put upward pressure on costs of machinery and equipment in the forestry and mining industries in particular, much of which is currently imported.

Other potential manufacturing opportunities can be identified in the marine industries category. Shipyards may expand to accommodate increased demand for ferries, coastal freighters and barges, fishing boats and specialized lumber

carriers. Shipboard fish processing vessels offer a specialized opportunity, as do offshore drilling platforms. Defence contracts may also emerge for new vessels and refits.

Manufacturing activities that are heavy energy users, such as pulp and paper, metal fabricating and smelting operations, or heavy users of fresh water such as food processors and distillers, should continue to develop on the strength of British Columbia's comparative advantages. Import replacement, particularly in the food processing industry offers an important opportunity, particularly in relationship to the Vancouver and Victoria metropolitan market.

5.2.7 Northern Transportation Opportunities

Strengthening the northern transportation system in British Columbia offers a major development opportunity through to 1985 and beyond, and is a prerequisite to a number of other northern initiatives, not only in the province but also in the other Western Region provinces, Yukon and the Northwest Territories. Northern British Columbia remains a relatively underdeveloped, sparsely-populated region that has long-term potential for expanding economic development on the strength of its forest, water and mineral resources.

The northern part of the province will continue to play a strategic role in the economic development of adjacent political units -- Alaska, Yukon, the Northwest Territories and the prairie provinces, particularly Alberta. Northern British Columbia's strategic advantages stem from its tidewater access to Pacific Rim markets for Western Region resources and from its juxtaposition between regions of energy supply and energy demand. Several unrelated resource-based projects and commodity movements may well combine in the next decade to necessitate upgrading of the transportation system in northern British Columbia.

The demand for major improvements in bulk-handling facilities on the west coast provides the strongest stimulus to northern British Columbia at this time. In this regard, the port of Prince Rupert is being recognized as an alternative to congested port facilities in the Lower Mainland.

In 1979 the National Harbours Board announced a master plan for the construction on Ridley Island of a grain and coal handling terminal. This is based partly on the premise that Canada's grain exports will increase by some 50 per cent by 1985 and that much of this increase will flow through west coast ports. The coal terminal would serve emerging markets for northeast metallurgical coal.

The export of large quantities of bulk commodities -- grain, coal, lumber products and perhaps potash -- through Prince Rupert will necessitate upgrading of transportation facilities throughout the entire feeder network of rail lines, Western Region highways, repair and maintenance depots and air services, as well as new capital investment in navigational facilities.

The construction of the proposed Alaska Highway natural gas pipeline is another major initiative whose impact on the transportation network in northern British Columbia could be both immediate and long-lasting. To build and service the pipeline will necessitate wide-ranging transportation improvements which may be utilized over a prolonged period if subsequent developments warrant maintenance. These will vary considerably depending upon the logistics plan for this undertaking and fundamentally on the transportation mode selected to move the large diameter pipe. Transportation improvements could involve the ports of Prince Rupert and Stewart. A number of highways may require various degrees of upgrading. The Alaska Highway, portions of Highway 16 from Prince Rupert, elements of Highway 37 from Kitwanga to near the Yukon border, and perhaps others could be improved. Some rail line upgrading may also be required. Ancillary communications and small airstrip improvements are likely to be substantial.

A proposal to construct an oil pipeline from Skagway across northern British Columbia connecting with existing continental pipeline systems to deliver Alaska oil and other offshore oil to mid-west United States markets has recently been endorsed by the Government of Canada. A competing scheme involving the construction of an oil port at Kitimat and an oil pipeline to Edmonton has met stiff environmental opposition.

The potential for rail line upgrading in northern British Columbia could occur in three stages: normal ongoing main line improvements to Prince Rupert; accelerated upgrading due to increased grain movements; and further accelerated upgrading and the construction of access spurs associated with development of northeast metallurgical coal.

An initiative that offers long-term development potential is the Liard highway which would run from Fort Nelson in northern British Columbia to Yellowknife in the Northwest Territories.

5.2.8 Service Sector Opportunities

In terms of employment creation, the various service industries will continue to lead the primary and secondary industries in the future. Within the tertiary sector there will be significant shifts in share of employment growth reflecting in some cases new opportunities and in others severe constraints to growth. For example, government employment which

experienced the fastest rate of growth in British Columbia from 1971 to 1978, will be slower than provincial employment growth, whereas employment growth in tourism services and in retirement services will exceed provincial rates.

The travel industry is already the province's third largest revenue-earning industry after forestry and mining. More than 62 000 person-years of employment in 1976 were associated with travel related activities of which the most important were transportation, accommodation and the provision of food and beverages.

The travel industry has been identified by the federal and provincial governments as offering major opportunities for immediate development. Increased travel revenues and employment in British Columbia are expected to result from an overall upgrading of the tourism plant -- principally accommodation and restaurant businesses, an increase in major attractions and other travel generators, and a focus on the international skiing industry potential. Ski areas, in the southwest at Whistler and in the southeast near Invermere, have been identified as having international potential. Improved services and industry-wide planning will serve to develop the untapped tourism potential. The province's attractive environment and metropolitan business activity may provide an opportunity to develop the convention industry.

Services catering to the retired population represent a potential growth sector. British Columbia in general and some sub-provincial regions in particular have attracted a disproportionately high share of Canada's retired people. The per centage of the total population in the 65-and-over age group rises to 10.6 in the Lower Mainland, 15.0 in the southern Okanagan and 15.4 in the Victoria area. In these regions particularly, the retirement industry has already assumed significant proportions.

The fact that the retired population concentrates geographically and requires unique services and products, affords considerable economic potential. Specific opportunities could occur in senior citizen activities, recreation, the food industry, medical services and products, specialized housing and other areas.

In the service sector there is an opportunity for an expanded role in trade-related functions. British Columbia is strategically situated to take advantage of the increasing potential for Pacific Rim trade. Vancouver in particular could expand its trading and financial services to facilitate Canada's export and import trade, improve trade handling in the port of Vancouver, and participate in trade fairs and export promotion.

Prince Rupert could, in a smaller way, expand and diversify its trade services in response to an emerging pattern of higher general bulk cargo movements through its port.

6. SUMMARY AND CONCLUSIONS

The British Columbia economy performed well in the 1970s, exceeded only by Alberta in real domestic product growth. British Columbia's economic performance, like that of Canada, waned somewhat from the effects of the energy crisis of the mid-1970s. A lower valued Canadian dollar from 1977 onward has stimulated demand for provincial products. As a result, per capita personal income has remained considerably above the national average.

Growth has taken place mainly in the traditional sectors of forestry and mining, on which the health of the provincial economy is dependent. Consequently, there has been little movement towards a major economic goal of the province, namely sectoral diversification out of the present dependence on limited processing of natural resources. The province continues to export most of its resource-based output, principally to the United States, Japan and the European Common Market.

Generally, the outlook for the British Columbia economy in the 1980s is optimistic. The major overriding factor is, as always, the level of demand for the province's natural resource products in the world's industrial economies. The most optimistic view of the 1980s would occur if the principal industrial economies manage to adjust to higher-valued commodity inputs. Lower growth expectations in the industrialized world may be partially offset by higher growth rates in developing Third World countries. Consequently, greatly expanded trading opportunities are expected with Pacific Rim countries.

Against this background, the British Columbia economy is expected to continue to perform well in comparison to other provinces, but to record slower growth than was experienced in the boom years of the late 1960s and early 1970s. Factors contributing towards this period of somewhat slower growth include stiff competition in British Columbia's traditional product markets and a recognition that both renewable and non-renewable resources have absolute limits to development. Consequently, the 1980s will see concerns by both the private and public sectors for export development and resource management.

If world economic performance should exceed the lower expectations for the 1980s, then the prospects for British Columbia are greatly enhanced. In the minerals sector the potential for growth based on export demand is considerable. Buoyant economies in Japan, the United States and Europe would trigger development on new mines in British Columbia for metallurgical and thermal coal, copper, and molybdenum. Also,

modernization and expansion of sawmills, plywood and veneer plants, pulp mills and paper mills would be stimulated, thereby straining the limits of the province's annual allowable cut.

In the 1980s British Columbia will be faced by a number of persistent development problems. It is a continuing concern that the economy remains substantially undiversified, being highly dependent upon the natural resource sectors and the export of partially-processed raw materials. Also these key industries are encountering stronger international competition. Some progress towards diversification was achieved in the 1970s, as non-resource-based manufacturing made some gains. Additionally, growth in the tertiary sector, particularly the travel industry, transportation, trade and commerce and the public sector, was recorded.

The relatively small local market is another development problem that will persist through the 1980s. Population growth has slowed in British Columbia since the mid-1970s, and unless resource boom conditions return, in-migration will be modest.

A key development problem relates to changes in the renewable resource base. Reductions in the physical availability of resources, notably the forests and fisheries, are leading to increased federal and provincial government involvement in resource management policies and programming activity in their respective mandates.

Also restricting attempts to diversify the economic base is the limited presence of industrial research and development facilities in British Columbia. Development problems unlikely to diminish in the next decade are the familiar transportation constraints of mountainous terrain, distance, inaccessible forest and mineral resources, isolated coastal communities, and port congestion. The latter has significance for British Columbia and also for the movement of bulk commodities from western Canada.

Other potential difficulties involve: the traditionally difficult labour-relations climate in British Columbia often associated with the high degree of unionization; certain skilled labour shortages for large resource development projects; a general scarcity of usable land for development purposes; and the continuing need to create meaningful opportunities for one of Canada's largest populations of native ancestry.

The clarification of policy issues will have an important bearing on the thrust of economic development in British Columbia in the next decade. Generally, the provincial government favours a liberalization of Canada's trading position,

and seeks greater access to world markets for intermediate natural resource products. Nonetheless, the provincial government seeks protection for certain key industries.

Resource management and the ownership and control of resources is becoming a critical issue. The provincial government strongly holds to its responsibilities for the management of resources and the right to resource rents. Federal-provincial initiatives for cost-sharing resource management are viewed cautiously at present. Concern about foreign ownership trends is also a provincial issue, as is the desire for in-province control of the most important private companies.

Transportation policy will influence the determination of export opportunities, competitiveness of producers, and the level of activity in British Columbia ports. The province has not finalized an energy policy, but recognizes the need for one. Against a background of adequate energy supplies, the nuclear alternative has been postponed in favour of hydro-electric and thermal-electric sources. Nonetheless, each of these options faces important constraints.

Specifically, two development issues are: provincial demands for a "compensation package" to offset social and environmental costs of the Alaska Highway gas pipeline which will cross northeastern British Columbia; and the question of native land claims, which is viewed as a strictly federal problem.

Sectoral opportunities in the 1980s are widespread and encouraging. The forest industries will remain the main economic force in British Columbia. However, opportunities in the forest sector will become increasingly difficult to achieve, reflecting timber supply limitations and international competition. The industry will show an increasing awareness of the need for a development strategy, forest management and the rationalization and modernization of old plants.

Sawmilling output depends heavily on the level of housing starts in the United States. Conversion to small-log technology should be completed in the early 1980s together with productivity improvements. Employment growth will not match output gains. Plywood and veneer mills will be modernized in the early 1980s and export markets to Britain and elsewhere could strengthen. Steady growth in pulp demand should see several mill expansions and possibly construction of one or more new mills. Although essentially a modern industry fully integrated with sawmilling, several older coastal pulp mills require modernization. Paper production, especially newsprint, is expected to remain strong.

It is the mineral sector that has perhaps the greatest potential for accelerated growth. There are many metallic and coal mining opportunities that could be developed as a result of a stronger world economy, higher prices, and a favourable exchange rate on the Canadian dollar.

Copper is the leading metal and there are a number of opportunities for development in the province, particularly in the Highland Valley. Several copper mines could be expanded, and a world-scale copper smelter is a possibility. Molybdenum, often occurring in association with copper, also offers a development potential. Direct employment from these operations could be considerable, resulting in some skilled labour shortages. A lead-zinc smelter to process concentrates from Yukon is under active investigation. The Trail base-metal smelter is undergoing a modernization program, and a major upgrading of the aging Kitimat aluminum smelter is being considered.

Rising prices have encouraged exploration activity in northeastern British Columbia for oil and gas resources. To date, discoveries are proving sufficient to sustain domestic and export gas demand but not to meet provincial oil requirements.

Metallurgical coal prospects are good, but the timing for their development depends on world demand. Competition is faced from lower-cost producers, particularly Australia. Opportunities will emerge in both northeast and southeast British Columbia.

Thermal coal also offers opportunities for the 1980s, particularly in development of the Hat Creek coal deposits. However, hydro-electric projects appear to have priority at present.

British Columbia has a variety of energy opportunities, comprised largely of hydro-electric and thermal generating facilities. These afford the province a major comparative advantage.

Opportunities in agriculture and associated food processing will be locally significant. Upgrading of the limited agricultural land base will continue. Selective food processing opportunities will arise. The fishing industry will be stimulated by strong demand for fish protein in a world context and growing domestic product acceptance. The industry will operate in an increasingly controlled environment. Fish processing will be stimulated by the increased supply resulting from jurisdiction over the 200-mile coastal region, and longer-term returns from the Salmonid Enhancement Program. Greater emphasis on herring for food and groundfish is expected.

Non-resource-based manufacturing opportunities may emerge in the area of import replacement of heavy machinery and equipment for the resource industries. The marine industries category is also expected to afford opportunities. Heavy energy-using industries should be attracted on the strength of British Columbia's comparative advantage.

Strengthening the northern transportation system in British Columbia in the 1980s is a prerequisite to other northern initiatives, including development of currently inaccessible forest stands, the Alaska Highway natural gas pipeline, metallurgical coal development in northeastern British Columbia and greatly expanded grain and other commodity movements. Upgrading transportation infrastructure in northern British Columbia will greatly strengthen the role of Prince Rupert.

In terms of employment, the service sector is expected to continue to lead the primary and secondary industries in job creation in the 1980s. A compositional shift from the 1970s is expected, with lesser emphasis on public sector growth, and strong gains from the tourism and travel industries, the retirement industry, and trade-related services.

When the scenario for opportunities in the 1980s is examined at the sub-provincial level, important development opportunities can be identified in nearly all cases. Indeed, several regions have in many respects a number of development options from which to choose.

Economic output will remain concentrated in the Lower Mainland and southern Vancouver Island where modernizations will occur in all aspects of the key forest products industries and where the service sector, notably trade, travel and retirement functions should thrive.

Other sub-provincial regions, however, should be able to make some inroads into the southwest's economic share. In the northeast the stimulus will come from mineral and energy resources, with the most important over the long term being metallurgical coal development. Forestry development and agricultural expansion strengthen the economy of the northeast. The northwest has perhaps the greatest limitations in the province in terms of access; however, growth may be expected in transportation, mining and forestry.

The coastal region will experience modernization of the forest industry, selective expansion in fisheries development, and possibly increased smelter activity. Important port developments for western Canada will take place at Prince Rupert.

The central interior will have diversified opportunities in the woods industries, mining, agriculture and services, with Prince George continuing to assert its key role in northern British Columbia.

The Thompson-Okanagan region will experience some notable mining development in terms of copper and molybdenum and possibly in the longer term, thermal coal from Hat Creek. Some expansion in agricultural processing should occur along with service sector growth and transportation.

Finally, resource-use conflicts between mining, forestry, agriculture and recreation may continue to hamper developments in the southeast. Nonetheless, that region has been developing a sound metallurgical coal mining economic base, whose further development will be subject to trends in world demand and alternative options in the northeast.

External influences in both Canada and in world markets will be major determinants in shaping British Columbia's economic development through the 1980s. Future sectoral policies of the province can be expected to continually assert the provincial jurisdictional role. However, coordinated resource management and utilization policies at all levels of government are anticipated to become the key elements in assuring that the benefits of economic opportunities are maximized.

