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GAP ANALYSIS OF
WESTERN CANADA LABOUR MARKET
1980 - 1990

DREE WESTERN REGION
SASKATOON, SASK.

FEBRUARY 1980

TECHNICAL WORKING PAPER

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This report forecasts potential gaps between demand and supply of labour in western Canada. The basic objective of the study is to identify the potential magnitude of labour shortages within the region.

The paper was prepared by the Regional Analysis Branch of DREE Western Region Office in Saskatoon, and is made available as a contribution to the discussion of this issue. This paper is a technical working document and does not necessarily reflect the policy of the Department of Regional Economic Expansion.

PREFACE

As Canada embarks upon the decade of 1980s., there is considerable room for optimism about its future, particularly that of the energy and protein rich areas of the country. Upward shifts in relative prices, which will in the long term stimulate production of energy and improve protein output, have been evident since 1973. Maintaining existing levels of production of oil, let alone self-sufficiency by 1990, will require massive investment in enhanced recovery, the oil sands, heavy oil, and frontier deposits of oil. Still other projects will involve gas development and delivery systems as well as the expansion of hydroelectricity in British Columbia and perhaps Manitoba. Similarly, agricultural output may also be expanded in the west. The location of the bulk of these known resources suggests that the major driving force for the expansion of the Canadian economy in the 1980s will occur in the west and coastal areas. This study is concerned with delineating the broad magnitudes of the anticipated population growth in the four westernmost provinces.

These magnitudes form a useful backdrop to DREE's activities not only in the west but throughout the country. Under the Prairie Farm Rehabilitation Act, DREE lends engineering expertise on provincial and interprovincial water issues. Since the average per capita consumption of water, both domestic and industrial, is 500 gallons per day, a rapid expansion of population, especially on the water scarce prairies, requires advanced planning if all demands are to be met. In addition, rapidly expanding employment opportunities provide avenues for increased participation of native people in the labour force through adjustments by industry to foster good will and develop skills. DREE's Special ARDA and Northern Development programs can be important catalysts in this endeavour. Because indigenous growth of labour and net foreign migration are not expected to keep pace with growth in the demand for labour, some net internal migration is likely to be required. Such flows may be attracted by higher wages and salaries and lower unemployment rates in the west rather than in the rest of the country. Concurrently, the option of increased immigration may warrant a fresh review.

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This paper presents analyses of the gap between anticipated demand for and supply of labour. The time trend in employment growth based on 1973 to 1979 is higher than that based on the longer time period, 1966 to 1979. In order not to exaggerate the potential gap, the lower projection is generally used. Similarly, labour supply is calculated using the relatively low existing labour force participation rates as well as a higher set. The higher participation rates are largely due to increased female participation so that projected labour force growth is higher. Generally, the higher estimates of the labour force are used so that once again the size of the gap is minimized. If even this smaller estimate of the gap is to be closed, wage and salary differentials will be substantial.

Summary

1. Economic buoyancy of the western Canadian economy is expected to continue. Western economic history has been characterized by major projects such as CPR and Syncrude. The construction of such large projects is expected to continue with the construction of the Alaska Highway Gas Pipeline, the Alsands Oil Sands Recovery Plant, the Cold Lake Heavy Oil Recovery Project, new potash mines and uranium mining and refinery, increased grain exports, as well as others.

2. DREE is actively engaged in the generation of economic development and employment opportunities, and therefore, it is sensitive to pressures in the labour market. Through the RDIA program, the Department is already aware that some enterprises are experiencing difficulties in requiring skilled labour. DREE, Western Region, has felt it necessary to undertake this study so as to have an indication of the magnitude of pressures that might develop in the labour market over the next decade.

3. Assuming that trends since 1966 prevail, western employment will rise by 1 338 000 jobs, from nearly 3 million to over 4 million persons, an increase of 45 percent over current employment from actual 1979 to forecasted 1990.

4. Increases in the western labour force due to natural growth, plus an increase in labour force participation rates, largely due to an increase in female participation, will still result in a shortage of approximately 733 000 workers by 1990 if no new people move into the region.

5. If Canadian net foreign immigration is 75 000 per year from 1980 to 1990 and the west receives the same share as in the recent past, the shortage of labour would range from 535 000 to 581 000 depending on demand and supply scenarios. If there is only 50 000 net foreign immigration per annum, the gap ranges from 601 000 to 647 000. These data assume indigenous supply based on increased labour force participation rates.

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6. Labour shortages should be the most severe in Alberta, Saskatchewan and British Columbia in that order.

7. If the goal is to entice a continuous yearly flow of domestic in-migrants to the region with no net foreign migration so as to alleviate the expected shortage of labour, wages and salaries would have to be nearly 28 percent greater in western Canada than in the rest of the country assuming the 1979 difference in unemployment rates were to continue. If the western Canadian unemployment rate is half the rate in the rest of the country, western wages and salaries would have to be 22 percent higher than those offered in the rest of Canada to obtain the required in-migration. With 75 000 Canadian foreign immigration and the same unemployment rate differential, wages and salaries would have to be 1.09 times those in the rest of the country. Western wages and salaries would have to be 1.13 times those in the rest of Canada with only 50 000 net foreign immigration. These estimates are not dynamic and, therefore, do not account for adjustments in demand due to increasing wages and salaries beyond 8.7 percent for the period 1980-1990. Megaprojects are capital-intensive and will often pay the high wages necessary to obtain the required labour. Further, these estimates assume the smallest of three projected labour demand curves in an attempt to account for some of the adjustments that could be expected to arise from accelerated wage differentials relative to the rest of the country that are not an integral part of this model.

8. Severe shortages of labour may be expected over the decade of the eighties. In-migration will be required to meet expected labour demand, which in turn requires that high unemployment and wage rate differentials prevail in favour of western Canada. Shortages will be most severely felt in the market for skilled labour.

9. Forecasting the labour market for skilled labour was beyond the context of this study. However, the aggregate shortage forecast has led to the conclusion that severe shortages in specific skill areas will materialize over the study period. Ways and means need to be found to more efficiently train larger numbers of apprentices than is now the case. It will be important not to jeopardize the position of existing journeymen who have made their investment in time and labour to get their papers.

10. Given the anticipated size of long-term migratory flows, it will be necessary to avoid the bunching of long-term projects. Simultaneous construction of several of these would exaggerate inflationary pressures, reduce Canadian content and place additional pressure on housing and other infrastructure.

11. The specific effects upon the economy and society at large, from rapid employment growth, are not dealt with in this study. Nevertheless, these effects are germane to DREE's activities in western Canada. Two areas of interest to DREE would include improved opportunities for native people to participate in the labour force, particularly the skilled labour pool, and the supply of adequate high quality water to support the expected municipal and industrial growth on the prairies. In addition, DREE is concerned with the adjustment problems which may occur as significant numbers of people migrate within the west, especially from Manitoba to Saskatchewan, Alberta and British Columbia.

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I INTRODUCTION

The focus of DREE's study is on the labour market of the eighties in order to alert the public and private sectors to the anticipated size and direction of labour force adjustments. These adjustments include: migratory flows, increased wage and salary differentials, relatively lower unemployment rates in the west than elsewhere in the country, and augmented labour force participation by native peoples.

Usually labour market analysis has been performed on a national or provincial basis. A national context ignores regional and provincial vagaries. Strictly provincial analysis often ignores events in neighbouring provinces. This study contends that the four western provinces function as a single labour market. Interprovincial movement within the region is often of less distance than movement within the provinces of Ontario or Quebec. Moreover, many in the Western Region feel a kinship to the region which is conducive to relocation in the west, but would have greater reservation to relocation out of the region. Numerous companies operate throughout the region, but not outside it; often companies that do operate outside the region operate as an administrative unit with a western region division. Such companies look for employees on a regional basis.

For these reasons, this study concentrates on the four western provinces in aggregate with some accompanying provincial disaggregation. Unfortunately, due to data shortages, the territories must be omitted from this analysis.[1]

This study identifies potential labour force gaps under various assumptions. Population, migration, and labour force participation are the variables used to formulate

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[1] For a discussion on the labour market in the two territories, the reader is referred to the following studies: Matharin, D. C., Merson, E. and Laforenare, Normand: The Supply of and the Demand for Labour in the Yukon and Northwest Territories; Department of Indian Affairs and Northern Development; May 1971. DREE; Economic Circumstances in Yukon Territory; August 1979. DREE; Economic Circumstances in Northwest Territories; August 1979. DREE; Economic Development Prospects in the Northwest Territories; December 1979. DREE; Economic Development Prospects in Yukon; December 1979.

labour supply. Trend analysis and the number and scheduling of major projects, incremental to the trend, are used to formulate labour demand.

Knowledge of the net migration required to balance demand and supply is inadequate without some cognizance of the occupational and professional skills required. Shortages of persons with specific skills can cause severe bottlenecks. Detailed data on more narrowly defined occupational and industrial categories would be useful to delineate directions for manpower training.

II CURRENT VIEW OF THE LABOUR MARKET

Historically the bulk of western economic activity has been in resource related industries. Both renewable and nonrenewable resources provide the impetus for growth within the region. In British Columbia, forestry and mining are dominant industries. On the prairies, agriculture is paramount to the employment base. Yet, mining, especially related to energy, has played a more significant role recently in increasing the demand for labour and related services.

Western economic growth has often been characterized by what is referred to as major projects. One of the first was the building of the Canadian Pacific Railroad -- a mammoth undertaking. A more recent major project, also of similar proportions, was the development and construction of the Syncrude Oil Sands extraction plant. In its peak construction year, the Syncrude project employed 7 900 persons; or approximately 8.5 percent of the Alberta construction labour force. The operation of Syncrude employs 3 800 persons on an annual basis.

The Syncrude project may become viable with increasing oil prices. The continuing energy crisis of the early seventies has been the greatest single cause of economic buoyancy within the region. The assumption that the current trend in energy and related areas will prevail or, if anything, accelerate is accepted in this study.[2] Spurred by developments in energy extraction and processing and augmented by general strength in the west's primary industries, the western economy is likely to continue its rapid growth. (However, recent oil and gas discoveries in eastern Canada may alleviate some of the overheating which otherwise would have arisen). One result of this rapid growth will be high demand for labour.

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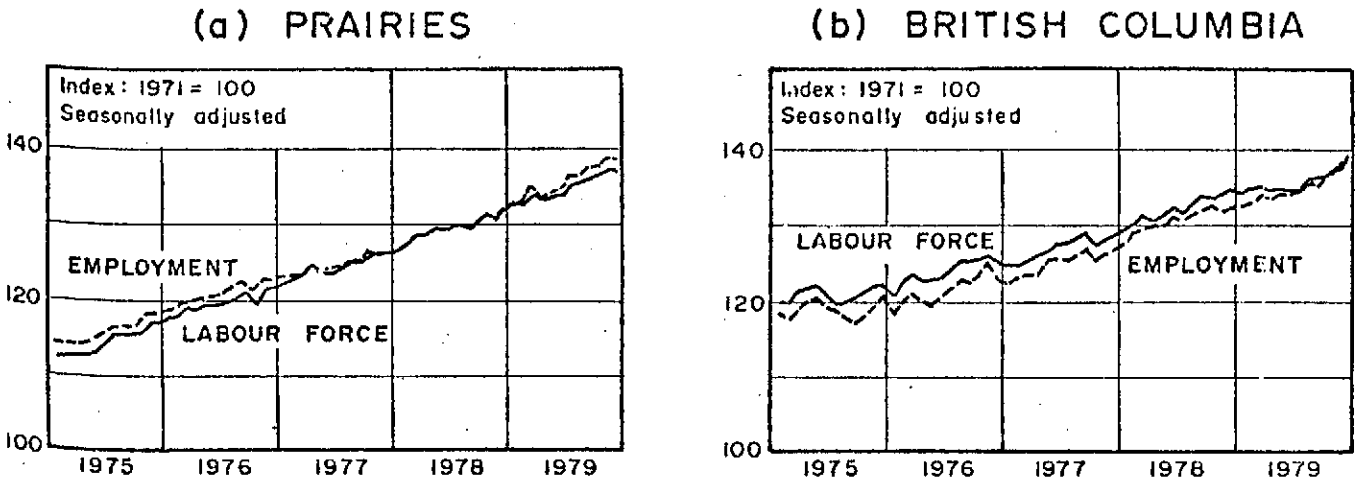
[2] Obviously if world energy prices were to fall drastically, much of the activity planned for the west would become uneconomic. This is unlikely as the situation in Iran and the recent increase in OPEC oil prices has demonstrated. Moreover, the world now recognizes that conventional reserves of oil are becoming scarce relative to the demands of an industrialized world.

Tight labour markets have been the norm for parts of the west since the early seventies. Charts II-1a and II-1b plot seasonally adjusted employment and labour force indices for the Prairies and British Columbia from 1975 to 1979. Growth in employment generally exceeded or equaled that of the labour force on the Prairies. In 1979, British Columbia's employment growth overtook that of the labour force. The Canadian unemployment rate in 1979 was 7.5 percent, whereas for Saskatchewan and Alberta it was only 4.2 and 3.9 percent respectively. The 1979 rate was somewhat higher in Manitoba, 5.4 percent, and in British Columbia, which had a rate of 7.7 percent. All western provinces, except British Columbia, had unemployment rates below the national average.

CHART II - 1

LABOUR FORCE AND EMPLOYMENT*



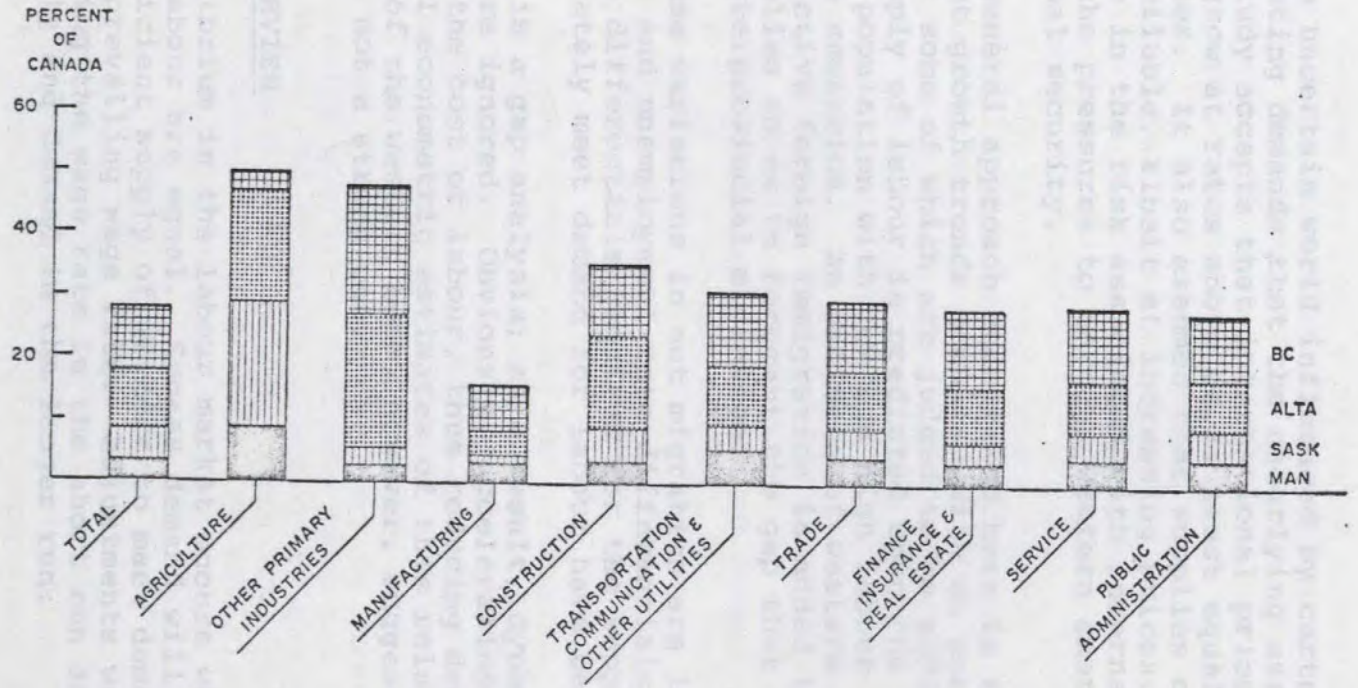
Western Canada accounts for 27.8 percent of the Canadian population and 28.1 percent of national employment. Chart II-2 depicts the region's share of Canadian employment for major industrial groups. The most significant point to note is the dominance of the west in the primary and construction sectors: agriculture 51.8 percent of national employment; other primary industries 47.6 percent; and construction 36.4 percent.

The primary sector of the economy has been and is western Canada's strength. Future projections indicate continuing dominance of this sector along with the construction sector led by investment in major projects.

*Conference Board in Canada

CHART II - 2

EMPLOYMENT BY PROVINCE AND INDUSTRY-1979



Statistics Canada: Cat. No. 71-001.

III FORECAST OF WESTERN CANADIAN LABOUR MARKET IN THE EIGHTIES

In an uncertain world influenced by cartels and super powers, forecasting demands that the underlying assumptions be clear. This study accepts that international prices of energy and food will grow at rates above or at least equal to those of other commodities. It also assumed that supplies of offshore oil will be available, albeit at increasing prices. Even a slight increase in the risk associated with international oil would augment the pressures to harness western energy resources and international security.

The general approach undertaken here is to project demand from past growth trends combined with an analysis of major projects, some of which are judged to be additive to the trend. The supply of labour is predicted upon the growth of the indigenous population with low and high labour force participation rate scenarios. An estimate of western Canada's share of prospective foreign immigration is added to the indigenous supplies so as to forecast the gap that can only be filled by interprovincial migration.

Because variations in net migration are largely related to wage and unemployment rate differentials, the levels of these differentials required for the supply of labour to adequately meet demand for labour have been estimated.

This is a gap analysis; as a result, dynamics of the labour market are ignored. Obviously, accelerating wage rates would increase the cost of labour, thus reducing demand for labour. General econometric estimates of this relationship in the context of the western boom, however, suggest that this relationship is not a strong one.

METHODOLOGY OVERVIEW

Equilibrium in the labour market occurs when demand and supply of labour are equal. Excess demand will exist when there is insufficient supply of workers to meet demand for workers at the prevailing wage rate. Adjustments would be made by increasing the wage rate in the short run and changes in overall supply and demand in the longer run.

Aggregate Demand

Labour demand has been considered along three avenues. The first projection assumes a constant rate of growth in demand for labour equal to the average rate attained from 1966 to 1979. This projection yields a lower estimate than the second avenue, a trend from 1973 to 1979 which would reflect the west's accelerated growth relative to the rest of the country arising out of increasing prices for energy and protein since 1973. Because the impact of major projects was minimized by utilizing the longer term projections, the direct and indirect effects within the province of impact of these major projects, that were judged to be additional to the trend, were added to the long-term projection. While clearly judgemental (see Appendix II-2 for the list of major projects assumed to be incremental to the trend), the third approach gave similar results to those attained in the short-term projection. In this study, we utilize the first and third approaches. These employment projections are used as a proxy for labour demand. In some areas of the study, long-term trend analysis has been used alone; in others, it has been supplemented by the incremental employment of selected major projects. Double counting in the augmented demand projection is not considered to be a problem; rather, the inclusion of so many large projects as part of the trend probably perpetuates the downward bias inherent in the longer time trend alone. The appended data allow the reader to make his own judgement.

Since the employment trend was estimated over the period 1966-79, it inherently includes market adjustments for the relative rise in western wages from 88.6 percent of the rest of Canada to 98.9* percent. Although some scenarios that follow suggest that the difference between western average wages and salaries and those in the rest of Canada will accelerate, projections based upon increased participation rates and fairly high levels of foreign migration indicate that the growth of western average wages and salaries relative to the rest will be only slightly above past performance. Thus, the time trend of employment already contains adjustments for anticipated change in relative wages and salaries.

Aggregate Supply

Estimated supply of labour is developed from the Statistics Canada indigenous population projection.[3] Current (1979) labour participation rates or alternatively increasing rates have been used to obtain two indigenous labour supply

*Annual 1979 data were not available at time of writing so that this number is an estimate.

[3]Statistics Canada, Population Projection for Canada and the Provinces, 1976 to 2000, Catalogue 91-520.

scenarios. The increased labour force participation assumption is based on increased female participation in the labour force as estimated by the Hudson Research Institute. In addition to the indigenous supply of labour, supplies of labour accounting for the west's probable share of foreign immigration were developed. This was done assuming 75 000 and 50 000 immigrants to Canada with the west receiving 30 percent of these persons as was the case from 1975 to 1978. Eighty percent of these immigrants are assumed to participate in the labour supply.

At all times some people are unemployed while looking for employment. In the 1950s and 1960s, estimates of this frictional unemployment rate ranged from three to four percent. Recent estimates range from five to six percent. To maintain a conservative bias and due to the ease in obtaining employment in a buoyant economy, the low estimate of three percent frictional unemployment is used in this study. All labour supply estimates employed in the text of this paper have been reduced by the frictional unemployment rate of three percent. The labour supply data in the appendices are not adjusted for frictional unemployment.

The preceding discussion is a simplification of the methodology employed in this study. The reader is referred to Appendix I for a more formal and detailed exposition.

GAP ESTIMATES

Demand

Western employment, assuming the labour estimate based on the 1966 to 1979 trend alone, should rise by 1 338 000 jobs, from 2 973 000 in 1979 to 4 311 000 in 1990, an increase of 45 percent. For the estimate based on the trend inclusive of the incremental projects, the increase from 1979 to 1990 would be 1 384 000 to 4 357 000 in 1990, an increase of 46.6 percent.

Further supporting evidence for these projections, at least until 1985, is given by the model developed by the Canadian Employment and Immigration Commission. For western Canada, their 1985 estimate falls between the two estimates discussed in the previous paragraph. DREE's demand projections are presented in Table III-1.

TABLE III - 1

LABOUR DEMAND PROJECTIONS, WESTERN PROVINCES, TOTAL WEST, INCREMENTAL PROJECTS, AND TREND PLUS INCREMENTAL PROJECTS

Year	Man	Sask	Alta	B.C.	Total West	Demand Due* To Incremental Projects	Total West Trend Plus Incremental Projects
1980	460	404	985	1 190	3 039	8	3 047
1981	469	412	1 028	1 237	3 146	30	3 176
1982	478	419	1 074	1 286	3 257	52	3 309
1983	488	426	1 121	1 337	3 372	81	3 453
1984	498	434	1 171	1 389	3 491	80	3 572
1985	507	442	1 222	1 444	3 615	64	3 679
1986	518	449	1 276	1 501	3 744	69	3 813
1987	528	457	1 332	1 560	3 878	73	3 951
1988	538	465	1 391	1 622	4 017	80	4 097
1989	549	474	1 452	1 686	4 161	68	4 229
1990	560	482	1 517	1 752	4 311	46	4 357

*Demand estimates of incremental projects includes direct and induced employment in province of impact -- see Appendix II for details.

It is probable that the 1966 to 1979 trend forecasts an underestimate of western Canadian employment and that the projection inclusive of incremental major projects will prove to be more accurate. The 1966 to 1979 employment trend equation underestimated actual 1979 western employment by 37 000 which supports this conclusion.

Indigenous Supply

Forecasting the total gap, that is the gap in absence of any migration, requires estimates of the indigenous labour force. Here, Statistics Canada estimates of population growth from internal western sources alone is used in conjunction with the high and low labour force participation rates. This provides two estimates of the potential indigenous labour supply.

Statistics Canada estimates are projected from 1976 census data. As a result, three years of net migration, 1976 to 1979, into the region are not accounted for in their projections. An estimation of the number of in-migrants to the region who would join the labour force has been made and added to the estimates based on the Statistics Canada Projections to establish the 1979 resident labour force.

Estimates of the indigenous labour supply, demand for labour and the resultant gaps are found in Table III-2 and the two demand and supply projections are graphed in Chart III-1.

TABLE III - 2

GAP ESTIMATES UNDER HIGH AND LOW DEMAND AND SUPPLY PROJECTIONS, WESTERN CANADA 1980-1990

'000'

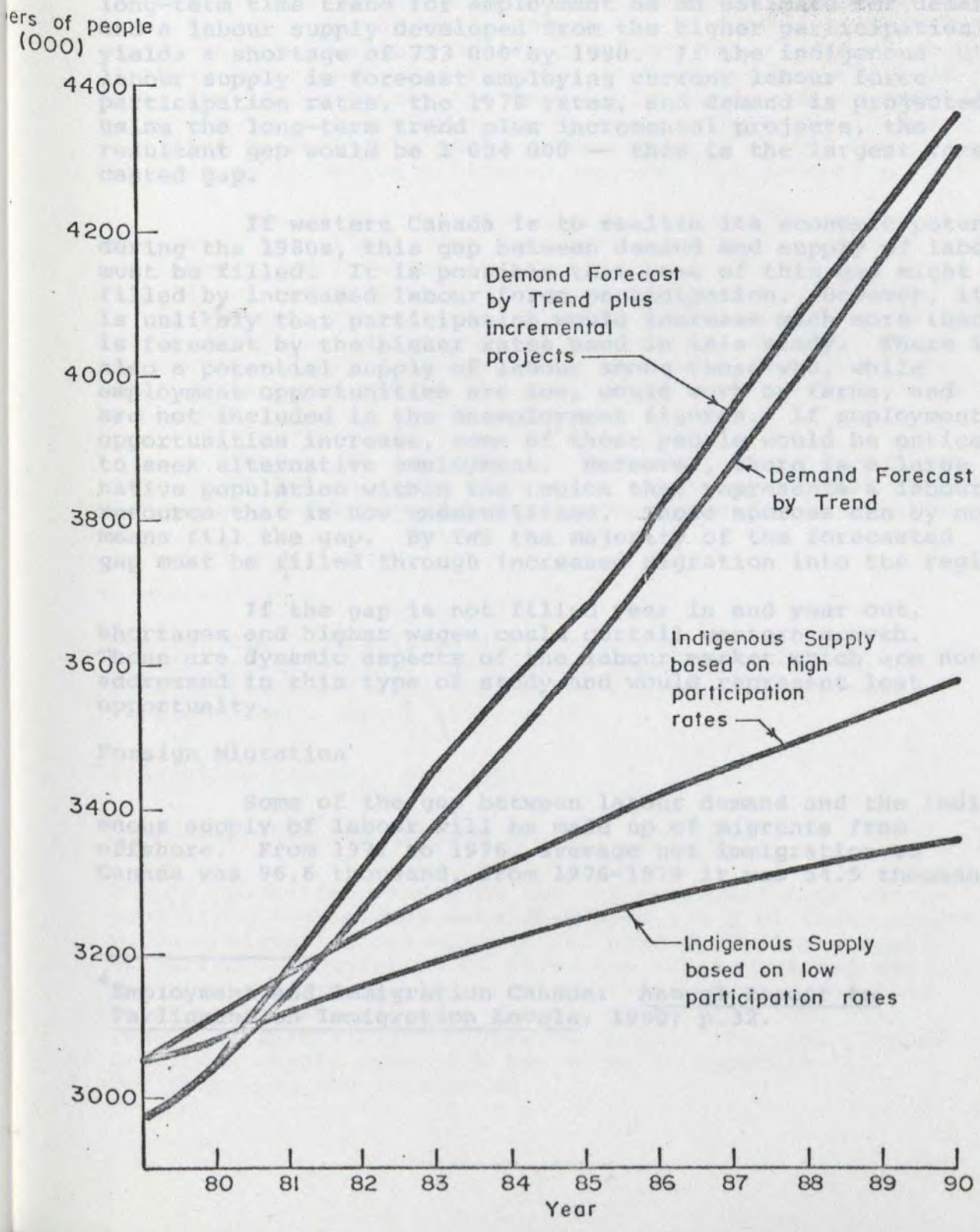
	LABOUR DEMAND		LABOUR SUPPLY	
Year	Trend	Trend Plus Incremental Projects	Low	High
1980	3 039	3 047	3 080	3 117
1981	3 146	3 176	3 118	3 170
1982	3 257	3 309	3 153	3 223
1983	3 372	3 453	3 186	3 276
1984	3 491	3 572	3 219	3 325
1985	3 615	3 679	3 247	3 372
1986	3 744	3 813	3 274	3 417
1987	3 878	3 951	3 296	3 458
1988	4 017	4 097	3 315	3 498
1989	4 161	4 229	3 333	3 536
1990	4 311	4 357	3 354	3 578

FORECASTED GAPS

LOW DEMAND		HIGH DEMAND	
High Supply	Low Supply	Low Supply	High Supply
-77	-41	-33	-69
-24	+28	+58	+6
+34	+104	+156	+86
+96	+186	+267	+177
+167	+273	+353	+247
+243	+368	+432	+307
+327	+470	+540	+396
+420	+582	+655	+493
+519	+702	+782	+598
+625	+828	+896	+693
+733	+958	+1 004	+779

CHART III - 1

DEMAND PROJECTIONS AND SUPPLY PROJECTIONS OF THE INDIGENOUS LABOUR FORCE FOR WESTERN CANADA



From internal sources alone, obviously western Canada will not be able to provide the labour force to meet its employment requirements. The narrowest gap, employing only the long-term time trend for employment as an estimate for demand and a labour supply developed from the higher participation yields a shortage of 733 000 by 1990. If the indigenous labour supply is forecast employing current labour force participation rates, the 1978 rates, and demand is projected using the long-term trend plus incremental projects, the resultant gap would be 1 004 000 -- this is the largest forecasted gap.

If western Canada is to realize its economic potential during the 1980s, this gap between demand and supply of labour must be filled. It is possible that some of this gap might be filled by increased labour force participation. However, it is unlikely that participation would increase much more than is forecast by the higher rates used in this study. There is also a potential supply of labour among those who, while employment opportunities are low, would work on farms, and are not included in the unemployment figures. If employment opportunities increase, some of these people would be enticed to seek alternative employment. Moreover, there is a large native population within the region that represents a labour resource that is now underutilized. These sources can by no means fill the gap. By far the majority of the forecasted gap must be filled through increased migration into the region.

If the gap is not filled year in and year out, shortages and higher wages could curtail western growth. These are dynamic aspects of the labour market which are not addressed in this type of study and would represent lost opportunity.

Foreign Migration

Some of the gap between labour demand and the indigenous supply of labour will be made up of migrants from offshore. From 1971 to 1976, average net immigration to Canada was 96.6 thousand, from 1976-1979 it was 54.5 thousand.[4]

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[4] Employment and Immigration Canada: Annual Report to Parliament on Immigration Levels, 1980; p.32.

On average, from 1975 to 1978, the four western provinces received 30 percent of immigrants.[5] Statistics Canada assumes international net migration scenarios in two of their projections of 75 000, 50 000 in another, and one assuming 100 000.[6] Assuming net international immigration to Canada is 75 000 per annum, and that western Canada continues to receive 30 percent of these immigrants, and further, that 80 percent of these enter the labour force, the west would receive on an annual basis, 18 000 labour force participants. Over the 11 years from 1980 to 1990 this would reduce the gap by 198 000 persons. The most conservative estimated gap would be reduced to 535 000.

The 75 000 net international migration may be a high estimate. Recent patterns have been much lower. For 1979-80, net international migration is estimated to be 40 000.[7] If the same set of assumptions put forward in the previous paragraph for 75 000 net international migration are applied to 50 000 net international migration, 12 000 persons would be added to the western labour force annually -- a total of 132 000 by 1990. This would reduce the most conservative gap (733 000) to 601 000.

Chart III-2 graphs the two gaps with the western share of 75 000 and 50 000 Canadian net international migration added to their indigenous labour force.[8]

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[5] Norris, D.A.: Migration Projections for Canada and the Provinces, 1976-1991. Background paper prepared for the 1976 Statistics Canada Population Projections, Revised Version; Xerox, March 1979; p.30.

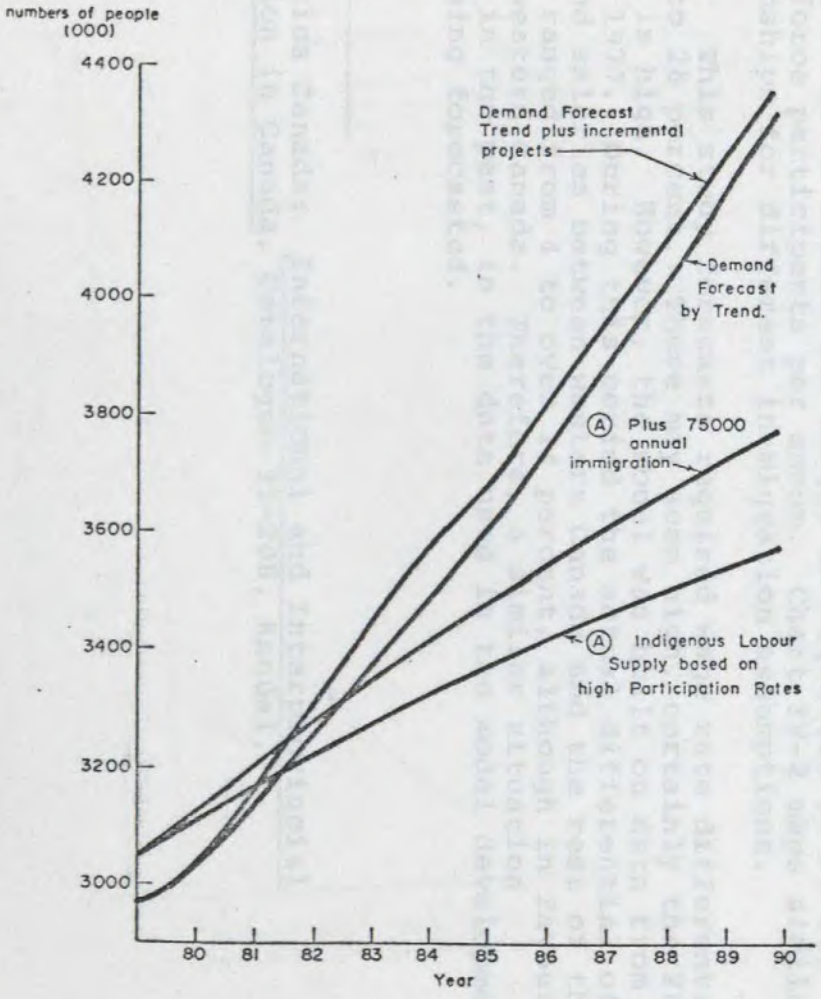
[6] Statistics Canada: op. cit.

[7] Employment and Immigration Canada: op. cit.

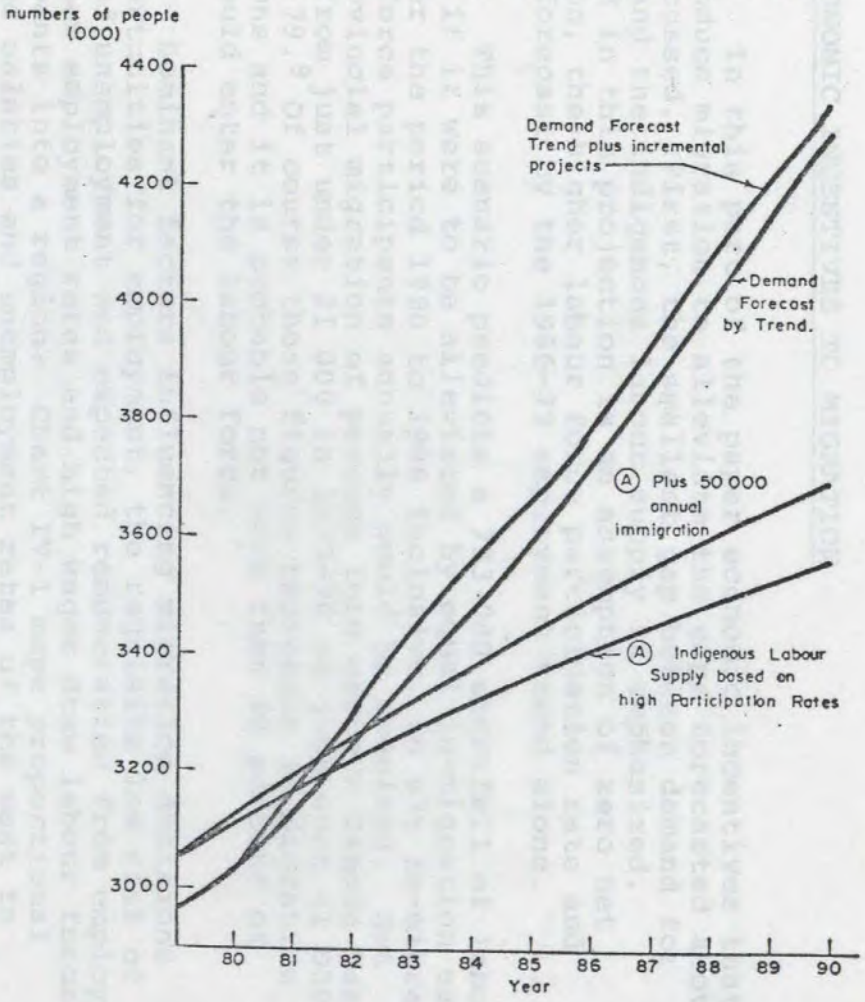
[8] Supply projections based on the various Statistics Canada population projections were developed. All of these assume various migration assumptions and none present a scenario of sufficient migration to alleviate the forecasted gap. These data do not yield significant information for this study other than views on current migratory flows will result in insufficient migration to fill the gap. These projected supply scenarios are found in Appendix III-3 for those who are interested.

CHART III - 2

INDIGENOUS LABOUR FORCE IN WESTERN CANADA
SUPPLY AND DEMAND PROJECTIONS 1980-1990



INDIGENOUS LABOUR FORCE IN WESTERN CANADA
SUPPLY AND DEMAND PROJECTIONS 1980-1990



IV ECONOMIC INCENTIVES TO MIGRATION

In this part of the paper economic incentives that would induce migration to alleviate the gaps forecasted above are discussed. First, the smallest gap between demand for labour and the indigenous labour supply is emphasized. Embodied in this projection is an assumption of zero net migration, the higher labour force participation rate and demand forecast by the 1966-79 employment trend alone.

This scenario predicts a 733 000 shortfall of labour supply, if it were to be alleviated by equal in-migration each year over the period 1980 to 1990 inclusive, 66 636 in-migrant labour force participants annually would be required. Net interprovincial migration of persons into western Canada has ranged from just under 21 000 in 1975-76 to just over 41 000 in 1978-79.[9] Of course these figures represent in-migration of persons and it is probable not more than 80 percent of these would enter the labour force.

Dominant factors influencing migration decisions are opportunities for employment, the requisite low risk of prolonged unemployment and expected remuneration from employment. Low employment rates and high wages draw labour force participants into a region. Chart IV-1 maps proportional wages and salaries and unemployment rates of the west to non-west so as to obtain the target in-migration of 66 636 labour force participants per annum. Chart IV-2 maps similar relationships for different in-migration assumptions.

This study forecasts required wage rate differentials from 9 to 28 percent. These may seem high, certainly the 28 percent is high. However, the model was built on data from 1962 to 1977. During this period the actual differential of wages and salaries between western Canada and the rest of the country ranged from 4 to over 14 percent, although in favour of non-western Canada. Therefore, a similar situation existed in the past, in the data used in the model development, as is being forecasted.

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[9] Statistics Canada: International and Interprovincial Migration in Canada, Catalogue 91-208, Annual.

CHART IV - 1

TRADE-OFF BETWEEN WAGES AND SALARIES AND UNEMPLOYMENT RATE TO OBTAIN 66 636 IN-MIGRANTS PER YEAR TO THE WESTERN REGION

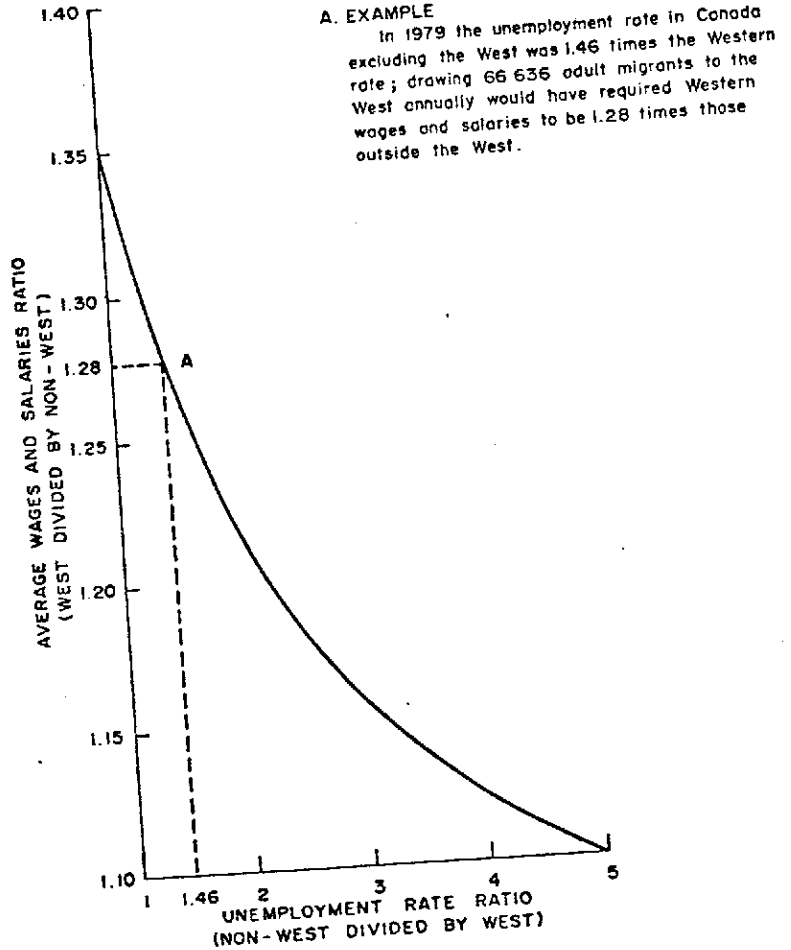
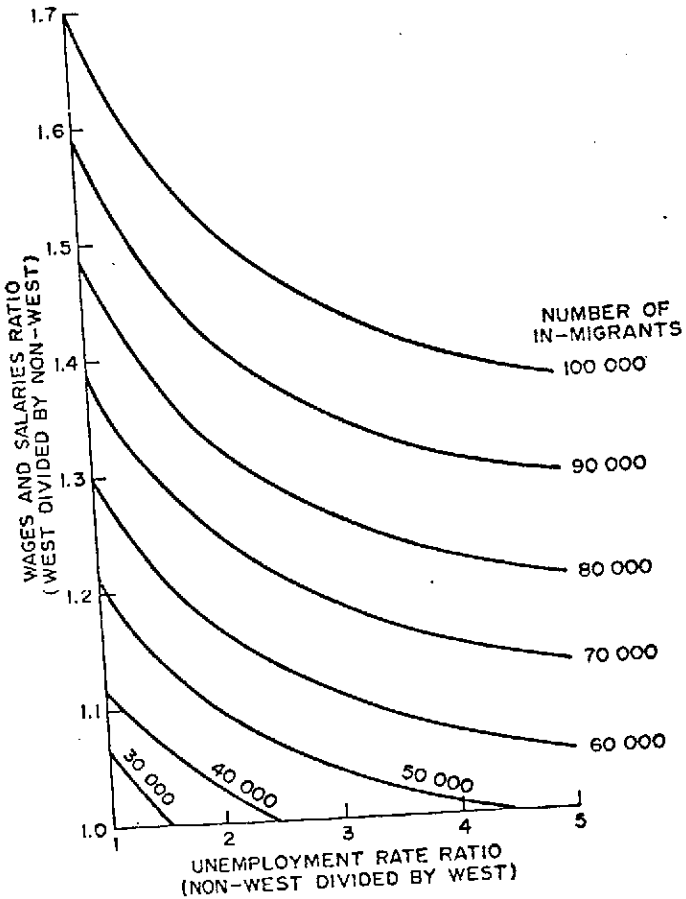


CHART IV - 2

TRADE-OFF BETWEEN WAGES AND SALARIES AND UNEMPLOYMENT RATE TO OBTAIN INDICATED LEVELS OF IN-MIGRANTS PER YEAR TO THE WESTERN REGION



NOTE: These charts were developed from a model assuming a two-region country, the four western provinces and the rest of the country. Variables key to migration such as distance and cultural aspects were not considered. Although this is a simplification, it is useful in emphasizing the more economic variables.

In 1979, non-western Canada had an unemployment rate 1.46 times the western rate. To obtain the target in-migration of 66 636 given 1979 unemployment rates, average wages and salaries would have to be 1.28 times the average wages and salaries in the rest of the country. If the west retains its economic buoyancy, while the rest of the country is in a period of recession, unemployment rates twice the western rate would not be unreasonable. At these rates, average wages and salaries would have to be nearly 1.23 times those in the rest of the country so as to entice the required in-migration. If assumed incremental projects are added to this scenario demand, the resultant gap by 1990 is 779 000 persons. This gap would be alleviated by an annual in-migration to the western provinces of 70 818 persons. Even with western unemployment rates half those in the rest of the country, western wages and salaries would have to be 1.25 times those in the rest of the country to bring in these persons.

Required average wages and salaries differentials are reduced when scenarios of foreign immigration are considered. The two scenarios of foreign immigration into Canada assume 75 000 and 50 000 net immigrants. Assuming the western unemployment rate is half that in the rest of the country, and with the 75 000 international net immigration, wages and salaries would have to be 1.09 times those in the rest of the country with demand forecast by the trend alone. If demand is forecast inclusive of the incremental projects, the west's wages and salaries would need to be 1.16 those in the rest of Canada to induce interprovincial migration to alleviate the forecasted gaps. With 50 000 net foreign immigration and the same unemployment rate differentials, wage rates in the west would have to be 1.13 and 1.16 times those in the rest of the country for the demand trend and demand trend inclusive of incremental major projects respectively. Gaps and the required wage rate differentials are found in Table IV-1.

The obvious conclusion is that even with net foreign migration, wages and salaries in western Canada will have to be significantly higher if employment opportunities are to be realized.

TABLE IV-1

WAGE RATE DIFFERENTIALS BETWEEN WESTERN CANADA AND THE REST OF THE COUNTRY TO INDUCE MIGRATION TO ALLEVIATE ESTIMATED GAPS

Demand / Supply	TREND				TREND PLUS INCREMENTAL PROJECTS			
	Gap By 1990	Required Annual In-Migration	1979 U.R. Differential	West ½ U.R. of Rest of Canada	Gap By 1990	Required Annual In-Migration	1979 U.R. Differential	West ½ U.R. of Rest of Canada
Indigenous Based On High Participation Rates	733 000	66 636	1.28	1.22	779 000	70 818	1.31	1.25
Indigenous Based On High Participation Rates Plus Western Share of 50 000 Net Foreign Migration	601 000	54 636	1.18	1.13	647 000	58 818	1.21	1.16
Indigenous Based On High Participation Rates Plus Western Share of 75 000 Net Foreign Migration	535 000	48 636	1.13	1.09	581 000	52 818	1.17	1.12

V OTHER CONSIDERATIONS

Skills:

A large percentage of new job opportunities will be for skilled labour, creating shortages for skilled tradesmen in general with severe shortages for specific trades. Finding workers with appropriate skills is likely to be difficult, as William Dodge states:[10]

> "An important characteristic of skilled labour is that its supply tends to be inelastic -- that is, simply offering higher wages does not immediately attract more workers than are already trained. Thus shortages are difficult to correct quickly or, even if given adequate time, accurately. Attempts to meet shortages through crash immigration or training programs may create as many problems as they solve. This year's trainees and recruits from abroad may be next year's unemployed. Conversely, curtailing a training program when it proves to be providing more skilled workers than needed could contribute to a future skill shortage."

Much of new employment will be for new major projects and will require substantial numbers of skilled labour. Many of Canada's craftsmen came to the country in the early post war period and will be retiring from the labour force over the decade. Traditional offshore sources of skilled tradesmen are not as dependable as in the past. It may be assumed that, on top of the gap forecast in this study or even if it does not materialize as forecast, there will be shortages -- probably severe shortages -- in specific skill areas. The analysis of the skilled labour market was beyond the context of this study and is really within CEIC's mandate. Detailed analysis of this subset of the labour market is needed.

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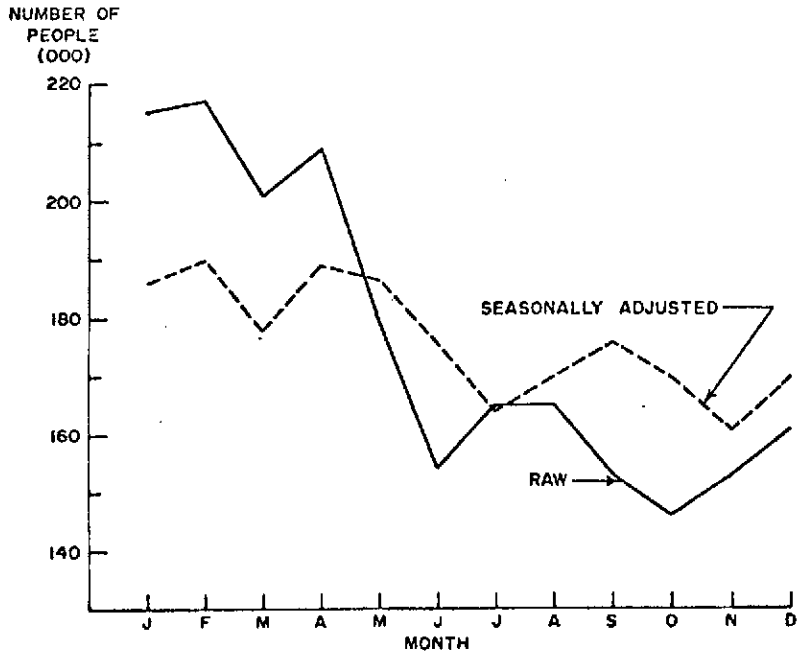
[10] Dodge, William: Skilled Labour Supply Imbalances; The Canadian Experience, British-North American Committee, 1977; p. 1-2.

Deviations from Annual Trends:

This analysis has looked only at the annual employment picture. Chart V-1 plots both the raw and seasonally adjusted unemployment for the region. The difference between the seasonally adjusted (the dashed line) and the raw unemployment rate (the solid line) demonstrates the volatility of raw unemployment in comparison to non-seasonal employment. An example of seasonal employment is the Alaska Highway Gas Pipeline where work is carried out only in winter and summer with employees being laid off in spring and autumn. Of course, the pipeline company may continue to employ their labour force in the off-season, especially their skilled labour, so as to ensure their labour force when construction resumes. The demand for labour, forecasted in this study, will certainly be made up of much seasonal work.

CHART V-1

UNEMPLOYMENT
RAW AND SEASONALLY ADJUSTED
WESTERN REGION 1979



...21

The timing of major projects within the west may very well augment the forecasted gap and accentuate shortages of skilled labour. As well, the spreading out of the projects may help to alleviate some of the shortages. However, with the current domestic and international energy situation pressure to push ahead with the large energy projects will increase. Currently, there is a good example of the bunching up of these types of projects with the starting of the pre-build section of the Alaska Highway Natural Gas Pipeline, and the clearing of sites for both the Alsands Oil Sands Plant and the Cold Lake Heavy Oil Plant.

The tight labour market may place strains on some marginal operations within the region as they find their labour, especially skilled, being bid away by major project employers offering higher wages. In addition some planned investments may be postponed during periods of severe labour shortages.

Obviously this analysis is highly aggregated. It does give an indication of what may be expected within the four western provinces. Certainly more detailed information and analysis are required. One important aspect of this study is to point out the lack of information concerning future prospects in the labour market, especially in relation to skilled labour where the severest problem will likely be felt.

VI CONCLUSION

The analysis done to date leads to the conclusion that western Canada is, and will continue to be, faced with tight labour markets. Without improved participation rates, the anticipated shortfall in the labour supply relative to potential demand ranges from 958 000 to 1 004 000. Rising wage rates may curtail some demand for labour, due to increasing cost and substitution of other factor inputs, thus reducing some economic opportunities. Increased labour force participation rates are expected to alleviate labour shortages by approximately 224 000. Further foreign immigration will provide additional supply ranging from 132 000 to 198 000.

Given improved participation rates and net foreign migration of 50 000 per annum to Canada, distributed consistently with past trends, anticipated annual required in-migration from the rest of the country would range from 54 636 to 58 818 or 601 000 to 647 000 over the total 11-year period 1980-1990.

In spite of their magnitudes, these aggregate numbers hide some of the story. Simultaneous peaking of several large projects will place strains on labour markets at specific points in time. Forecasts suggest that 1983-84 will be one such period. Further, specific skills will be lacking, thereby accelerating wage pressures.

The required rate of in-migration to the region will lead to increased disparities between western unemployment and wage rates relative to the rest of the country. Taking projected demand, unadjusted for incremental major projects, if relative unemployment differentials are maintained, and there is no net foreign migration, then the annual wage and salary differential would be 28 percent of levels in the rest of Canada. Net foreign immigration of 50 000 would reduce this income differential to 18 percent and 75 000 to 13 percent. If projects incremental to the trend are included, the wage and salary differentials are 31, 21 and 17 for levels of 0, 50 000 and 75 000 net foreign migration. Should western unemployment levels fall to one-half of those elsewhere in the country, then the last set of wage and salary differentials would be 25, 16 and 12 percent depending upon the level of net foreign immigration.

The sheer magnitude of these population flows suggests that training programs must be broadly distributed and, particularly in western Canada, aimed at those groups whose members are underutilized in the labour markets, native people and youth. This expansion will also require the necessary infrastructure ranging from quite large water systems, including perhaps interbasin transfers and heavy industrial applications through to municipal systems.

Prosperity in the west, requiring very high levels of immigration or migration from the rest of the country, also suggests that room is available for the national economy to enhance its linkages to western development.

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APPENDICES

APPENDIX I

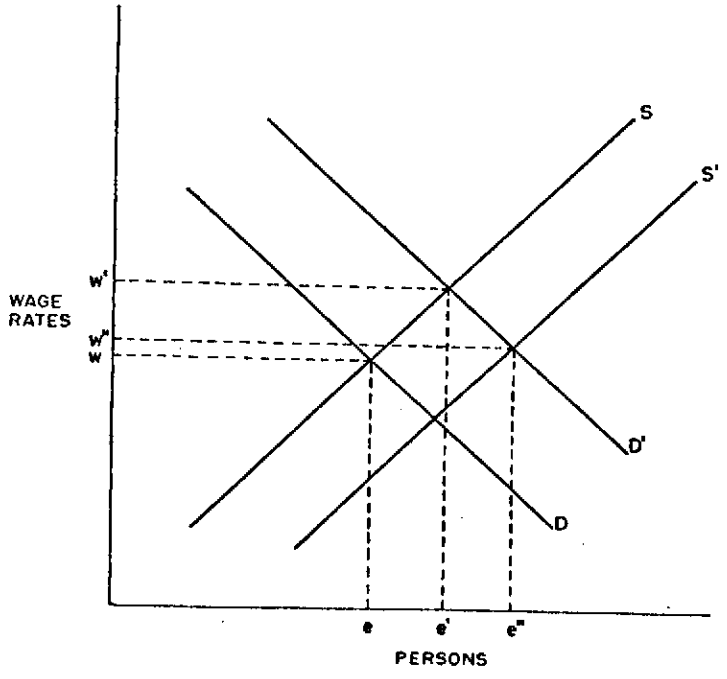
METHODOLOGY

The methodology of the preceding study is discussed in this appendix. Data and statistical documentation are found in subsequent appendices. This section points out the caveats of the study.

From the point of view of the discipline of economics, the labour market is similar to any other market; price, the wage rate, quantity, and the number of people employed are determined by the interactions of supply and demand, although demand is a derived demand. Traditionally the market may be described with an upward sloping supply curve (S) and a downward sloping demand curve (D). The market clears, or a position of equilibrium is reached where the supply and demand curves intersect. In Figure A-1 this occurs with a wage rate (w) and number of employed persons (e).

FIGURE A - 1

THE LABOUR MARKET



Increase in economic activity will result in an increased demand for labour at all wage rates. The demand curve, D, will shift rightward to D'. For equilibrium to be obtained with the existing labour supply schedule -- the existing supply curve -- the wage rate would have to rise to w' so as to entice more individuals into the labour market. With a higher wage rate, entering this specific labour market becomes more attractive. For example, if the above situation is the Alberta labour market, it is likely that there will be increased migration into the province. The result is an increase in labour supply, therefore, a movement of the supply curve from S to S'. If labour demand remains at the increased level, represented by D' in Figure A-1, a new equilibrium position should be obtained with a drop in the wage rate to w" and increased employment e".

The first position, with wage rate w and employed persons e, should be considered the current or initial position. This study assumes buoyant economic activity for western Canada in the eighties. This activity should result in increased demand for labour with the rightward shift in the demand curve represented by the movement of D to D'. The point where D' intersects S, the original supply curve, is the second position of short-run equilibrium. With increased wage rates, some employers may not be able to pay the higher wages and will lose employees to competitors for labour services and, therefore, cut back or cancel expansion. The availability of jobs and high wages will entice more people into the labour market and more migration into the region to take advantage of these opportunities. This last situation is represented by the third equilibrium position where the increased supply of labour represented by S', intersects D'.

The third position of equilibrium is the long-term position. It is possible, even probable, that increasing demand in western Canada will outstrip the increasing supply of labour. In the terms of Figure A-1, the demand curve D would continue to shift rightward while the supply curve S also shifted but lagged behind the demand curve. The result would be shortages of workers and upward pressure on wages making it more difficult for marginal operations to stay in business. However, it must be remembered that the above is an oversimplification of labour market reactions in that the process is ongoing. Changes in the market occur in a dynamic fashion.

The stepwise simplification is useful to illustrate the areas that concern this analysis. Here, the interest is in the shift of the demand and supply curves and the resulting pressures in the labour market. The increase in labour demand over the study period will be largely due to major engineering projects. These types of projects have unionized labour whose wages will be determined by negotiations. To obtain workers, other employers will have to pay the going wage rate. Of course a tight labour market will give the bargaining strength in wage negotiation to unions.

a) Labour Demand:

The demand for labour during the period in question is the continuing demand from the previous period plus net new demand.

$D_t = D_t - ND_t$ where: D_t is the demand for labour in time period t

D_{t-1} is demand continuing from the previous period, and

ND_t is new demand for labour in time period t

If the assumption is made that, in the past, total demand for labour was met at the wage rates of the time, employment may be used as a proxy for labour demand. This will, however, increase downward bias. Employment data, as a proxy for past demand for labour is used in this study.[11] Future demand has been estimated by using trend analysis and interpolating incremental major project employment.

Our projection of the trend line assumed a constant rate of growth commensurate with past experience for each province. These equations suggest that the demand for labour will increase at an annual rate of 1.98, 1.76, 4.32 and 3.87 percent for Manitoba, Saskatchewan, Alberta and British

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[11] Past data from: Statistics Canada Historical Labour Force Statistics, Catalogue No. 71-201 annual.

Columbia respectively. By its nature, trend analysis projects the future based solely on past data used to develop the trend. If demand for labour is growing more rapidly than in the past the trend may underestimate demand. Moreover, this form of analysis cannot foresee structural changes.

These types of estimated relationships are insensitive to an upturn in activity as foreshadowed by planned major projects. Estimates of major projects believed by DREE in consultation with others to be incremental to the trends were developed. DREE recognizes that this is a guessing game but feels confident in this approach as economic activity is expected to be very buoyant within western Canada over the study period. However, data from the trend alone is also used and the list of incremental projects is presented in Appendix II-2 for any who wish to adjust the estimates inclusive of incremental projects. Trends based on 1973 to 1979 data were also developed. This short-term trend emphasizes the situation since the 1973 energy crisis. The resulting employment estimate proved to be 98 000 persons more by 1990 than the estimate based on the longer trend plus assumed incremental projects. Both sets of trends and the list of incremental projects are presented in additional appendices.

The list of incremental projects was assembled with data coming from various sources -- mostly secondary.[12] Newspapers, financial papers, and trade journals provided much of the information. Where available, special reports on an individual project were used (three reports supplied the most reliable data). The DREE Input/Output Model was utilized to derive much of the direct employment and all of the induced impacts.[13] Where estimates of permanent employment were unavailable, numbers were derived using judgement and comparisons to other large projects. It is probable that there will

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[12] Any list of major projects becomes dated as soon as it is completed. Nevertheless, lists of this type give an indication of the magnitude of expected development.

[13] Note that the DREE Input/Output Model is quite dated. It is based on the structure of the Canadian economy as it was in 1966. This weakens the reliability of the major projects data, but does yield an estimate where no other one is available.

be more projects coming on stream towards the end of the decade than have been announced to date. As a result, some projects that will start later in the decade have been added to the list. Overall, the timing of the projects is as announced, however, in some cases it has been a judgement call.

For incremental projects, employment data disaggregated by year were used where available. If only a total employment figure were obtainable, it was disaggregated by the following proportions, depending on the length of the project, to derive yearly construction employment. These proportions approximate past performance of major projects.

PERCENTAGE DISTRIBUTIONS USED TO ALLOCATE CONSTRUCTION EMPLOYMENT %

	1	2	3	4	5	6	7
2 Year Project	50	50					
3 Year Project	15	45	40				
4 Year Project	15	20	35	30			
5 Year Project	10	15	25	30	20		
6 Year Project	10	15	25	25	20	5	
7 Year Project	5	15	20	20	20	15	5

If only the capital cost of a project were known, employment was derived from the DREE Input/Output Model. A comparison of the construction employment figures that were available from special reports with those derived showed that the Input/Output Model consistently overestimated construction employment. As a result, the construction employment coefficients relating employment to investment from the Input/Output Model used in this study were reduced by 50 percent. This is reasonable since the projects discussed here are for large capital projects only, whereas the construction coefficient of the Input/Output Model represents all types of construction. Residential construction, which makes up a large part of the coefficient is more labour-intensive

than the types of projects under consideration here. The employment figures generated by this means were then disaggregated to yearly construction employment numbers by the proportions mentioned above. These data are presented in Appendix II-2.

b) Labour Supply:

The available supply of future labour is that part of the projected population that participates in the labour market. Projected population is made up of two components: population presently internal to the region or born within the region and net migrants. In functional form:

$S = aP \quad aNM$ where: S is the supply of labour
P is the population of labour force age
NM is net migrants of labour force age, and
a is the labour force participation rate.

To project the supply of labour, estimates of P, A, and NM are required.

(i) Population:

Mortality and fertility are the variables that affect internal population growth assuming zero migration. Fertility is not a concern in this study since all those who can possibly be in the labour force by 1990 are already born. The labour force is defined as the population between the ages of 15 and 65. Death rates in Canada are already low and any further reduction will be negligible; therefore, mortality may be assumed to be fairly constant. Internal population over the time period of this study is a stable variable.14

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14 Statistics Canada: op. cit..

(ii) Labour Force Participation Rates:

Over the period 1980 through 1990 the coefficient of labour force participation is a crucial and volatile variable. This coefficient is defined as the ratio of the labour force to the adult population of labour force age.

> "Changes in the participation rate over time are governed by long run socioeconomic developments which cause the particular labour supply to alter their propensity or inclination to enter or withdraw from the labour force in proportions contrary to past behaviour."[15]

There are three principal factors affecting participation rates: age, sex and region or province of residence.

The male participation rate is relatively stable; if anything, it may be dropping slightly. This drop is due to early retirement and longer school attendance of those beginning their working lives. Recently, there has been some shift away from longer schooling towards full time labour force participation. This may reflect the realization that education, by itself, is not a guarantee of gainful employment. Prime age males, those 24 to 64 years, have the highest labour force participation rates of any subgroup. Moreover, these rates have been, and are expected to remain, fairly constant.

The most precarious aspect of forecasting the labour force is estimating female labour force participation rates. Both the Economic Council of Canada and the Department of Finance, in the past, have underestimated future female participation rates. The female rate for the country as a whole has gone up from 36.5 percent in 1970 to 47.8 percent in 1978, an increase of 11.3 points or 31 percent.

In general, married women have a greater element of choice of whether or not to participate in the labour force. Some of the variables that may influence this choice are the

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[15] Ostry, Sylvia, and Zaidi, Mahood, A: Labour Economics in Canada, 3rd ed., MacMillan, Toronto, 1979.

spouse, family or household income, number and age of children, decision to have children, employability, the work environment and the availability of employment. It is often necessary to have two earners in the family to maintain the desired standard of living. Improved birth control methods have made the choice available of whether to have any children or to postpone child bearing. There appears to be a trend towards first births by women over 30 after they are well established in the labour force. Availability of day-care permits women to work and raise a family. Moreover, greater societal acceptance of working mothers should remove any of the remaining stigma attached to them. Child bearing later in life may reduce female labour force participation of the older age groups. Whether or not the later child bearers stay out of the labour force is difficult to estimate. In fact, whether the phenomena of late child bearers actually materializes is difficult to estimate.

Because of the difficulties in predicting labour force participation rates, notably for the female population, three versions of the participation rates, "a" are postulated. In all cases "a" is defined as a vector with differing elements for each age and sex cohort.

The first is the 1978 labour force participation rate for both sexes. The second is the current male rate for both sexes. Last is the provincial rates increasing at the rate forecast by the Hudson Institute.[16] Three labour force scenarios, assuming zero net migration from 1976 forward, result from the three participation rates; these are plotted on Chart A-2.

The labour supply developed from using the current male participation rate for both sexes is a hypothetical maximum. In the time period of this study, the female participation rate would hever reach the male rate. It does, however, demonstrate the magnitude of potential variation

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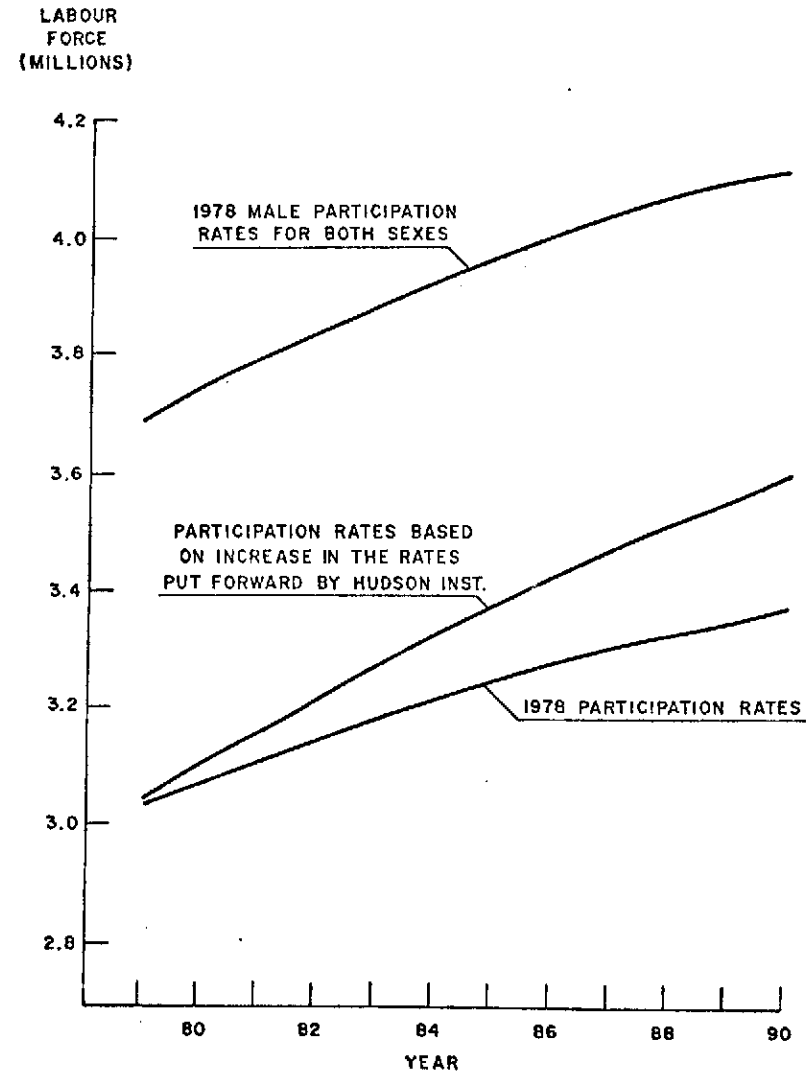
[16] Drouin, M. and Brude-Briggs, B: Canada Has a Future, McClelland and Stewart Limited, Toronto, 1978. Various specific rates appear in Appendix III-1.

CHART A - 2

ESTIMATED NATURAL LABOUR FORCE BASED ON SELECTED PARTICIPATION RATES, WESTERN CANADA, 1979 - 1990



and gives an upper limit of labour supply due to increased participation rates. This version of the labour supply is not presented in the text; however, data on this version are in Appendix III as are data on other versions.

The 1978 labour force participation rates reflect the status quo and are the most conservative. The Hudson Institute's projected rates of change in labour force participation are the most sophisticated in their underlying assumptions. Vagaries in participation rates of both sexes, as previously discussed, are taken into account by the Hudson Institute. Some feel that female participation rates have peaked or are very close to peaking (this has been felt before) and if so, this last version may be somewhat optimistic. The Hudson Institute states "female participation rates in Canada are lower than in many European countries, and will almost certainly continue to increase."[17]

Labour force participation rate data were already differentiated for age and sex. Historical data were further disaggregated by provinces, thus providing a regional dimension. The Hudson Institute's projected rates were developed only on a national basis. Starting with actual 1978 participation rates the annual change forecasted by the Institute, on a national basis, was calculated (see Table 2, Appendix III-1). This annual change was addressed to the actual provincial 1978 participation rates, disaggregated by age and sex, to develop yearly estimates of the labour force until 1990. This method provides a regional dimension to the national estimates. These data may be found in Appendix III-1.

(iii) Indigenous Labour Supply:

The indigenous labour supply is the supply of labour that would result in the absence of any migration. Statistics Canada has produced projections from the 1976 census forecasting forward population assuming zero migration. Since the Statistics Canada projection starts from 1976, there has been three years of in-migration that should be included in the indigenous labour supply if one considers it to be from 1979 forward as is done in this study.

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[17] Drouin and Bruce-Briggs: op. cit; p.98.

Some simplifying assumptions were required to estimate the effect on the labour supply of the three years of migration. Net migration for these years are found in Table A-3.

TABLE A-3

NET MIGRATION INTO THE FOUR WESTERN PROVINCES

Year	Net Migration
1976-77	28 913
1977-78	36 825
1978-79	41 253
TOTAL	106 991

All of these migrants will not enter the labour force. Some may be too old, some may be too young, and others will choose to remain outside its boundaries. However, people generally migrate so as to obtain employment. Further, some of the children who have migrated to the west over these three years will reach labour force age and participate in the labour force during the time horizon of this study. Primarily for this reason, the relatively high labour force participation rate of 80 percent is used to estimate the additional labour supply due to the net migration from 1976 to 1979. As a result, 85 593 persons are added to the indigenous labour supply for both the high and low estimates.

(iv) Foreign Migration:

Western Canada will certainly receive some net foreign migration. From 1975 to 1978 the four western provinces received approximately 30 percent of net Canadian immigration. In this paper two scenarios of net foreign immigration are postulated: one of 75 000 and the other of 50 000. We assume that 30 percent of these people will

settle in the western provinces and that 80 percent will join the labour force. These persons are added to the indigenous labour force so as to be used with the demand projections to estimate the resultant shortage of supply that must be obtained from other sources.

In functional form the supply of labour would be:

$$S = aP + (.08)(.03)(NFM)$$

where: S is the supply of labour,
P is the indigenous population,
a is the labour force participation rate of the indigenous population,
and NFM is net foreign migration to Canada.

(v) Frictional Unemployment Rate:

To make the labour supply reflect those actually available, it must be reduced by the "frictional rate of unemployment" which, in short, is the rate required to accommodate transitional unemployment. It is postulated that when the unemployment rate falls below the frictional rate, inflation will accelerate. In Canada three percent unemployment was regarded as full employment (four percent in the U.S.) during the 1950s and much of the 1960s. Many now believe three percent is impractical, that the level should be five or even six percent.[18] However, three percent is used here which may be conservative, but with the abundance of opportunities expected in the region, it is probably reasonable.

In effect, by incorporating a value for the frictional rate of unemployment, the data are discounted for transitional unemployment. Thus, the discounted labour supply is the available labour under our assumptions. The labour force from net foreign migration is not reduced for frictional unemployment. It is probably accounted for in

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[18] Kaufman, Rogers: "Why the U.S. Unemployment Rate Is So High": Challenge; Vol. 21, No. 2, May/June 1978, pp. 40-49.

the 80 percent participation rate applied to these persons; further, many immigrants enter the country having a job waiting for them.

The frictional rate of unemployment is assumed to be:

Since $S = aP$ for the indigenous labour supply, and
$S = aP + (.08)(.03)(NFM)$ with foreign migration

$SA = aP - .03aP$ for the indigenous labour force, and

$SA = aP + (.08)(.03)(NFM) - .03aP$ with net foreigm migration

where: S is the supply of labour
P is the indigenous population
a is the labour force participation rate of the indigenous population
NFM is Canadian net foreign migration
and SA is the supply of labour adjusted for frictional unemployment.

Economic Incentives to Migration:

A trade-off relationship between the wages and salaries differential and the unemployment rate differentials that would induce the required in-migration was developed. This was accomplished by first estimating the relationship.[19]

$NM = a + b_1WSD + b_2URD$ where:

NM represents adult net migration;
WSD represents the proportional average wage rate differential between the four western provinces and the rest of Canada; and
URD represents the proportional unemployment rate differential between the rest of Canada.

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[19] For simplicity of interpretation, the chart in the text derived from this relationship was transformed to present ratios between the west and the rest of the country for wages and salaries and unemployment rates.

If the assumption that the shortfall of employees will be obtained by an equal amount of annual in-migration is made, an estimate for required annual net migration, NM, is available. By substituting this value for NM into the above relationship, a trade-off between WSD and URD to obtain this in-migration is obtained.

An estimate of Demand for employment in excess of the indigenous labour force for 1990 has been determined using trend analysis for demand and projections of the indigenous labour force. Unfortunately, this analysis does not account for the reduction in demand for labour due to increasing wages and salaries.[20] So as to correct somewhat for this, the smallest labour demand projection is emphasized in the text. Moreover, there are a number of megaprojects over the study period that are very capital-intensive and rather than have the large amount of capital stand idle, these employers will pay high wages so as to obtain the required labour. For these reasons and due to the general economic buoyancy of the western economy, it is likely that estimates derived from the methodology used here are acceptable.

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[20] Attempts were made to develop models to account for the reduction in the demand for labour due to increased wages and salaries. All models proved statistically insignificant.

APPENDIX II

LABOUR DEMAND

APPENDIX II - 1

1966-1979 EMPLOYMENT TREND REGRESSIONS

$$E_M = 94.32e^{.0198t} \quad (24.1) \qquad R^2 = .98$$

$$E_S = 99.24e^{.0176t} \quad (8.18) \qquad R^2 = .85$$

$$E_A = 31.18e^{.0432t} \quad (26.76) \qquad R^2 = .98$$

$$E_{BC} = 53.87d^{.0387t} \quad (40.55) \qquad R^2 = .99$$

1973-1979 EMPLOYMENT TREND REGRESSIONS

$$E_M = 114.44e^{.0173t} \quad (8.52) \qquad R^2 = .94$$

$$E_S = 31.86e^{.0325t} \quad (28.82) \qquad R^2 = .99$$

$$F_A = 15.99e^{.0520t} \quad (35.65) \qquad R^2 = .99$$

$$E_{BC} = 91.03e^{.0318t} \quad (16.8) \qquad R^2 = .98$$

Where: E represents employment,
t represents time,
M represents Manitoba,
S represents Saskatchewan,
A represents Alberta
BC represents British Columbia

t statistics in brackets

The trend for the west in aggregate was developed by summing the results of these regressions.

APPENDIX II - 2

MAJOR PROJECTS ASSUMED INCREMENTAL TO THE TREND

DC represents direct construction employment

DPER represents direct operational employment

P represents total employment induced in province of impact

C represents total employment induced in Canada

It is total employment induced in province of impact that is added to the trend to produce the high demand estimate.

MAJOR PROJECTS ASSUMED INCREMENTAL TO 1966-1973 TREND
TOTAL WEST

Year	D	P	C
1980	3 263	8 081	11 714
1981	12 329	30 168	44 919
1982	21 511	52 280	77 491
1983	33 154	81 027	107 562
1984	33 021	80 428	119 817
1985	24 702	63 852	90 567
1986	27 120	69 286	98 530
1987	27 002	72 921	104 424
1988	32 043	79 926	114 540
1989	26 572	67 639	94 850
1990	17 138	46 035	58 844

SASKATCHEWAN

MAJOR PROJECTS ASSUMED INCREMENTAL TO 1966-1973 TREND

PROJECT	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Husky Heavy Oil Upgrading Plant Lloydminster			3 322C 1 935P 750DC	9 967C 5 805P 2 250DC	8 860C 5 160P 2 000DC	2 148C 909P 300DP	2 148C 909P 300DP	2 148C 909P 300DP	2 148C 909P 300DP	2 148C 909P 300DP	2 148C 909P 300DP
Foothills Natural Gas Pipeline		4 430C 2 580P 1 000DC	70C 56P 32DP	70C 56P 32DP	70C 56P 32DP	70C 56P 32DP	70C 56P 32DP	70C 56P 32DP	70C 56P 32DP	70C 56P 32DP	70C 56P 32DP
Eldorado Uranium Refinery, Warman			380C 221P 86DC	1 147C 668P 259DC	1 018C 593P 230DC	1 148C 470P 200DP	1 148C 470P 200DP	1 148C 470P 200DP	1 148C 470P 200DP	1 148C 470P 200DP	1 148C 470P 200DP
Midwest Lake Uranium Mine/Mill NOTE - Key Lake go 1 year earlier, we assume included in trend		265C 152P 60DC	797C 457P 180DC	708C 406P 160DC	966C 460P 300DP	966C 460P 300DP	966C 460P 300DP	966C 460P 300DP	966C 460P 300DP	966C 460P 300DP	966C 460P 300DP
Additional Uranium Mine (Speculation) (Replication of Midwest Above)						265C 152P 60DC	797C 457P 180DC	708C 406P 160DC	966C 460P 300DP	966C 460P 300DP	966C 460P 300DP
		4 695C 2 732P 1 060D	4 569C 2 669P 1 048D	11 892C 6 935P 2 701D	10 914C 6 269P 2 562D	4 597C 2 047P 892D	5 129C 2 352P 1 012D	5 040C 2 301P 992D	5 298C 2 355P 1 132D	5 298C 2 355P 1 132D	5 298C 2 355P 1 132D

C - Total Induced Employment in Country as a Whole
P - Total Induced Employment in Province of Impact
DC - Direct Construction Employment
DP - Direct Permanent Employment
D - Total Direct Employment

ALBERTA

MAJOR PROJECTS ASSUMED INCREMENTAL TO 1966-1973 TREND

PROJECT	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Alsands Conventional	1 200C	10 148C	15 708C	30 711C	29 652C	5 824C	2 118C				
Oil Sands Plant;	795P	6 727P	10 413P	20 358P	19 656P	3 861P	1 404P				
Fort McMurray	340DC	2 875DC	4 450DC	8 700DC	8 400DC	1 650DC	600DC				
(already started,	624C	682C	780C	2 925C	7 020C	10 920C	10 920C	10 920C	10 920C	10 920C	10 920C
moved ahead to 1980	491P	537P	614P	2 302P	5 526P	8 596P	8 596P	8 596P	8 596P	8 596P	8 596P
start)	160DP	175DP	200DP	750DP	1 800DP	2 800DP	2 800DP	2 800DP	2 800DP	2 800DP	2 800DP
In-Situ Oil Sands	529C	8 648C	22 344C	35 052C	34 382C	11 754C					
Project; Cold	351P	5 733P	14 812P	23 236P	22 791P	7 792P					
Lake	150DC	2 450DC	6 330DC	9 930DC	9 740DC	3 330DC					
Esso Oil	487C	971C	1 723C	4 102C	7 940C	7 710C	6 329C	6 150C	6 033C	5 912C	5 912C
	383P	764P	1 356P	3 229P	6 250P	6 069P	4 982P	4 841P	4 749P	4 654P	4 654P
	125DP	249DP	442DP	1 052DP	2 036DP	1 977DP	1 623DP	1 577DP	1 547DP	1 516DP	1 516DP
Peace River Oil					529C	8 648C	22 344C	35 052C	34 382C	11 754C	
Sands (Speculation)					351P	5 733P	14 812P	23 236P	22 791P	7 792P	
Replication of Cold					150DC	2 450DC	6 330DC	9 930DC	9 740DC	3 330DC	
Lake Project Above					487C	971C	1 723C	4 102C	7 940C	7 710C	6 329C
					383P	764P	1 356P	3 229P	6 250P	6 069P	4 982P
					125DP	249DP	442DP	1 052DP	2 036DP	1 977DP	1 623DP
Alternate Oil						1 200C	10 148C	15 708C	30 711C	29 652C	5 824C
Sands Plants						795P	6 727P	10 413P	20 358P	19 656P	3 861P
(Speculation)						340DC	2 875DC	4 450DC	8 700DC	8 400DC	1 650DC
Replication of						624C	682C	780C	2 925C	7 020C	10 920C
Alsands Project						491P	537P	614P	2 302P	5 526P	8 596P
Above						160DP	175DP	200DP	750DP	1 800DP	2 800DP

...2

ALBERTA (Cont.)

PROJECT	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	199C
Foothills Natural Gas Pipeline	5 517C 3 657P 1 563DC	9 135C 6 055P 2 589DC	14 494C 9 608P 4 106DC	11 751C 7 789P 3 329DC	139C 114P 65DP	139C 114P 65DP	139C 114P 65DP	139C 114P 65DP	139C 114P 65DP	139C 114P 65DP	139C 114P 65DP
	8 357C 5 677P 2 338D	29 584C 19 816P 8 337D	55 049C 36 803P 15 528D	71 852C 56 914P 23 761D	80 149C 55 071P 22 316D	47 790C 34 215P 13 021D	54 403C 38 528P 14 910D	72 851C 51 043P 20 074D	93 050C 65 160P 25 638D	73 107C 52 407P 19 888D	40 044C 30 803P 10 454D

C - Total Induced Employment in Country as a Whole

P - Total Induced Employment in Province of Impact

DC - Direct Construction Employment

DP - Direct Permanent Employment

D - Total Direct Employment

BRITISH COLUMBIA

MAJOR PROJECTS ASSUMED INCREMENTAL TO 1966-1973 TREND

PROJECT	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Foothills Natural Gas Pipeline		1 934C 1 385P 533DC	6 047C 4 331P 1 666DC	5 161C 3 697P 1 422DC	218C 180P 92DP	218C 180P 92DP	218C 180P 92DP	218C 180P 92DP	218C 180P 92DP	218C 180P 92DP	218C 180P 92DP
Northeast Coal Development		1 375C 985P 379DC	1 056C 756P 291DC	290C 208P 80DC	4 116C 2 948P 1 134DC	8 893C 6 370P 2 450DC	12 287C 8 801P 3 385DC	7 408C 5 306P 2 041DC	2 556C 2 016P 900DP	2 556C 2 016P 900DP	2 556C 2 016P 900DP
Southeast Coal Development	392C 280P 108DC	522C 374P 144DC	914C 655P 252DC	1 420C 1 120P 500DP 784C 561P 216DC	1 420C 1 120P 500DP 1 963C 1 406P 541DC	1 420C 1 120P 500DP 5 891C 4 219P 1 623DC	1 420C 1 120P 500DP 5 234C 3 749P 1 442DC	2 556C 2 016P 900DP	2 556C 2 016P 900DP	2 556C 2 016P 900DP	2 556C 2 016P 900DP
Copper and Molybdenum Mines		755C 540P 208DC	2 265C 1 622P 624DC	2 766C 1 981P 762DC	1 420C 1 120P 500DP 2 265C 1 622P 624DC	1 420C 1 120P 500DP 2 011C 1 440P 554DC	2 840C 2 240P 1 000DP	2 840C 2 240P 1 000DP	2 840C 2 240P 1 000DP	2 840C 2 240P 1 000DP	2 840C 2 240P 1 000DP
Lead Zinc Smelter					863C 618P 238DC	1 154C 826P 318DC	2 018C 1 445P 556DC	1 731C 1 240P 477DC	1 480C 1 116P 450DP	1 480C 1 116P 450DP	1 480C 1 116P 450DP
Copper Smelter				863C 618P 238DC	1 154C 826P 318DC	2 018C 1 445P 556DC	1 731C 1 240P 477DC	1 151C 868P 350DP	1 151C 868P 350DP	1 151C 868P 350DP	1 151C 868P 350DP
Alcan Aluminum Smelter and Dam	1 815C 1 300P 500DC	4 537C 3 250P 1 250DC	4 537C 3 250P 1 250DC	4 537C 3 250P 1 250DC	4 537C 3 250P 1 250DC	4 537C 3 250P 1 250DC	2 632C 1 984P 800DP	2 632C 1 984P 800DP	2 632C 1 984P 800DP	2 632C 1 984P 800DP	2 632C 1 984P 800DP

...2

BRITISH COLUMBIA (Cont.)

PROJECT	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Hat Creek Energy Project			2 617C 1 874P 721DC	7 855C 5 626P 2 164DC	10 476C 7 503P 2 886DC	10 476C 7 503P 2 886DC	10 476C 7 503P 2 886DC	7 855C 5 626P 2 164DC	2 617C 1 874P 721DC	2 870C 2 340P 1 000DP	2 870C 2 340P 1 000DP
Prince Rupert Port	1 150C 824P 317DC	1 517C 1 086P 418DC	71C 58P 30DP 366C 262P 101DC	142C 117P 60DP	142C 117P 60DP	142C 117P 60DP	142C 117P 60DP	142C 117P 60DP	142C 117P 60DP	142C 117P 60DP	142C 117P 60DP
	3 357C 2 404P 925D	10 640C 7 620P 2 932D	17 873C 12 808P 4 935D	23 818C 17 178P 6 692D	28 574C 19 088P 8 143D	38 180C 27 590P 10 789D	38 998C 28 406P 11 198D	26 533C 19 577P 5 936D	16 192C 12 411P 5 273D	16 445C 12 877P 5 552D	16 445C 12 877P 5 552D

C - Total Induced Employment in Country as a Whole

P - Total Induced Employment in Province of Impact

DC - Direct Construction Employment

DP - Direct Permanent Employment

D - Total Direct Employment

APPENDIX II - 3

Major Projects Assumed to Be Accounted for in the Trend

MAJOR PROJECTS ASSUMED TO BE ACCOUNTED FOR IN THE TREND ESTIMATE

The following is a list of large projects that this study assumes not to be incremental to the trend estimate of employment. Where they were available, estimates of employment demand and timing are included.

MANITOBA

Nelson River Hydro Project

- 2 000 peak employment for five years
- possibly start construction in 1983

Fighter Aircraft Development

- peak employment could be as high as 1 000
- possibly start construction in 1981

SASKATCHEWAN

Potash Mines

- possibly one or two will be developed over the decade

IPSCO Steel Mill Expansion

- first phase underway which should employ 175 permanent employees
- second phase will employ 285 permanent employees and should start soon

Cluff Lake Uranium Mine/Mill

- phase one will employ at peak approximately 300 construction workers; construction is underway
- phase two will employ an additional 100 workers for construction and should be built in 1982 and 1983
- phase one operation employment from 150 to 200 persons
- phase two operation employment from 250 to 300 persons

Key Lake Uranium Mine/Mill

- construction requirements similar to Cluff Lake Uranium Mine/Mill
- operation employment should be approximately 300

SASKATCHEWAN (Cont.)

Poplar River Power Plant II

- approximately 500 man-years during construction
- approximately 50 permanent employees

ALBERTA

Great Canadian Oil Sands Plant

- this project is underway and will employ 650 to 750 construction workers during summer peaks
- approximately 175 permanent employees

Syncrude Expansion

- approximately 1 000 permanent jobs

Pacific Petroleum Heavy Oil Refinery

- approximately 5 000 construction jobs
- approximately 300 permanent employees

Coal Liquifaction Plant

- approximately 8 000 construction man-years

Consolidated Coal Mine and Plant

- approximately 520 permanent jobs

Thermal Coal Project, Hinton, Union Oil Co.

- approximately 100 permanent jobs

Paint Earth Coal Mines

- approximately 100 permanent jobs

Pacific Petroleum Heavy Oil Upgrading Pland

- 350 permanent jobs
- approximately 5 000 man-years construction employment

Benzene Plant, Fort Saskatchewan

- approximately 200 permanent jobs

Synthetic Natural Gas Plant, Fort Saskatchewan

- peak construction employment 600
- 60 permanent jobs

Alberta Gas Chemical Ltd. - two methanol gas plants

- approximately 100 permanent jobs

Shell Canada Ltd., Oil Refinery

- approximately 135 permanent jobs

Esso Chemical Canada, fertilizer plant

- 150 to 200 permanent jobs

Alberta Gas Ethylene Co. Ltd., ethylene plant

Turbo Resources Ltd., Oil Refinery

Keephills Power Plant

- approximately 300 permanent jobs

Sheerness Coal Mine and Generating Plants

- 800 peak construction employment
- 240 permanent employment

Genesee Power Plant

- 190 permanent jobs

Various other commercial construction projects including a number of large office complexes.

BRITISH COLUMBIA

Revelstoke Hydroelectric Project

- under construction

Seven Mile Dam

- under consideration

Site One Dam

- under construction

Fortress Mountain Ski Resort

- under consideration

Kootney Recreation Development

MacMillan Bloedel Mill, Powell River

Deep Water Port Nanaimo

- permanent employment of 100

New Westminster Redevelopment

- 1 000 jobs per year for 10 years

Tree Island Steel Co. Rolling Mill

Methanol Plant, Ocelot Industries

- about 150 permanent jobs

All of these projects would have appropriate multiplier effects.

APPENDIX III

LABOUR SUPPLY

APPENDIX III - 1

LABOUR FORCE PARTICIPATION RATES

The labour force participation rates used to forecast labour supply are found in the following six tables. The 1978 participation rates are in the first table; this table represents current participation rates.

The second table documents the annual change in labour force participation required by selected age and sex groups to reach the forecasted, by the Hudson Institute, 1990 rate. The change is taken from the actual national 1978 participation rates. The remaining table gives the actual participation rates by age, sex, year and province based on the change forecast by the Hudson Institute.

TABLE 1

LABOUR FORCE PARTICIPATION RATES

BY AGE, SEX AND PROVINCE, 1978

AGE GROUP	SEX	MANITOBA	SASK.	ALBERTA	BRITISH COLUMBIA	CANADA
15-19	M	63.6	65.0	65.9	59.3	54.8
	F	50.4	47.7	56.5	52.3	48.0
20-24	M	87.3	91.2	89.6	87.4	85.4
	F	72.2	64.1	70.6	70.7	70.3
25-34	M	95.7	97.0	97.1	96.3	95.6
	F	59.1	53.2	59.2	60.4	59.0
35-44	M	96.2	96.9	97.4	97.1	96.0
	F	60.4	58.3	62.2	62.7	58.3
45-54	M	94.5	94.7	96.3	94.1	92.9
	F	56.4	56.1	57.1	54.3	51.0
55-64	M	77.8	79.7	81.7	73.7	76.5
	F	39.6	35.4	38.1	31.6	32.8

Source: Statistics Canada; Cat. No. 71-529

TABLE 2

PARTICIPATION RATES AND THEIR CHANGE

AS PROJECTED BY HUDSON INSTITUTE, CANADA[1]

AGE GROUP	SEX	PARTICIPATION RATE		CHANGE 1978 - 1990	ANNUAL CHANGE
		1978	1990		
15-19	M	54.8	54.2	- 0.6	- 0.05
	F	48.0	53.9	5.9	0.49
20-24	M	85.8	81.0	- 4.8	- 0.4
	F	70.3	79.9	9.6	0.8
25-34	M	95.6	95.1	- 0.5	- 0.04
	F	59.0	70.9	11.9	0.99
35-44	M	96.0	96.0	-	-
	F	58.3	71.9	13.6	1.13
45-54	M	92.9	91.5	- 1.4	- 0.12
	F	51.0	64.6	13.6	1.12
55-64	M	76.5	71.7	- 4.8	- 0.4
	F	32.8	42.7	9.9	0.83

[1] These changes are on a national basis. The 1978 participation rate is the actual rate (Statistics Canada) whereas the 1990 rate is the Hudson Institute forecasted rate.

PARTICIPATION RATES BY AGE AND SEX, WITH BASE YEAR 1978

MANITOBA

AGE GROUP	SEX	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
15-19	M	63.6	63.55	63.5	63.45	63.4	63.35	63.3	63.25	63.2	63.15	63.1	63.05	63.0
	F	50.4	50.89	51.38	51.87	52.36	52.85	53.34	53.83	54.32	54.81	55.3	55.79	56.28
20-24	M	87.3	86.9	86.5	86.1	85.7	85.3	84.9	84.5	84.1	83.7	83.3	82.9	82.5
	F	72.2	73.0	73.8	74.6	75.4	76.2	77.0	77.8	78.6	79.4	80.2	81.0	81.8
25-34	M	95.7	94.66	94.62	94.58	94.54	94.5	94.46	94.42	94.38	94.34	94.3	94.26	94.22
	F	59.1	60.09	61.08	62.07	63.06	64.05	65.04	66.03	67.02	68.01	69.00	69.99	70.98
35-44	M	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2	96.2
	F	60.4	61.53	62.66	63.79	64.92	66.05	67.18	68.31	69.44	70.57	71.7	72.83	73.96
45-54	M	94.5	94.38	94.26	94.14	94.02	93.9	93.78	93.66	93.54	93.42	93.3	93.18	93.06
	F	56.4	57.53	58.66	59.79	60.92	62.05	63.18	64.31	65.44	66.57	67.7	68.83	69.96
55-64	M	77.8	77.4	77.0	76.6	76.2	75.8	75.4	75.0	74.6	74.2	73.8	73.4	73.00
	F	39.6	40.43	41.26	42.09	42.92	43.75	44.58	45.41	46.24	47.07	47.90	48.73	49.56

These participation rates are the rates increasing at the rate proposed by the Hudson Institute.

PARTICIPATION RATES BY AGE AND SEX, WITH BASE YEAR 1978

SASKATCHEWAN

AGE GROUP	SEX	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
15-19	M	65.0	64.95	64.90	64.85	64.8	64.75	64.70	64.65	64.60	64.55	64.5	64.45	64.4
	F	47.7	48.19	48.68	49.17	49.66	50.15	50.64	51.13	51.62	52.11	52.60	53.09	53.58
20-24	M	91.2	90.8	90.4	90.0	89.6	89.2	88.8	88.4	88.0	87.6	87.2	86.8	86.4
	F	64.1	64.9	65.7	66.5	67.3	68.1	68.9	68.7	70.5	71.3	72.1	72.9	73.7
25-34	M	97.0	96.96	96.92	96.88	96.84	96.8	96.76	96.72	96.68	96.64	96.6	96.56	96.52
	F	53.2	54.19	55.18	56.17	57.16	58.15	59.14	60.13	61.12	62.11	63.1	64.09	65.08
35-44	M	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	F	58.3	59.43	60.56	61.69	62.82	63.95	65.08	66.21	67.34	68.47	69.6	70.73	71.86
45-54	M	94.7	94.58	94.46	94.34	94.22	94.1	93.98	93.86	93.74	93.62	93.5	93.38	93.26
	F	56.1	57.23	58.36	59.49	60.62	61.75	62.88	64.01	65.14	66.27	67.4	68.53	69.66
55-64	M	79.7	79.3	78.9	78.5	78.1	77.7	77.3	76.9	76.5	76.1	75.7	75.3	74.9
	F	35.4	36.23	37.06	37.89	38.72	39.55	40.38	41.21	42.04	42.87	43.7	44.53	45.36

These participation rates are the rates increasing at the rate proposed by the Hudson Institute.

PARTICIPATION RATES BY AGE AND SEX, WITH BASE YEAR 1978

ALBERTA

AGE GROUP	SEX	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
15-19	M	65.9	65.85	65.8	65.75	65.7	65.65	65.6	65.55	65.5	65.45	65.4	65.35	65.3
	F	56.5	56.99	57.48	57.97	58.46	58.95	59.44	59.93	60.42	60.91	61.4	61.89	62.38
20-24	M	89.6	89.2	88.8	88.4	88.0	87.6	87.2	86.8	86.4	86.0	85.6	85.2	84.8
	F	70.6	71.4	72.2	73.0	73.8	74.6	75.4	76.2	77.0	77.8	78.6	79.4	80.2
25-34	M	97.1	97.06	97.02	96.98	96.94	96.9	96.86	96.82	96.78	96.74	96.7	96.66	96.62
	F	59.2	60.19	61.18	62.17	63.16	64.15	65.14	66.13	67.12	68.11	69.1	70.09	71.08
35-44	M	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4
	F	62.2	63.33	64.46	65.59	66.72	67.85	68.98	70.11	71.24	72.37	73.5	74.63	75.76
45-54	M	96.3	96.18	96.06	95.94	95.82	95.7	95.58	95.46	95.34	95.22	95.1	94.98	94.86
	F	57.1	58.23	59.36	60.49	61.62	62.75	63.88	65.01	66.14	67.27	68.4	69.53	70.66
55-64	M	81.7	81.3	80.9	80.5	80.1	79.7	79.3	79.9	78.5	78.1	77.7	77.3	76.9
	F	38.1	38.93	39.76	40.59	41.42	42.25	43.08	43.91	44.74	45.57	46.4	47.23	48.06

These participation rates are the rates increasing at the rate proposed by the Hudson Institute.

PARTICIPATION RATES BY AGE AND SEX, WITH BASE YEAR 1978

BRITISH COLUMBIA

AGE GROUP	SEX	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
15-19	M	59.3	59.25	59.2	59.15	59.1	59.05	59.0	58.95	58.9	58.85	58.8	58.75	58.7
	F	52.3	52.79	53.28	53.77	54.26	54.75	55.24	55.73	56.22	56.71	57.2	57.69	58.18
20-24	M	87.4	87.0	86.6	86.2	85.8	85.4	85.0	84.6	84.2	83.8	83.4	83.0	82.6
	F	70.7	71.5	72.3	73.1	73.9	74.7	75.5	76.3	77.1	77.9	78.7	79.5	80.3
25-34	M	96.3	96.26	96.22	96.18	96.14	96.1	96.06	96.02	95.98	95.94	95.9	95.86	95.82
	F	60.4	61.39	62.38	63.37	64.36	65.35	66.34	67.33	68.32	69.31	70.3	71.29	72.28
35-44	M	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1
	F	62.7	63.83	64.96	66.09	67.22	68.35	69.48	70.61	71.74	72.87	74.0	75.13	76.26
45-54	M	94.1	93.98	93.86	93.74	93.62	93.5	93.38	93.26	93.14	93.02	92.9	92.78	92.66
	F	54.3	55.43	56.56	57.69	58.82	59.95	61.08	62.21	63.34	64.47	65.6	66.73	67.86
55-64	M	73.7	73.3	72.9	72.5	72.1	71.7	71.3	70.9	70.5	70.1	69.7	69.3	68.9
	F	31.6	32.43	33.26	34.09	34.92	35.75	36.58	37.41	38.24	39.07	39.9	40.73	41.56

These participation rates are the rates increasing at the rate proposed by the Hudson Institute.

APPENDIX III - 2

THE INDIGENOUS LABOUR FORCE

The indigenous labour force is that labour force projected from 1976 Census assuming zero migration, either in or out. The following tables give the indigenous labour force by province, age and sex using labour force participation rates documented in Appendix III-1.

These data have not been adjusted for the frictional unemployment rate nor have they been adjusted for in-migration from 1976-79, however these adjustments have been made for data in the text.

SUPPLY BASED ON 1978 PARTICIPATION RATES

INDIGENOUS

LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON 1978 PARTICIPATION RATES, (000)
BOTH SEXES

YR	AGE	MAN	SAS	ALTA	B.C.	WEST
1979						
	15-19	58.1	56.2	119.9	135.2	369.5
	20-24	78.0	71.5	153.4	180.3	483.4
	25-34	128.4	99.3	255.5	329.7	813.2
	35-44	87.0	71.5	175.6	241.3	573.3
	45-54	77.3	70.8	145.9	197.3	419.3
	55-64	56.5	52.0	87.1	121.0	316.7
	TOTAL	485.5	421.5	937.6	1205.1	3047.7
1980						
	15-19	57.2	55.3	118.0	131.9	362.6
	20-24	78.7	73.4	153.7	183.9	489.8
	25-34	132.9	104.7	284.8	336.4	838.9
	35-44	87.2	72.6	180.6	246.2	588.7
	45-54	76.5	69.8	147.2	196.5	490.1
	55-64	56.6	52.1	88.9	121.6	319.4
	TOTAL	489.4	428.2	953.3	1218.8	3089.8
1981						
	15-19	55.6	53.6	114.3	126.9	350.6
	20-24	79.6	75.0	153.9	186.9	495.5
	25-34	137.3	109.9	273.8	342.7	863.8
	35-44	89.9	74.0	185.9	255.5	605.4
	45-54	75.9	69.0	148.6	196.3	489.9
	55-64	57.0	52.1	91.0	122.9	323.2
	TOTAL	495.5	434.0	967.7	1231.3	3128.6
1982						
	15-19	53.8	51.7	110.8	122.0	338.5
	20-24	80.1	76.1	154.2	189.1	499.6
	25-34	139.1	113.9	277.6	342.0	872.6
	35-44	95.0	77.0	195.9	269.1	637.2
	45-54	75.4	68.3	149.5	196.2	489.5
	55-64	57.2	52.1	93.1	124.2	326.7
	TOTAL	500.8	439.3	981.4	1242.9	3164.6
1983						
	15-19	51.7	49.1	106.3	115.8	323.1
	20-24	80.6	77.1	155.4	190.7	503.9
	25-34	141.3	118.4	281.0	343.4	884.2
	35-44	99.6	79.6	205.9	281.7	666.9
	45-54	75.1	67.5	150.3	196.8	489.9
	55-64	57.5	52.2	95.3	125.7	330.9
	TOTAL	506.0	444.1	994.5	1254.3	3199.1
1984						
	15-19	49.9	46.7	102.1	111.2	310.0
	20-24	80.7	77.1	155.9	190.1	504.0
	25-34	143.5	123.4	284.9	340.6	896.6
	35-44	103.9	82.5	214.8	292.6	694.0
	45-54	75.3	66.8	151.3	197.6	491.2
	55-64	57.5	52.1	97.5	127.1	334.4
	TOTAL	511.0	449.0	1006.8	1265.5	3232.5

INDIGENOUS

LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON 1976 PARTICIPATION RATES, (000)
BOTH SEXES

YR	AGE	MAN	SAS	ALTA	B.C.	WEST
1985						
	15-19	48.6	44.8	100.1	108.7	302.3
	20-24	79.5	75.9	153.5	185.5	494.6
	25-34	140.2	128.5	289.6	351.0	915.4
	35-44	108.5	85.9	223.7	303.4	721.7
	45-54	75.4	66.2	152.0	198.8	492.6
	55-64	57.3	51.8	99.2	127.1	335.5
	TOTAL	515.6	453.3	1018.3	1274.9	3262.2
1986						
	15-19	48.3	43.9	99.4	107.9	299.6
	20-24	77.3	73.0	148.7	178.5	476.3
	25-34	148.9	133.1	294.1	355.6	931.8
	35-44	112.6	88.6	232.1	312.3	746.0
	45-54	76.2	66.2	153.7	201.1	497.3
	55-64	56.8	51.5	100.6	127.2	336.3
	TOTAL	520.3	457.4	1029.1	1282.8	3289.6
1987						
	15-19	48.0	43.1	97.8	106.1	295.1
	20-24	74.8	72.6	144.2	171.6	463.4
	25-34	150.8	137.1	297.3	358.7	944.1
	35-44	117.0	92.5	240.9	320.5	771.0
	45-54	78.9	66.2	156.0	204.6	503.9
	55-64	56.2	50.7	101.3	126.4	334.9
	TOTAL	524.0	462.5	1037.9	1288.2	3312.7
1988						
	15-19	47.9	42.8	96.8	104.7	292.2
	20-24	71.8	67.5	138.3	162.9	440.7
	25-34	152.3	140.7	299.9	362.2	955.2
	35-44	120.8	96.2	248.9	327.2	793.2
	45-54	78.6	66.7	159.6	209.8	514.8
	55-64	55.7	50.3	102.8	126.3	335.2
	TOTAL	527.3	464.4	1046.5	1293.2	3331.6
1989						
	15-19	47.6	42.3	95.6	101.7	287.4
	20-24	69.3	64.1	132.8	156.5	422.9
	25-34	153.0	143.1	300.6	364.3	961.1
	35-44	124.8	100.9	257.4	332.5	815.7
	45-54	80.8	67.4	164.0	216.5	528.9
	55-64	55.1	49.9	103.8	125.7	334.6
	TOTAL	530.8	467.8	1054.5	1297.5	3350.8
1990						
	15-19	47.2	42.0	94.0	98.7	282.1
	20-24	67.6	61.6	130.2	152.9	412.4
	25-34	152.6	143.8	298.5	363.2	958.2
	35-44	129.3	106.2	266.8	339.4	841.8
	45-54	83.2	68.3	166.7	222.9	543.3
	55-64	54.4	49.2	104.6	125.1	333.7
	TOTAL	534.6	471.4	1063.2	1302.4	3371.7

INDIGENOUS

LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON 1978 PARTICIPATION RATES, (000)

MALES

YR	AGE	MAN	SAS	ALTA	B.C.	WEST
1979						
	15-19	33.0	32.9	65.9	73.1	105.0
	20-24	43.0	42.5	87.4	100.4	273.5
	25-34	79.7	65.4	160.7	203.6	509.6
	35-44	53.9	45.0	109.0	149.6	357.7
	45-54	48.3	44.3	93.6	127.5	313.9
	55-64	36.0	35.7	58.6	81.8	212.3
	TOTAL	294.2	266.1	575.5	736.2	1672.2
1980						
	15-19	32.4	32.4	64.7	71.3	200.9
	20-24	43.6	43.6	87.6	102.8	277.8
	25-34	82.3	68.9	160.6	20.7	525.3
	35-44	55.6	45.7	111.9	155.6	368.8
	45-54	47.9	44.1	94.7	127.6	314.4
	55-64	36.1	35.7	59.8	82.1	213.8
	TOTAL	298.0	270.6	585.6	744.9	1699.3
1981						
	15-19	31.4	31.3	62.6	68.5	194.0
	20-24	44.2	44.6	87.8	104.7	281.6
	25-34	85.0	72.2	172.3	210.7	540.3
	35-44	57.2	46.6	114.9	157.6	376.4
	45-54	47.6	43.5	95.7	127.8	314.7
	55-64	36.2	35.6	61.1	83.2	216.2
	TOTAL	301.9	274.1	594.6	752.8	1923.6
1982						
	15-19	30.4	30.3	60.7	65.9	187.9
	20-24	44.6	45.3	88.1	106.3	284.5
	25-34	86.0	74.7	174.6	209.9	545.4
	35-44	60.5	46.5	121.0	165.6	395.9
	45-54	47.3	43.0	96.3	127.7	314.5
	55-64	36.4	35.5	62.5	84.4	216.9
	TOTAL	305.3	277.6	603.5	760.3	1947.4
1983						
	15-19	29.3	28.9	58.4	62.6	179.3
	20-24	44.9	45.6	88.7	107.3	286.8
	25-34	87.4	77.6	176.8	210.7	552.6
	35-44	63.2	50.3	127.1	173.2	414.0
	45-54	47.1	42.6	96.3	128.0	314.2
	55-64	36.5	35.6	64.3	86.0	222.6
	TOTAL	308.7	281.1	611.8	766.0	1969.7
1984						
	15-19	28.3	27.4	56.0	60.1	172.0
	20-24	45.0	45.8	88.9	106.9	286.6
	25-34	88.8	80.8	179.3	212.8	561.7
	35-44	66.0	52.1	132.6	179.5	430.4
	45-54	47.3	42.1	96.7	128.5	314.9
	55-64	36.4	35.6	66.0	87.4	225.6
	TOTAL	312.1	284.0	619.6	775.5	1991.6

INDIGENOUS
LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON 1978 PARTICIPATION RATES, (000)
MALES

YR	AGE	MAN	SAS	ALTA	B.C.	WEST
1985						
	15-19	27.6	26.3	54.9	58.8	167.7
	20-24	44.2	45.2	45.2	87.3	281.2
	25-34	90.4	84.0	182.0	215.8	572.3
	35-44	68.9	54.3	138.2	185.7	447.2
	45-54	47.5	41.8	90.9	129.0	315.3
	55-64	36.4	35.3	67.4	88.0	227.2
	TOTAL	315.2	287.1	627.0	781.9	2011.3
1986						
	15-19	27.4	25.8	54.6	58.4	166.3
	20-24	42.9	43.7	84.6	100.2	271.6
	25-34	92.4	87.1	184.9	218.7	583.3
	35-44	71.4	56.3	143.3	190.8	462.1
	45-54	47.9	41.6	97.6	130.1	317.5
	55-64	36.2	35.2	66.6	88.6	228.7
	TOTAL	318.4	289.9	634.1	787.2	2029.8
1987						
	15-19	27.2	25.3	54.0	57.5	164.1
	20-24	41.4	42.3	82.0	96.4	265.0
	25-34	93.6	89.4	186.9	221.2	591.2
	35-44	74.1	58.8	148.7	195.1	476.8
	45-54	48.4	41.6	98.9	131.7	320.8
	55-64	35.9	34.7	69.3	88.8	228.8
	TOTAL	321.0	292.3	640.1	790.9	2047.1
1988						
	15-19	27.2	25.1	53.4	56.6	162.5
	20-24	39.9	40.3	78.9	91.5	250.8
	25-34	94.8	91.5	188.3	223.6	599.3
	35-44	76.2	61.3	153.4	198.6	489.6
	45-54	49.4	41.9	101.1	134.8	327.3
	55-64	35.8	34.4	76.6	89.3	230.3
	TOTAL	323.6	294.7	645.9	794.8	2059.1
1989						
	15-19	27.1	24.8	52.6	55.0	159.7
	20-24	38.5	38.3	75.8	88.0	240.7
	25-34	95.4	93.1	189.0	225.5	603.1
	35-44	78.5	64.2	158.3	201.0	502.3
	45-54	50.6	42.3	103.4	138.7	335.3
	55-64	35.7	34.0	71.6	89.3	230.7
	TOTAL	326.3	296.8	650.9	797.9	2072.0
1990						
	15-19	27.0	24.7	51.8	53.4	157.1
	20-24	37.6	36.8	74.2	86.0	234.7
	25-34	95.3	93.5	187.5	225.5	601.9
	35-44	81.0	67.6	164.2	204.5	517.5
	45-54	52.4	42.9	100.1	142.4	344.0
	55-64	35.3	33.7	72.3	89.4	230.9
	TOTAL	328.9	299.3	650.4	801.5	2080.3

INDIGENOUS

LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON 1978 PARTICIPATION RATES, (000)

FEMALES

YR	AGE	MAN	SAS	ALTA	B.C.	WEST
1979						
	15-19	25.0	23.2	54.0	62.0	164.4
	20-24	35.0	28.9	66.3	80.2	210.6
	25-34	46.8	34.1	94.8	126.5	304.4
	35-44	33.2	26.5	60.6	92.0	218.5
	45-54	29.2	26.3	52.3	70.4	178.3
	55-64	20.1	16.3	28.4	39.3	104.4
	TOTAL	191.7	155.6	362.7	470.6	1180.8
1980						
	15-19	24.8	22.9	53.3	60.4	161.5
	20-24	35.2	29.8	66.4	81.3	212.7
	25-34	50.7	35.9	98.2	129.5	314.5
	35-44	34.1	26.9	68.7	94.9	224.7
	45-54	28.8	25.8	52.6	69.7	177.1
	55-64	20.3	16.4	29.1	39.5	105.5
	TOTAL	194.1	157.9	368.6	475.5	1196.3
1981						
	15-19	24.1	22.2	51.6	58.3	156.4
	20-24	35.5	30.3	66.3	82.4	214.7
	25-34	52.3	37.6	101.7	132.2	324.1
	35-44	35.2	27.4	70.9	97.8	231.5
	45-54	28.5	25.5	53.1	69.4	176.7
	55-64	20.5	16.4	29.8	39.9	106.8
	TOTAL	196.3	160.0	373.7	480.2	1210.3
1982						
	15-19	23.4	21.4	50.1	56.0	150.9
	20-24	35.6	30.8	66.5	83.2	216.2
	25-34	53.0	39.2	103.1	132.2	327.7
	35-44	37.2	28.5	74.8	103.3	244.0
	45-54	28.3	25.2	53.5	69.5	176.6
	55-64	20.6	16.5	30.5	40.1	107.8
	TOTAL	198.4	161.8	378.7	484.4	1223.4
1983						
	15-19	22.4	20.2	47.9	53.1	143.8
	20-24	35.9	31.2	67.1	83.8	218.2
	25-34	53.6	40.9	104.4	132.7	331.9
	35-44	39.0	29.4	78.7	108.3	255.6
	45-54	28.3	25.0	54.0	69.7	177.1
	55-64	20.7	16.6	31.2	40.4	108.9
	TOTAL	200.4	163.5	383.4	488.3	1235.7
1984						
	15-19	21.6	19.2	46.0	51.0	137.9
	20-24	35.8	31.2	67.3	83.6	218.0
	25-34	54.7	42.6	105.9	133.9	337.3
	35-44	40.8	30.5	82.1	112.8	266.4
	45-54	28.3	24.7	54.5	69.9	177.6
	55-64	20.7	16.5	31.7	40.6	109.7
	TOTAL	202.2	165.0	387.7	492.1	1247.2

INDIGENOUS
LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON 1978 PARTICIPATION RATES, (000)

FEMALES

YR	AGE	MAN	SAS	ALTA	B.C.	WEST
1985						
	15-19	21.0	18.5	45.0	49.6	134.5
	20-24	35.5	30.7	66.5	81.5	214.3
	25-34	55.7	44.4	107.6	135.4	343.3
	35-44	42.6	31.7	85.4	117.3	277.1
	45-54	28.3	24.5	54.9	70.6	178.4
	55-64	20.6	16.4	32.2	40.4	109.8
	TOTAL	203.9	166.5	391.9	495.3	1257.7
1986						
	15-19	20.9	18.1	44.8	49.4	133.2
	20-24	34.5	29.8	64.4	78.6	207.6
	25-34	56.6	46.1	109.3	137.0	349.2
	35-44	44.2	32.7	86.6	121.0	286.6
	45-54	28.5	24.6	55.7	71.6	180.6
	55-64	20.4	16.2	32.6	40.1	109.6
	TOTAL	205.4	167.8	395.6	498.0	1267.0
1987						
	15-19	20.7	17.7	43.9	48.5	131.0
	20-24	33.5	28.7	62.4	75.5	200.2
	25-34	57.3	47.6	110.5	138.0	353.6
	35-44	46.0	34.0	92.1	124.5	296.7
	45-54	28.8	24.6	56.7	73.3	183.5
	55-64	20.1	16.0	32.6	39.6	108.5
	TOTAL	206.6	168.8	398.5	499.7	1273.8
1988						
	15-19	20.6	17.7	43.4	47.9	129.8
	20-24	32.0	27.1	59.7	71.7	190.7
	25-34	57.7	46.8	111.5	139.1	357.3
	35-44	47.7	35.3	95.3	127.5	305.9
	45-54	29.5	24.8	58.2	75.3	187.9
	55-64	19.8	15.9	32.9	39.4	108.2
	TOTAL	207.6	169.9	401.3	501.0	1280.0
1989						
	15-19	20.4	17.5	42.9	46.5	127.5
	20-24	30.9	25.8	57.3	68.8	182.9
	25-34	57.9	49.7	111.7	139.5	358.9
	35-44	49.4	37.0	98.7	130.1	315.4
	45-54	30.3	25.0	60.0	78.0	193.5
	55-64	19.5	15.7	33.2	38.8	107.4
	TOTAL	208.6	171.0	404.0	502.0	1285.8
1990						
	15-19	20.2	17.4	42.2	45.2	125.1
	20-24	30.1	24.8	56.2	67.3	176.6
	25-34	57.6	50.1	111.0	138.7	357.5
	35-44	51.3	39.0	102.3	133.2	325.9
	45-54	31.2	25.4	61.6	80.5	199.0
	55-64	19.2	15.5	33.4	36.5	106.8
	TOTAL	209.9	172.4	407.2	503.6	1293.1

SUPPLY BASED ON

HUDSON INSTITUTE PARTICIPATION RATES

INDIGENOUS
LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON HUDSON INSTITUTE PART. RATES,(000)
BOTH SEXES

YR	AGE	MAN	SASK	ALTA	B.C.	TOTAL
1979						
	15-19	58.3	56.4	120.5	135.7	371.0
	20-24	78.3	71.7	154.1	181.1	485.3
	25-34	128.5	100.1	257.1	332.2	818.1
	35-44	87.8	69.7	176.9	243.3	577.8
	45-54	78.1	72.2	146.9	199.2	496.6
	55-64	56.6	52.3	87.4	121.8	318.2
	TOTAL	487.7	422.6	943.3	1213.4	3067.3
1980						
	15-19	57.7	55.8	118.8	132.8	365.2
	20-24	79.2	73.8	154.7	185.0	492.9
	25-34	133.7	106.2	268.2	340.8	849.1
	35-44	91.0	73.7	183.2	251.9	599.8
	45-54	77.7	70.9	149.2	200.0	497.9
	55-64	57.0	52.5	89.6	122.9	322.1
	TOTAL	496.5	433.0	963.9	1233.7	3127.4
1981						
	15-19	56.3	54.2	115.5	128.3	354.4
	20-24	80.3	75.6	155.3	188.5	499.9
	25-34	139.0	112.1	278.9	349.1	879.2
	35-44	94.4	75.6	189.7	260.8	620.7
	45-54	77.7	70.5	151.6	201.1	501.0
	55-64	57.5	52.7	92.1	124.9	327.3
	TOTAL	505.4	441.0	983.3	1253.0	3182.8
1982						
	15-19	54.6	52.5	112.4	123.8	343.4
	20-24	81.1	76.9	156.1	191.3	505.5
	25-34	141.6	116.8	284.4	314.4	893.4
	35-44	100.5	79.3	201.3	276.6	657.9
	45-54	77.7	70.1	153.5	202.6	503.8
	55-64	58.0	52.9	94.5	127.0	332.5
	TOTAL	513.7	448.7	1002.5	1271.7	3236.7
1983						
	15-19	52.7	50.1	108.2	118.0	329.1
	20-24	81.8	78.1	157.6	193.4	511.1
	25-34	144.7	122.2	289.6	253.9	910.5
	35-44	106.0	82.6	213.0	191.3	693.0
	45-54	78.0	69.8	156.9	204.2	509.1
	55-64	58.5	53.2	97.4	129.4	338.7
	TOTAL	521.9	456.3	1022.8	1290.5	3291.6
1984						
	15-19	51.0	47.8	104.2	113.7	316.9
	20-24	82.0	78.2	156.5	193.3	512.1
	25-34	147.9	128.0	295.5	359.4	930.9
	35-44	111.5	89.2	223.7	304.6	726.1
	45-54	78.7	69.6	157.0	206.2	511.7
	55-64	58.7	53.4	100.0	131.7	343.8
	TOTAL	530.2	463.3	1039.0	1309.1	3341.8

INDIGENOUS
LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON HUDSON INSTITUTE PART. RATES,(000)
BOTH SEXES

YR	AGE	MAN	SASK	ALTA	B.C.	TOTAL
1985						
	15-19	49.9	46.0	102.4	114.6	310.1
	20-24	81.1	76.8	156.4	189.1	503.4
	25-34	151.0	134.0	301.8	366.2	953.0
	35-44	117.2	90.4	234.5	317.8	760.0
	45-54	79.3	69.4	158.6	208.7	516.3
	55-64	58.8	53.2	103.1	132.6	347.7
	TOTAL	537.4	470.0	1056.7	1326.2	3390.9
1986						
	15-19	49.7	44.4	102.2	111.2	307.7
	20-24	79.0	74.9	151.9	182.3	488.2
	25-34	155.4	139.8	308.3	373.0	976.6
	35-44	122.3	94.2	144.8	329.3	790.8
	45-54	80.5	69.7	161.4	212.4	524.2
	55-64	58.6	52.9	104.2	133.4	349.3
	TOTAL	545.8	476.2	1073.2	1341.9	3437.1
1987						
	15-19	49.6	44.6	100.9	109.7	305.0
	20-24	76.5	72.5	147.6	175.7	472.6
	25-34	158.3	144.6	313.4	378.8	995.2
	35-44	127.9	98.8	255.9	339.9	822.6
	45-54	82.0	70.2	164.7	217.2	534.3
	55-64	58.2	52.5	105.4	133.4	349.7
	TOTAL	552.7	483.5	1088.8	1355.0	3479.5
1988						
	15-19	49.7	44.5	100.2	108.6	303.1
	20-24	73.7	69.1	141.9	167.2	452.1
	25-34	160.9	149.1	317.7	384.5	1012.4
	35-44	133.0	103.5	266.0	349.1	851.7
	45-54	84.2	71.2	169.6	224.1	549.2
	55-64	58.0	52.4	107.3	134.3	352.1
	TOTAL	559.7	490.0	1103.1	1368.1	3521.0
1989						
	15-19	49.5	44.1	99.2	105.8	298.8
	20-24	71.3	65.8	136.6	161.0	434.8
	25-34	162.5	152.6	320.4	389.1	1024.8
	35-44	138.2	109.1	276.8	357.0	881.3
	45-54	87.2	72.3	174.5	232.6	566.8
	55-64	57.7	52.0	108.9	134.1	352.9
	TOTAL	566.6	496.2	1116.7	1380.0	3559.6
1990						
	15-19	49.4	44.0	97.9	103.2	294.7
	20-24	69.7	63.5	134.2	157.7	425.1
	25-34	163.1	154.3	320.0	390.4	102.7
	35-44	143.9	115.7	288.8	366.6	915.2
	45-54	90.4	73.8	181.1	240.9	586.3
	55-64	57.3	51.5	110.3	134.3	353.6
	TOTAL	574.0	503.1	1132.5	1393.3	3603.0

INDIGENOUS
LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON HUDSON INSTITUTE PART. RATES,(000)
MALES

YR	AGE	MAN	SASK	ALTA	B.C.	TOTAL
1979						
	15-19	32.9	32.9	65.8	73.1	204.8
	20-24	42.8	42.4	87.0	99.9	272.2
	25-34	78.8	65.4	160.7	203.5	508.6
	35-44	53.9	45.0	109.0	149.6	357.7
	45-54	48.3	44.3	93.5	127.3	313.6
	55-64	35.9	35.5	58.3	81.4	211.2
	TOTAL	292.8	265.7	574.6	735.0	1868.3
1980						
	15-19	32.3	32.3	64.6	71.2	200.6
	20-24	43.2	43.3	86.6	101.9	275.3
	25-34	81.3	68.9	166.6	207.0	524.0
	35-44	55.6	45.7	111.9	153.6	366.8
	45-54	47.7	44.0	94.5	127.3	313.6
	55-64	35.8	35.3	59.2	81.2	211.6
	TOTAL	296.2	269.6	583.7	742.5	1892.2
1981						
	15-19	31.4	31.3	62.5	68.3	193.6
	20-24	43.6	44.1	86.7	103.3	277.8
	25-34	84.0	72.1	172.1	210.4	538.8
	35-44	57.2	46.6	114.9	157.6	376.4
	45-54	47.4	43.3	95.3	127.3	313.6
	55-64	35.6	35.0	60.2	81.8	212.9
	TOTAL	299.5	272.6	591.9	749.1	1913.3
1982						
	15-19	30.3	30.2	60.5	65.7	186.8
	20-24	43.8	44.5	86.5	104.4	279.4
	25-34	84.9	74.6	174.3	209.5	543.6
	35-44	60.5	48.5	121.0	165.8	395.9
	45-54	47.1	42.8	95.8	127.1	312.9
	55-64	35.6	34.8	61.3	82.6	214.4
	TOTAL	302.4	275.7	599.8	755.3	1933.2
1983						
	15-19	29.2	28.8	58.2	62.3	178.6
	20-24	43.9	44.8	86.7	104.8	280.3
	25-34	86.3	77.5	176.4	210.2	550.6
	35-44	63.2	50.3	127.1	173.2	414.0
	45-54	46.8	42.3	97.5	127.2	314.0
	55-64	35.6	34.7	62.8	83.7	216.9
	TOTAL	305.2	278.6	608.9	761.7	1954.6
1984						
	15-19	28.1	27.3	55.8	59.8	171.2
	20-24	43.8	44.6	86.5	104.0	279.1
	25-34	87.6	80.6	176.9	212.2	559.4
	35-44	66.0	52.1	132.6	179.5	430.4
	45-54	47.0	41.8	96.0	127.5	312.5
	55-64	35.3	34.5	64.0	84.6	218.6
	TOTAL	308.1	281.1	614.1	767.9	1971.3

INDIGENOUS
LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON HUDSON INSTITUTE PART. RATES,(000)
MALES

YR	AGE	MAN	SASK	ALTA	B.C.	TOTAL
1985						
	15-19	27.4	26.2	54.6	58.4	166.8
	20-24	42.8	43.8	84.6	101.0	272.4
	25-34	88.7	83.7	181.5	215.1	569.2
	35-44	68.9	54.3	138.2	185.7	447.2
	45-54	47.1	41.4	96.1	127.8	312.5
	55-64	35.1	34.0	65.9	84.7	219.8
	TOTAL	310.2	283.7	621.1	773.0	1988.2
1986						
	15-19	27.2	25.6	54.3	58.0	165.3
	20-24	41.3	42.0	81.6	96.5	261.6
	25-34	91.1	86.7	164.3	218.0	560.3
	35-44	71.4	56.3	143.3	190.8	462.1
	45-54	47.4	41.1	96.8	128.8	314.2
	55-64	34.7	33.6	65.9	84.8	219.1
	TOTAL	313.4	285.6	626.5	777.2	2002.9
1987						
	15-19	27.0	25.1	53.6	57.0	163.0
	20-24	39.7	40.6	78.7	92.5	251.6
	25-34	92.3	89.1	186.2	220.3	588.0
	35-44	74.1	58.8	148.7	195.1	476.8
	45-54	47.9	41.1	97.8	130.2	317.2
	55-64	34.2	33.1	66.3	84.4	218.2
	TOTAL	315.5	288.1	631.5	779.8	2015.1
1988						
	15-19	27.0	24.9	53.0	56.2	161.2
	20-24	38.1	38.5	75.4	87.4	239.5
	25-34	93.4	91.1	187.5	222.6	594.9
	35-44	76.2	61.3	153.4	198.6	489.6
	45-54	48.7	41.4	99.6	133.1	323.1
	55-64	34.0	32.7	67.2	84.5	218.4
	TOTAL	317.7	290.1	636.5	782.6	2027.0
1989						
	15-19	26.9	24.6	52.2	54.5	158.2
	20-24	36.6	36.4	72.0	83.6	228.8
	25-34	93.9	92.6	188.1	224.5	599.3
	35-44	78.5	64.2	158.3	201.0	502.3
	45-54	50.1	41.7	101.4	136.7	330.1
	55-64	33.6	32.1	67.7	84.0	217.6
	TOTAL	319.9	291.9	640.1	784.5	2036.5
1990						
	15-19	26.8	24.4	51.3	52.9	155.6
	20-24	35.5	34.9	70.2	81.2	222.0
	25-34	93.8	93.0	186.6	224.4	597.9
	35-44	81.0	67.6	164.2	204.5	517.5
	45-54	51.6	42.3	104.5	140.2	338.8
	55-64	33.2	31.6	68.1	83.6	216.6
	TOTAL	322.1	294.0	645.2	787.1	1048.6

INDIGENOUS

LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON HUDSON INSTITUTE PART. RATES,(000)

FEMALES

YR	AGE	MAN	SASK	ALTA	B.C.	TOTAL
1979						
	15-19	25.3	23.5	54.7	62.6	166.1
	20-24	35.4	29.3	67.1	81.1	213.0
	25-34	49.6	34.7	96.4	128.6	309.5
	35-44	33.8	24.7	67.8	93.7	220.1
	45-54	29.8	27.8	53.3	71.8	183.0
	55-64	20.7	16.7	29.1	40.3	106.9
	TOTAL	194.9	156.9	368.6	478.4	1198.9
1980						
	15-19	25.3	23.4	54.2	61.5	164.5
	20-24	36.0	30.5	87.9	63.1	217.6
	25-34	52.4	37.3	101.5	133.8	325.0
	35-44	35.4	27.9	71.2	98.3	233.0
	45-54	29.9	26.9	54.7	72.6	184.2
	55-64	21.2	17.2	30.4	41.6	110.5
	TOTAL	200.3	163.3	380.1	491.2	1235.1
1981						
	15-19	24.8	22.9	53.0	59.9	160.8
	20-24	36.7	31.5	68.6	85.2	222.0
	25-34	54.9	39.9	106.8	138.7	340.4
	35-44	37.1	29.0	74.8	103.1	244.2
	45-54	30.3	27.1	56.2	73.7	187.4
	55-64	21.8	17.6	31.8	43.0	114.4
	TOTAL	205.8	168.3	391.3	503.9	1269.5
1982						
	15-19	24.3	22.2	51.8	58.1	156.6
	20-24	37.2	32.3	69.5	86.9	226.1
	25-34	56.6	42.1	110.0	140.8	349.7
	35-44	40.0	30.7	80.3	110.7	261.9
	45-54	30.6	27.2	57.7	75.2	190.9
	55-64	22.3	18.0	33.2	44.3	118.0
	TOTAL	211.2	172.9	402.7	516.4	1303.4
1983						
	15-19	23.5	21.3	49.9	55.6	150.5
	20-24	37.9	33.2	70.9	88.5	230.7
	25-34	58.4	44.7	113.1	143.6	359.9
	35-44	42.7	32.2	85.8	118.1	279.0
	45-54	31.1	27.5	59.3	77.0	195.0
	55-64	22.9	18.5	34.6	45.7	121.8
	TOTAL	216.6	177.6	413.9	528.7	1337.0
1984						
	15-19	22.8	20.4	48.4	53.9	145.6
	20-24	38.2	33.5	71.9	89.3	233.0
	25-34	60.2	47.4	116.6	147.1	371.4
	35-44	45.5	34.1	91.0	125.0	295.7
	45-54	31.7	27.7	61.0	78.7	199.2
	55-64	23.4	18.8	35.9	47.0	125.2
	TOTAL	222.0	182.1	424.9	541.2	1370.4

INDIGENOUS
LABOUR FORCE ESTIMATES BY AGE AND SEX
BASED ON HUDSON INSTITUTE PART. RATES,(000)
FEMALES

YR	AGE	MAN	SASK	ALTA	B.C.	TOTAL
1985						
	15-19	22.5	19.8	47.8	53.1	143.3
	20-24	38.2	32.9	71.7	88.0	231.0
	25-34	62.2	50.2	120.2	151.0	383.8
	35-44	48.2	36.0	96.3	132.1	312.7
	45-54	32.2	27.9	62.5	80.9	203.7
	55-64	23.7	19.1	37.1	47.8	127.8
	TOTAL	227.2	186.3	435.9	553.1	1402.6
1986						
	15-19	22.5	18.8	47.9	53.1	142.4
	20-24	37.6	32.8	70.3	85.8	226.6
	25-34	64.2	53.0	123.9	155.0	396.3
	35-44	50.8	37.8	101.5	138.4	328.7
	45-54	33.1	28.5	64.6	83.6	209.9
	55-64	23.9	19.3	38.3	48.6	130.2
	TOTAL	232.3	190.5	446.6	564.6	1434.2
1987						
	15-19	22.5	19.4	47.3	52.6	142.0
	20-24	36.8	31.9	68.8	83.2	220.9
	25-34	65.9	55.5	127.2	158.4	407.2
	35-44	53.7	39.9	107.1	144.7	345.7
	45-54	34.0	29.0	66.8	87.0	217.0
	55-64	23.9	19.4	39.0	48.9	131.4
	TOTAL	237.2	195.4	456.5	575.2	1464.4
1988						
	15-19	22.6	19.5	47.2	52.4	141.9
	20-24	35.6	30.5	66.5	79.8	212.6
	25-34	67.4	57.9	130.1	161.9	417.5
	35-44	56.7	42.1	112.6	150.5	362.0
	45-54	35.4	29.8	69.7	90.9	226.0
	55-64	23.9	19.7	40.1	49.7	133.6
	TOTAL	241.9	199.8	466.0	585.4	1493.9
1989						
	15-19	22.6	19.5	47.0	51.4	140.6
	20-24	34.6	29.3	64.5	77.4	206.0
	25-34	68.5	59.9	132.2	164.6	425.5
	35-44	59.6	44.9	118.5	155.9	379.0
	45-54	37.0	30.6	73.0	95.8	236.6
	55-64	24.0	19.8	41.1	50.1	135.2
	TOTAL	246.6	204.3	476.6	595.5	1523.1
1990						
	15-19	22.6	19.5	46.5	50.3	139.1
	20-24	34.1	28.5	63.9	76.4	203.1
	25-34	69.2	61.3	133.3	166.0	429.9
	35-44	62.8	48.1	124.6	162.0	397.6
	45-54	38.7	31.5	76.5	100.6	247.5
	55-64	24.0	19.9	42.1	50.7	136.9
	TOTAL	251.8	209.0	487.2	606.2	1554.3

APPENDIX III - 3

PROJECTED LABOUR FORCE BASED ON VARIOUS POPULATION PROJECTIONS

Labour supply forecasts by age and sex groups based on population projections 1 to 4 are found in this appendix. Data are presented using projected Hudson Institute labour force participation rates and the 1978 rates. These participation rates are found in Appendix III - 1. For a discussion of the population projections, the reader is referred to:

Statistics Canada; Population Projections for Canada and the Provinces, 1976-2001; Cat. No. 91-520, February 1979.

These data have not been adjusted for the frictional unemployment rate.

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 1
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	43.1	78.9	54.1	48.0	35.8	292.8
	F	25.3	35.8	49.5	33.7	29.7	20.7	194.5
80	M	32.3	43.5	81.4	55.6	47.4	35.5	295.7
	F	25.2	36.4	52.1	35.2	29.7	21.2	199.5
81	M	31.2	43.8	83.8	57.0	47.0	35.4	298.3
	F	24.7	37.1	54.4	36.8	30.1	21.8	204.8
82	M	30.0	44.0	84.5	60.0	46.5	35.2	300.2
	F	24.1	37.5	55.9	39.3	30.2	22.2	209.3
83	M	28.8	43.8	85.6	62.4	46.2	35.1	302.0
	F	23.1	38.1	57.4	41.7	30.7	22.8	213.7
84	M	27.6	43.6	86.6	64.8	46.2	34.7	303.6
	F	22.4	38.4	59.1	44.1	31.1	23.2	218.3
85	M	26.8	42.6	88.1	67.2	46.2	34.4	305.2
	F	22.0	38.3	60.9	46.5	31.6	23.4	222.6
86	M	26.4	41.0	89.7	69.4	46.6	33.9	307.0
	F	21.9	37.6	62.8	48.7	32.4	23.5	226.9
87	M	26.1	39.3	90.8	71.5	46.9	33.5	308.2
	F	21.8	36.7	64.5	51.1	33.2	23.6	230.7
88	M	26.3	37.7	91.8	73.3	47.6	33.1	309.9
	F	21.7	35.4	65.9	53.6	34.3	23.6	234.5
89	M	25.7	36.1	92.4	75.0	48.7	32.7	310.5
	F	21.6	34.3	62.3	56.0	35.8	23.5	233.6
90	M	25.5	34.9	92.1	77.2	50.1	32.2	312.0
	F	21.5	33.7	67.7	58.7	37.3	23.6	242.5

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 2
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	43.0	78.9	54.0	48.0	35.8	292.6
	F	25.3	35.8	49.5	33.7	29.6	20.7	194.5
80	M	32.3	43.5	81.4	55.6	47.4	35.5	295.7
	F	25.2	36.3	52.2	35.2	29.7	21.2	199.9
81	M	31.2	43.9	84.2	57.1	47.1	35.4	298.9
	F	24.7	37.1	54.6	36.9	30.1	21.8	205.1
82	M	30.1	44.1	85.2	60.3	46.6	35.2	301.5
	F	24.1	37.6	56.3	39.5	30.3	22.2	210.2
83	M	28.9	44.1	86.6	63.0	46.4	35.2	304.1
	F	23.3	38.3	58.0	42.1	30.8	22.8	215.1
84	M	27.8	44.0	87.9	65.4	46.5	34.8	306.5
	F	22.5	38.6	59.9	44.6	31.3	23.2	220.1
85	M	26.9	42.9	89.5	68.0	46.5	34.5	308.4
	F	22.1	38.5	61.9	47.1	31.8	23.5	224.9
86	M	26.6	41.4	91.4	70.3	46.9	34.1	310.6
	F	22.1	37.8	63.9	49.6	32.6	23.6	229.5
87	M	26.4	39.7	92.6	72.7	47.3	33.6	312.3
	F	21.9	36.9	65.7	52.2	33.5	23.6	233.8
88	M	26.6	38.0	93.7	74.7	48.0	33.3	314.3
	F	22.0	35.7	67.1	54.7	34.8	23.7	237.9
89	M	25.9	36.5	94.4	76.7	49.3	32.9	315.6
	F	21.9	34.6	63.5	57.3	36.3	23.6	237.2
90	M	25.8	35.2	94.2	79.1	50.7	32.4	317.4
	F	21.8	34.0	69.1	60.3	37.8	23.6	246.6

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 3
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	43.0	78.8	54.0	48.0	35.8	292.5
	F	25.3	35.8	49.5	33.7	29.6	20.7	194.5
80	M	32.3	43.5	81.2	55.5	47.4	35.5	295.4
	F	25.2	36.2	52.0	35.2	29.7	21.2	199.6
81	M	31.2	43.8	83.8	57.0	47.1	35.4	298.3
	F	24.7	37.0	54.4	36.8	30.1	21.7	204.7
82	M	30.0	44.0	84.6	60.0	46.6	35.2	300.4
	F	24.1	37.5	56.0	39.4	30.3	22.2	209.5
83	M	28.8	43.9	86.0	62.6	46.3	35.1	302.7
	F	23.2	38.1	57.6	41.9	30.7	22.8	214.2
84	M	27.7	43.7	87.2	65.1	46.4	34.8	304.9
	F	22.5	38.4	59.4	44.4	31.2	23.2	219.1
85	M	26.8	42.8	88.8	67.6	46.5	34.5	307.0
	F	22.0	38.4	61.4	46.9	31.7	23.4	223.7
86	M	26.5	41.2	90.6	69.9	46.8	34.0	309.0
	F	21.9	37.6	63.3	49.2	32.5	23.6	228.3
87	M	26.3	39.6	91.9	72.2	47.1	33.6	310.7
	F	21.9	36.8	65.2	51.8	33.4	23.6	232.6
88	M	26.5	37.8	93.1	74.1	48.0	33.3	312.7
	F	21.8	35.5	66.7	54.3	34.7	23.6	236.6
89	M	25.9	36.3	93.7	76.2	49.2	32.9	314.1
	F	21.8	34.4	63.1	56.9	36.1	23.6	235.9
90	M	25.6	35.1	93.6	78.6	50.5	32.3	315.7
	F	21.7	33.9	68.7	59.8	37.7	23.6	245.3

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 4
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	42.9	78.5	53.9	48.0	35.8	291.9
	F	25.2	35.6	49.3	33.7	29.6	20.7	194.1
80	M	32.2	43.4	81.0	55.4	47.4	35.5	294.9
	F	25.2	36.2	52.0	35.2	29.7	21.1	199.3
81	M	31.2	43.8	83.7	57.0	47.1	35.4	298.2
	F	24.7	36.9	54.3	36.8	30.1	21.7	204.5
82	M	30.0	44.0	84.8	60.1	46.6	35.2	300.8
	F	24.1	37.5	56.1	39.5	30.3	22.1	209.6
83	M	28.8	44.0	86.2	62.8	46.4	35.2	303.4
	F	23.2	38.1	57.8	42.1	30.8	22.7	214.7
84	M	27.7	43.9	87.8	65.3	46.5	34.8	306.0
	F	22.5	38.5	59.8	44.6	31.3	23.1	219.7
85	M	26.9	42.9	89.4	68.0	46.6	34.5	308.4
	F	22.1	38.4	61.7	47.2	31.8	23.4	224.6
86	M	26.6	41.4	91.5	70.4	47.0	34.1	310.9
	F	22.0	37.7	63.9	49.6	32.7	23.6	229.5
87	M	26.3	39.8	92.9	72.9	47.4	33.7	313.0
	F	21.9	36.9	65.8	52.4	33.6	23.6	234.2
88	M	26.6	38.1	94.3	74.9	48.2	33.4	315.5
	F	22.0	35.6	67.3	55.0	34.9	23.7	238.4
89	M	26.0	36.5	94.9	77.1	49.5	33.0	316.9
	F	21.9	34.6	63.8	57.8	36.5	23.7	238.2
90	M	25.8	35.3	94.9	79.6	51.0	32.5	319.0
	F	21.8	33.9	69.5	60.8	38.1	23.7	247.8

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 1
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	43.3	79.8	54.1	48.1	35.9	294.2
	F	25.1	35.5	48.7	33.1	29.1	20.2	191.7
80	M	32.3	43.9	82.3	55.6	47.5	35.9	297.5
	F	24.7	35.6	50.4	33.9	28.6	20.4	193.6
81	M	31.3	44.4	84.8	57.0	47.2	35.9	300.7
	F	24.0	35.9	51.8	34.9	28.4	20.5	195.4
82	M	30.1	44.8	85.6	60.0	46.8	35.9	303.2
	F	23.2	36.0	52.4	36.6	28.0	20.5	196.6
83	M	28.9	44.9	86.7	62.4	46.5	36.0	305.4
	F	22.1	36.1	53.0	38.1	27.9	20.6	197.7
84	M	27.7	44.9	87.8	64.8	46.6	35.8	307.6
	F	21.2	36.0	53.7	39.6	27.7	20.6	198.9
85	M	26.9	44.0	89.3	67.2	46.6	35.6	309.7
	F	20.6	35.5	54.5	41.1	27.7	20.4	199.8
86	M	26.6	42.6	90.9	69.4	47.1	35.4	311.9
	F	20.3	34.5	55.4	42.3	27.9	20.2	200.6
87	M	26.3	41.0	92.2	71.5	47.4	35.1	313.5
	F	20.0	33.4	56.0	43.7	28.1	19.8	201.0
88	M	26.1	39.5	93.2	73.3	48.2	34.9	315.2
	F	19.8	31.8	56.4	45.1	28.6	19.5	201.3
89	M	25.9	38.0	93.8	75.0	49.4	34.6	316.7
	F	19.6	30.6	56.6	46.4	29.3	19.1	201.7
90	M	25.7	36.9	93.6	77.2	50.8	34.3	318.6
	F	19.3	29.7	56.4	48.0	30.1	18.8	202.2

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 2
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	43.2	79.7	54.0	48.1	35.9	293.9
	F	25.0	35.4	48.6	33.0	29.0	20.2	191.4
80	M	32.3	43.9	82.3	55.6	47.5	35.9	297.5
	F	24.7	35.5	50.5	33.9	28.6	20.4	193.6
81	M	31.3	44.5	85.2	57.1	47.3	35.9	301.3
	F	24.0	35.9	52.0	34.9	28.4	20.5	195.7
82	M	30.1	45.0	86.2	60.3	46.9	35.9	304.5
	F	23.2	36.0	52.8	36.8	28.1	20.5	197.4
83	M	29.0	45.1	87.7	63.0	46.7	36.1	307.6
	F	22.2	36.2	53.5	38.5	28.0	20.6	199.0
84	M	27.9	45.2	89.1	65.4	46.9	35.9	310.5
	F	21.3	36.2	54.4	40.1	27.9	20.6	200.5
85	M	27.1	44.3	90.7	68.0	47.0	35.8	312.9
	F	20.7	35.7	55.4	41.7	27.9	20.5	201.8
86	M	26.8	43.0	92.6	70.3	47.3	35.6	315.6
	F	20.5	34.7	56.4	43.1	28.1	20.2	203.0
87	M	26.6	41.4	94.0	72.7	47.8	35.2	317.7
	F	20.2	33.6	57.1	44.6	28.4	19.9	203.7
88	M	26.4	39.8	95.1	74.7	48.7	35.1	319.7
	F	20.0	32.1	57.5	46.1	29.0	19.6	204.3
89	M	26.1	38.4	95.8	76.7	50.0	34.9	321.9
	F	19.8	30.8	57.7	47.5	29.7	19.2	204.8
90	M	26.0	37.3	95.7	79.1	51.5	34.5	324.1
	F	19.5	30.0	57.6	49.2	30.5	18.9	205.7

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 3
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	43.2	79.6	54.0	48.1	35.9	293.8
	F	25.0	35.4	48.6	33.0	29.0	20.2	191.4
80	M	32.3	43.9	82.1	55.5	47.5	35.9	297.2
	F	24.7	35.5	50.4	33.9	28.6	20.3	193.4
81	M	31.3	44.4	84.8	57.0	47.3	35.9	300.8
	F	24.0	35.8	51.8	34.9	28.4	20.4	195.2
82	M	30.1	44.8	85.7	60.0	46.9	35.9	303.4
	F	23.2	36.0	52.5	36.7	28.0	20.5	196.8
83	M	28.9	45.0	87.1	62.6	46.6	36.0	306.2
	F	22.1	36.1	53.1	38.3	27.9	20.6	198.2
84	M	27.8	45.0	88.3	65.1	46.8	35.9	308.9
	F	21.2	36.0	54.0	39.9	27.9	20.6	199.6
85	M	27.0	44.2	90.1	67.6	46.9	35.8	311.5
	F	20.6	35.6	55.0	41.4	27.8	20.4	200.8
86	M	26.6	42.8	91.9	69.9	47.3	35.5	314.0
	F	20.4	34.6	55.8	42.8	28.0	20.2	201.8
87	M	26.5	41.3	93.2	72.2	47.6	35.2	316.1
	F	20.1	33.5	56.6	44.3	28.3	19.9	202.7
88	M	26.3	39.6	94.5	74.1	48.6	35.1	318.1
	F	19.9	32.0	57.1	45.7	28.9	19.5	203.1
89	M	26.1	38.2	95.1	76.2	49.9	34.9	320.4
	F	19.7	30.7	57.4	47.2	29.6	19.2	203.7
90	M	25.9	37.1	95.0	78.6	51.3	34.5	322.4
	F	19.4	29.9	57.2	48.8	30.4	18.9	204.6

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 4
MANITOBA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	43.1	79.3	53.9	48.1	35.9	293.3
	F	25.0	35.2	48.5	33.0	29.0	20.2	191.0
80	M	32.2	43.8	81.9	55.4	47.5	35.9	296.8
	F	24.7	35.4	50.3	33.9	28.6	20.3	193.1
81	M	31.3	44.4	84.7	57.0	47.3	35.9	300.6
	F	24.0	35.7	51.7	34.9	28.4	20.4	195.1
82	M	30.1	44.9	85.8	60.1	46.9	35.9	303.7
	F	23.2	35.9	52.5	36.8	28.1	20.4	196.9
83	M	28.9	45.0	87.3	62.8	46.7	36.1	306.9
	F	22.1	36.1	53.4	38.5	28.0	20.6	198.6
84	M	27.9	45.1	88.9	65.3	46.9	35.9	310.0
	F	21.2	36.1	54.3	40.1	27.9	20.6	200.2
85	M	27.0	44.3	90.6	68.0	47.1	35.8	312.9
	F	20.7	35.7	55.3	41.7	27.9	20.4	201.6
86	M	26.8	43.0	92.7	70.4	47.4	35.6	315.9
	F	20.4	34.7	56.3	43.2	28.2	20.2	203.0
87	M	26.5	41.5	94.3	72.9	47.9	35.3	318.4
	F	20.2	33.6	57.1	44.8	28.4	19.9	204.0
88	M	26.4	39.9	95.7	74.9	48.9	35.2	321.0
	F	20.0	32.1	57.7	46.3	29.0	19.6	204.7
89	M	26.2	38.4	96.4	77.1	50.2	34.9	323.2
	F	19.8	30.8	58.0	47.9	29.9	19.2	205.7
90	M	26.0	37.4	96.4	79.6	51.8	34.6	325.7
	F	19.5	30.0	57.9	49.6	30.7	18.9	206.6

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 1
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	42.1	68.0	45.9	44.4	35.4	268.6
	F	23.5	29.2	36.3	27.5	26.8	16.7	160.0
80	M	32.1	42.5	71.0	46.7	43.7	35.1	271.2
	F	23.2	30.0	38.6	28.5	26.7	17.2	164.3
81	M	30.9	42.7	73.1	47.7	42.9	34.7	272.0
	F	22.6	30.5	40.8	29.5	26.8	17.5	167.7
82	M	29.5	42.2	73.8	49.4	42.0	34.4	271.3
	F	21.8	30.7	42.0	31.2	26.8	17.9	170.2
83	M	27.9	41.9	74.6	51.1	41.3	34.0	270.8
	F	20.6	31.1	43.3	32.6	26.8	18.2	172.5
84	M	26.3	41.4	75.7	52.7	40.5	33.6	270.2
	F	19.6	31.1	44.7	34.4	26.9	18.5	175.2
85	M	25.0	40.1	76.7	54.5	39.8	33.0	269.0
	F	18.9	30.2	46.2	36.1	26.9	18.6	176.9
86	M	24.2	38.4	77.6	56.0	39.6	32.5	268.3
	F	18.5	29.9	47.6	37.6	27.3	18.7	179.6
87	M	23.6	36.7	78.2	57.8	39.2	31.7	267.3
	F	18.2	28.9	48.8	39.4	27.7	18.7	181.6
88	M	23.2	34.6	78.7	59.4	39.3	31.1	266.3
	F	18.2	27.5	50.0	41.2	28.2	18.8	183.9
89	M	22.8	32.6	78.9	61.2	39.6	30.4	265.4
	F	18.0	26.2	50.9	43.2	28.9	18.9	186.1
90	M	22.4	30.9	78.2	63.3	40.0	29.8	264.6
	F	17.8	25.4	51.2	45.3	29.7	18.9	188.4

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 2
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	33.1	42.5	68.7	46.2	44.5	35.5	270.6
	F	23.6	29.5	36.7	27.8	26.9	16.8	161.2
80	M	32.5	43.3	72.8	47.5	44.0	35.3	275.4
	F	23.5	30.6	39.6	28.9	27.0	17.2	166.8
81	M	31.5	44.0	76.3	49.0	43.6	34.9	279.4
	F	23.1	31.4	42.5	30.4	27.2	17.7	172.2
82	M	30.4	44.2	78.7	51.6	43.1	34.6	282.6
	F	22.4	32.1	44.8	32.6	27.4	18.1	177.3
83	M	28.9	44.3	81.0	54.2	42.6	34.4	285.5
	F	21.4	32.8	47.1	34.6	27.7	18.5	182.1
84	M	27.5	44.0	83.6	56.6	42.1	34.2	288.1
	F	20.6	33.1	49.4	36.9	28.0	18.8	186.7
85	M	26.4	43.1	85.7	59.3	41.6	33.8	290.0
	F	20.0	32.4	51.7	39.3	28.2	19.0	190.6
86	M	25.8	41.4	87.7	61.7	41.8	33.4	291.8
	F	19.7	32.1	53.7	41.5	28.9	19.2	195.3
87	M	25.3	39.7	88.9	64.3	41.8	32.6	292.7
	F	19.5	31.2	55.4	44.0	29.5	19.2	198.7
88	M	25.0	37.6	90.0	66.9	42.3	32.2	293.9
	F	19.6	29.8	57.1	46.4	30.3	19.4	202.7
89	M	24.7	35.5	90.5	69.0	42.9	31.7	294.8
	F	19.5	28.6	58.4	49.2	31.3	19.7	206.7
90	M	24.5	34.0	90.1	72.5	43.8	31.2	296.0
	F	19.4	27.9	59.0	52.2	32.5	19.7	210.8

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 3
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	33.0	42.4	68.5	46.1	44.5	35.5	270.0
	F	23.6	29.3	36.5	27.6	26.6	16.7	160.6
80	M	32.4	42.9	72.1	47.2	43.9	35.2	273.7
	F	23.4	30.4	39.3	28.6	26.6	17.2	165.9
81	M	31.3	43.5	75.2	48.4	43.4	34.9	276.6
	F	22.9	31.1	41.9	30.1	27.1	17.6	170.6
82	M	30.1	43.5	77.0	50.9	42.7	34.5	278.6
	F	22.2	31.6	43.8	32.1	27.2	18.0	174.9
83	M	28.6	43.5	78.8	53.1	42.2	34.3	280.5
	F	21.2	32.2	45.8	33.9	27.4	18.4	178.7
84	M	27.1	43.2	80.9	55.3	41.6	34.0	282.2
	F	20.3	32.5	47.8	36.1	27.7	18.7	182.9
85	M	26.0	42.3	83.1	57.8	41.3	33.5	284.0
	F	19.6	31.7	50.0	38.3	27.8	18.9	186.4
86	M	25.3	40.6	85.0	60.2	41.2	33.2	285.4
	F	19.4	31.6	52.0	40.4	28.5	19.0	190.9
87	M	24.9	39.0	86.4	62.7	41.2	32.4	286.5
	F	19.2	30.7	53.8	42.8	29.0	19.1	194.6
88	M	24.6	37.0	87.6	65.0	41.6	31.9	287.7
	F	19.3	29.3	55.6	45.2	29.9	19.3	198.5
89	M	24.2	35.0	88.4	67.7	42.2	31.4	288.9
	F	19.2	28.2	57.0	47.9	30.8	19.5	202.5
90	M	24.0	33.4	88.2	70.5	43.1	30.9	290.2
	F	19.1	27.5	57.8	50.7	32.0	19.5	206.6

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 4
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	33.1	42.6	68.9	46.3	44.5	35.5	271.0
	F	23.6	29.5	36.7	27.8	26.9	16.8	161.3
80	M	32.6	43.5	73.2	47.7	44.2	35.3	276.4
	F	23.6	30.7	39.8	29.1	27.0	17.2	167.4
81	M	31.6	44.4	77.1	49.3	43.8	35.0	281.2
	F	23.2	31.6	43.0	30.7	27.3	17.7	173.4
82	M	30.7	44.7	80.1	52.2	43.3	34.8	285.8
	F	22.6	32.4	45.6	33.0	27.6	18.1	179.2
83	M	29.3	45.1	83.1	55.1	43.0	34.6	290.2
	F	21.7	33.4	48.3	35.2	27.9	18.5	185.0
84	M	28.0	45.1	86.3	57.9	42.8	34.5	294.6
	F	20.9	33.8	51.1	37.8	28.4	18.9	190.9
85	M	27.0	44.3	89.6	61.1	42.6	34.0	298.6
	F	20.4	33.3	53.9	40.7	28.7	19.2	196.1
86	M	26.5	42.9	92.5	64.2	42.8	33.8	302.8
	F	20.2	33.3	56.6	43.3	29.6	19.4	202.4
87	M	26.1	41.4	94.8	67.6	43.2	33.2	306.4
	F	20.1	32.5	59.1	46.3	30.4	19.5	207.9
88	M	26.0	39.5	97.0	70.9	43.9	32.8	310.0
	F	20.3	31.3	61.5	49.3	31.5	19.8	213.7
89	M	25.8	37.6	98.5	74.5	44.8	32.4	313.6
	F	20.4	30.3	63.4	52.8	32.7	20.1	219.6
90	M	25.8	36.1	98.9	78.3	46.1	32.0	317.2
	F	20.5	29.6	64.7	56.5	34.2	20.1	225.5

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 1
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	32.9	42.3	68.0	45.9	44.4	35.5	269.1
	F	23.2	28.8	35.6	27.0	26.3	16.4	157.3
80	M	32.2	42.9	71.1	46.7	43.8	35.5	272.2
	F	22.8	29.3	37.2	27.4	25.7	16.4	158.8
81	M	30.9	43.2	73.2	47.7	43.1	35.2	273.4
	F	21.9	29.4	38.6	27.9	25.2	16.4	159.5
82	M	29.6	43.0	73.9	49.4	42.2	35.1	273.2
	F	20.9	29.2	39.0	28.9	24.8	16.4	159.2
83	M	28.0	42.9	74.8	51.1	41.6	34.8	273.1
	F	19.6	29.2	39.6	29.7	24.3	16.3	158.8
84	M	26.4	42.5	75.9	52.7	40.8	34.7	272.9
	F	18.5	28.9	40.2	30.8	24.0	16.2	158.6
85	M	25.1	41.4	76.9	54.5	40.2	34.2	272.2
	F	17.6	28.2	40.9	31.8	23.6	16.0	158.0
86	M	24.4	39.8	77.9	56.0	40.0	33.9	271.9
	F	17.1	27.2	41.4	32.6	23.5	15.8	157.5
87	M	23.8	38.2	78.5	57.8	39.7	33.2	271.2
	F	16.7	26.0	41.8	33.5	23.4	15.4	156.8
88	M	23.4	36.2	79.1	59.4	39.8	32.8	270.6
	F	16.5	24.4	42.1	34.5	23.4	15.3	156.3
89	M	22.9	34.2	79.2	61.2	40.2	32.2	270.0
	F	16.2	23.1	42.2	35.6	23.6	15.0	155.8
90	M	22.6	32.6	78.6	63.3	40.6	31.7	269.5
	F	15.9	22.1	41.9	36.8	23.9	14.7	155.3

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 2
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	33.1	42.7	68.8	46.2	44.6	35.7	271.1
	F	23.4	29.1	36.0	27.2	26.4	16.4	158.5
80	M	32.6	43.7	72.8	47.5	44.1	35.6	276.3
	F	23.0	29.8	38.2	27.9	25.9	16.5	161.2
81	M	31.5	44.6	76.4	49.0	43.8	35.5	280.8
	F	22.4	30.3	40.3	28.7	25.6	16.5	163.8
82	M	30.5	45.0	78.9	51.6	43.3	35.3	284.5
	F	21.5	30.6	41.7	30.3	25.4	16.5	165.9
83	M	29.1	45.3	81.2	54.2	42.9	35.3	287.9
	F	20.4	30.9	43.1	31.5	25.1	16.5	167.6
84	M	27.6	45.2	83.8	56.6	42.4	35.3	291.0
	F	19.4	30.8	44.5	33.1	25.0	16.5	169.1
85	M	26.5	44.4	85.9	59.3	42.1	35.0	293.3
	F	18.7	30.2	45.7	34.6	24.7	16.4	170.3
86	M	25.9	42.9	88.0	61.7	42.2	34.8	295.6
	F	18.2	29.2	46.8	36.0	24.9	16.2	171.3
87	M	25.5	41.3	89.2	64.3	42.3	34.2	296.9
	F	17.8	28.0	47.5	37.4	25.0	15.9	171.6
88	M	25.2	39.3	90.4	66.9	42.8	33.9	298.5
	F	17.7	26.5	48.1	38.9	25.2	15.8	172.3
89	M	24.9	37.3	90.9	69.6	43.5	33.6	299.7
	F	17.5	25.2	48.5	40.6	25.6	15.6	173.0
90	M	24.7	35.8	90.6	72.5	44.5	33.2	301.3
	F	17.3	24.2	48.3	42.4	26.2	15.4	173.7

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 3
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	33.0	42.6	68.5	46.1	44.5	35.7	270.4
	F	23.3	29.0	35.8	27.1	26.3	16.4	157.9
80	M	32.4	43.3	72.2	47.2	44.0	35.5	274.7
	F	22.9	29.6	37.9	27.7	25.8	16.5	160.3
81	M	31.3	44.0	75.3	48.4	43.6	35.4	278.1
	F	22.2	29.9	39.7	28.5	25.5	16.4	162.3
82	M	30.2	44.2	77.1	50.9	42.9	35.2	280.5
	F	21.3	30.1	40.8	29.8	25.2	16.5	163.6
83	M	28.7	44.5	79.0	53.1	42.4	35.1	282.9
	F	20.1	30.3	41.9	30.9	24.9	16.4	164.5
84	M	27.2	44.4	81.1	55.3	42.0	35.1	285.1
	F	19.1	30.2	43.0	32.3	24.7	16.4	165.6
85	M	26.1	43.6	83.3	57.8	41.7	34.7	287.3
	F	18.3	29.6	44.2	33.8	24.3	16.2	166.5
86	M	25.5	42.0	85.3	60.2	41.6	34.6	289.1
	F	17.9	28.7	45.3	35.0	24.5	16.0	167.4
87	M	25.0	40.6	86.7	62.7	41.7	34.0	290.6
	F	17.6	27.6	46.1	36.4	24.6	15.8	168.0
88	M	24.8	38.7	88.0	65.0	42.1	33.6	292.2
	F	17.5	26.1	46.9	37.8	24.9	15.6	168.8
89	M	24.4	36.8	88.8	67.7	42.8	33.2	293.7
	F	17.2	24.8	47.3	39.5	25.2	15.5	169.5
90	M	24.2	35.3	88.7	70.5	43.8	32.8	295.3
	F	17.0	23.9	47.2	41.2	25.7	15.2	170.3

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 4
SASKATCHEWAN

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	33.1	42.8	69.0	46.3	44.6	35.7	271.5
	F	23.4	29.2	36.1	27.2	26.4	16.4	158.6
80	M	32.6	43.9	73.2	47.7	44.3	35.6	277.4
	F	23.1	29.9	38.4	28.0	26.0	16.5	161.9
81	M	31.7	45.0	77.2	49.3	43.9	35.5	282.7
	F	22.5	30.4	40.8	29.0	25.7	16.5	164.9
82	M	30.7	45.5	80.2	52.2	43.6	35.5	287.7
	F	21.7	30.9	42.4	30.6	25.5	16.5	167.7
83	M	29.4	46.1	83.2	55.1	43.3	35.5	292.7
	F	20.6	31.4	44.2	32.1	25.4	16.6	170.3
84	M	28.1	46.3	86.5	57.9	43.1	35.5	297.5
	F	19.7	31.5	46.0	33.9	25.3	16.6	172.9
85	M	27.1	45.7	89.8	61.1	43.0	35.2	302.0
	F	19.0	31.0	47.7	35.8	25.2	16.5	175.2
86	M	26.6	44.4	92.8	64.2	43.3	35.2	306.6
	F	18.7	30.3	49.3	37.5	25.5	16.3	177.5
87	M	26.3	43.1	95.2	67.6	43.7	34.7	310.7
	F	18.4	29.2	50.6	39.4	25.7	16.1	179.5
88	M	26.2	41.3	97.4	70.9	44.4	34.5	314.8
	F	18.4	27.8	51.8	41.3	26.2	16.0	181.6
89	M	26.0	39.5	98.9	74.5	45.5	34.3	318.7
	F	18.3	26.6	52.7	43.5	26.8	16.0	183.8
90	M	26.0	38.1	99.4	78.3	46.8	34.0	322.7
	F	18.2	25.7	52.9	45.8	27.5	15.7	185.9

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 1
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	68.9	93.4	175.5	115.6	96.3	59.7	609.3
	F	57.1	72.6	105.4	71.7	55.3	30.0	392.1
80	M	68.2	94.4	184.6	120.5	97.9	60.8	626.5
	F	57.4	74.5	112.8	76.4	57.2	31.6	409.8
81	M	66.6	95.0	192.6	125.3	99.3	62.1	640.9
	F	56.6	76.1	119.9	81.1	59.0	33.2	425.9
82	M	65.0	95.3	196.3	133.0	100.1	63.4	653.1
	F	55.7	77.4	124.5	87.6	60.9	34.9	441.0
83	M	62.9	95.7	199.9	141.5	100.6	65.0	665.6
	F	54.2	79.3	128.8	94.4	62.9	36.5	456.0
84	M	60.9	95.9	203.6	148.0	101.4	66.5	676.4
	F	53.0	80.6	133.5	100.8	65.0	38.1	470.9
85	M	60.2	94.3	207.6	155.2	102.0	68.6	687.9
	F	52.7	80.8	138.4	107.3	67.0	38.8	485.0
86	M	60.3	91.5	211.6	162.0	103.5	68.8	697.8
	F	53.2	79.6	143.3	114.0	69.4	41.0	500.6
87	M	60.0	88.8	215.0	168.8	106.6	69.4	708.5
	F	53.1	78.6	147.8	120.9	66.9	42.0	509.3
88	M	59.8	85.7	217.8	174.7	108.2	70.4	716.6
	F	53.4	76.6	152.0	127.7	75.8	43.2	528.8
89	M	59.5	82.6	219.6	181.1	111.6	71.0	725.4
	F	53.7	75.0	155.2	134.9	79.8	44.5	543.1
90	M	59.0	81.2	219.3	188.0	115.3	71.6	734.4
	F	53.6	74.7	157.4	142.2	84.2	45.7	558.0

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 2
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	69.1	94.0	177.0	116.2	96.6	59.8	612.9
	F	57.3	73.0	106.4	72.2	55.4	30.0	394.4
80	M	69.0	95.9	188.5	122.0	98.7	61.0	635.1
	F	58.0	75.7	115.3	77.5	57.6	31.0	415.7
81	M	67.9	97.9	199.8	128.6	100.8	62.6	657.5
	F	57.6	78.1	124.5	83.2	60.0	33.4	436.8
82	M	66.8	99.5	207.8	138.4	102.6	64.2	679.5
	F	57.2	80.7	132.0	91.3	62.4	35.2	458.9
83	M	65.3	101.4	215.9	149.4	104.1	66.2	702.3
	F	56.2	83.7	139.3	99.9	65.0	37.1	481.2
84	M	63.9	102.7	224.2	158.8	105.8	68.0	723.5
	F	55.5	86.1	147.2	108.4	67.8	38.9	503.9
85	M	63.7	102.2	232.9	169.1	107.7	70.7	746.3
	F	55.8	87.2	155.3	117.4	70.6	39.8	526.2
86	M	64.4	100.2	241.7	179.4	110.3	71.3	767.3
	F	56.8	87.0	163.6	126.7	74.1	42.4	550.6
87	M	64.6	98.4	249.3	190.0	114.9	72.3	789.5
	F	57.2	86.7	171.4	136.7	72.2	43.7	567.9
88	M	65.0	95.8	256.4	200.0	116.0	73.8	809.0
	F	58.1	85.4	178.7	146.9	82.7	45.3	597.1
89	M	65.3	93.2	261.9	210.5	123.1	75.1	829.2
	F	58.9	84.3	184.8	157.5	85.2	46.9	620.7
90	M	65.5	92.2	264.7	221.9	128.6	76.3	849.4
	F	59.5	84.6	189.6	168.6	94.2	48.6	645.2

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 3
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	68.9	93.4	175.5	115.5	96.4	59.6	609.2
	F	57.1	72.5	105.5	71.8	55.3	29.9	392.0
80	M	68.4	94.7	185.3	120.7	98.1	60.8	627.9
	F	57.5	74.7	113.3	76.6	57.3	31.5	410.8
81	M	66.9	95.8	194.4	126.1	99.8	62.2	645.3
	F	56.8	76.5	121.1	81.7	59.3	33.2	428.7
82	M	65.5	96.6	199.8	134.6	100.9	63.7	661.1
	F	56.1	78.3	126.7	88.8	61.4	34.9	446.2
83	M	63.6	97.5	204.8	143.9	101.8	65.4	677.1
	F	54.8	80.6	132.1	96.2	63.6	36.6	463.8
84	M	61.8	98.1	210.2	151.5	102.8	67.1	691.5
	F	53.7	82.3	137.8	103.3	65.9	38.3	481.3
85	M	61.2	96.8	215.7	159.7	104.1	69.4	706.8
	F	53.6	82.8	143.8	110.7	68.2	39.1	498.1
86	M	61.4	94.2	221.3	167.6	105.8	69.6	720.0
	F	54.2	81.8	149.7	118.2	71.0	41.4	516.2
87	M	61.3	91.8	225.8	175.6	109.3	70.3	734.0
	F	54.3	80.8	155.1	126.1	68.7	42.5	527.5
88	M	61.3	88.7	229.9	182.8	111.6	71.6	745.8
	F	54.7	79.1	160.2	134.0	78.0	43.9	549.9
89	M	61.0	85.7	232.8	190.4	115.4	72.5	757.8
	F	55.1	77.6	164.3	142.2	82.6	45.2	567.0
90	M	60.8	84.3	233.3	198.8	119.8	73.2	770.2
	F	55.2	77.4	167.2	150.8	87.5	46.6	584.6

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 4
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	68.9	93.4	175.5	115.5	96.5	59.6	609.3
	F	57.1	72.4	105.5	71.8	55.3	29.9	392.0
80	M	68.5	95.0	186.1	121.0	98.3	60.8	629.7
	F	57.6	74.8	113.7	76.9	57.4	31.5	411.9
81	M	67.3	96.5	196.2	127.0	100.2	62.3	649.5
	F	57.0	76.9	122.2	82.2	59.6	33.2	431.3
82	M	66.0	97.9	203.0	136.2	101.7	63.9	668.6
	F	56.5	79.1	128.8	89.9	61.9	35.0	451.2
83	M	64.3	99.3	209.7	146.3	103.0	65.8	688.3
	F	55.4	81.8	135.1	98.0	64.3	36.8	471.3
84	M	62.6	100.2	216.5	154.8	104.4	67.6	706.0
	F	54.4	83.8	141.9	105.6	66.8	38.5	491.2
85	M	62.1	99.1	223.5	163.9	105.8	70.0	724.4
	F	54.5	84.5	148.9	114.0	69.4	39.3	510.5
86	M	62.6	96.8	230.4	173.0	108.0	70.4	741.2
	F	55.2	83.8	155.7	122.4	72.6	41.7	531.3
87	M	62.5	94.4	236.1	182.1	112.0	71.4	758.6
	F	55.3	83.0	162.0	131.2	76.4	42.9	544.9
88	M	62.6	91.5	241.4	190.5	114.6	72.6	773.2
	F	55.9	81.4	167.9	140.1	80.3	44.5	570.0
89	M	62.5	88.6	245.3	199.4	119.1	73.8	788.8
	F	56.4	80.0	172.8	149.4	85.3	45.9	589.8
90	M	62.4	87.3	246.8	209.0	124.1	74.7	804.2
	F	56.7	79.9	176.3	159.0	90.8	47.4	610.1

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 1
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	68.9	93.8	175.4	115.0	94.8	58.5	606.4
	F	47.8	65.2	93.2	66.0	53.2	27.3	352.7
80	M	68.3	95.2	184.6	119.9	96.5	59.9	624.5
	F	47.6	66.2	98.1	69.1	54.0	28.1	363.1
81	M	66.8	96.3	192.6	124.6	98.0	61.5	639.9
	F	46.6	66.8	102.6	72.1	54.8	29.0	371.7
82	M	65.2	97.0	196.4	132.3	99.0	63.1	653.0
	F	45.4	67.2	104.9	76.5	55.5	29.8	379.3
83	M	63.1	97.9	200.1	140.0	99.5	65.0	665.8
	F	43.8	68.1	106.8	81.1	56.2	30.6	386.7
84	M	61.2	98.6	203.9	147.3	100.5	66.9	678.2
	F	42.5	68.5	109.0	85.2	57.1	31.3	393.6
85	M	60.5	97.3	208.0	154.4	101.2	68.5	689.8
	F	42.0	68.0	111.3	89.3	57.8	31.9	400.3
86	M	60.6	94.9	212.2	161.1	102.8	69.8	701.6
	F	42.0	66.3	113.6	93.3	58.9	32.4	406.5
87	M	60.4	92.6	215.5	167.9	104.9	70.8	712.1
	F	41.6	64.7	115.4	97.4	60.3	32.6	412.1
88	M	60.2	89.7	218.4	173.8	107.8	72.2	722.2
	F	41.5	62.5	117.0	101.3	62.2	33.0	417.5
89	M	60.0	86.9	220.4	180.1	111.3	73.2	731.9
	F	41.4	60.6	117.8	105.3	64.4	33.3	422.9
90	M	59.6	85.7	220.2	187.0	115.2	74.2	741.9
	F	41.0	59.7	117.8	109.4	66.9	33.7	428.6

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 2
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	69.2	94.4	176.9	115.6	95.3	58.6	610.0
	F	48.0	65.6	94.1	66.5	53.4	27.3	354.8
80	M	69.1	96.8	188.5	121.4	97.3	60.1	633.1
	F	48.1	67.2	100.2	70.1	54.5	28.2	368.3
81	M	68.0	99.2	199.8	127.9	99.5	62.0	656.5
	F	47.4	68.6	106.5	73.9	55.7	29.2	381.2
82	M	67.0	101.3	208.0	137.7	101.4	63.9	679.4
	F	46.7	70.1	111.2	79.8	56.8	30.1	394.7
83	M	65.6	103.7	216.1	147.9	103.0	66.2	702.5
	F	45.5	71.9	115.5	85.8	58.1	31.1	407.9
84	M	64.2	105.5	224.6	157.9	104.8	68.4	725.5
	F	44.6	73.2	120.2	91.6	59.6	32.0	421.1
85	M	64.1	105.5	233.4	168.2	106.8	70.5	748.5
	F	44.4	73.4	125.0	97.7	60.9	32.8	434.1
86	M	64.8	103.9	242.2	178.5	109.6	72.4	771.3
	F	44.8	72.4	129.7	103.7	62.9	33.5	447.0
87	M	65.0	102.5	250.0	189.1	113.1	73.8	793.4
	F	44.8	71.4	133.9	110.1	65.1	33.9	459.2
88	M	65.5	100.3	257.2	198.9	117.5	75.7	815.2
	F	45.1	69.6	137.6	116.5	67.8	34.6	471.3
89	M	65.8	98.0	262.9	209.4	122.7	77.5	836.3
	F	45.4	68.1	140.3	123.1	71.1	35.2	483.1
90	M	66.1	97.4	265.8	220.7	128.6	79.1	857.7
	F	45.5	67.6	141.9	129.7	74.8	35.8	495.4

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 3
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	68.9	93.8	175.4	114.9	94.9	58.4	606.4
	F	47.8	65.1	93.2	66.1	53.2	27.2	352.6
80	M	68.5	95.5	185.3	120.1	96.7	59.9	625.9
	F	47.7	66.3	98.5	69.3	54.1	28.1	364.0
81	M	67.1	97.1	194.5	125.5	98.5	61.6	644.3
	F	46.7	67.2	103.6	72.6	55.0	29.0	374.2
82	M	65.7	98.4	199.9	133.9	99.7	63.4	661.0
	F	45.8	68.0	106.7	77.6	55.9	29.8	383.8
83	M	63.9	99.7	205.1	142.4	100.8	65.4	677.3
	F	44.3	69.2	109.5	82.7	56.8	30.7	393.3
84	M	62.1	100.8	210.5	150.7	101.9	67.4	693.4
	F	43.1	69.9	112.5	87.3	57.9	31.5	402.3
85	M	61.5	99.9	216.1	158.9	103.2	69.2	708.6
	F	42.7	69.6	115.7	92.1	58.8	32.1	411.0
86	M	61.8	97.7	221.8	166.8	105.1	70.7	723.9
	F	42.8	68.1	118.6	96.7	60.2	32.7	419.2
87	M	61.7	95.6	226.4	174.7	107.6	71.7	737.7
	F	42.5	66.6	121.1	101.6	61.9	33.0	426.7
88	M	61.7	92.8	230.6	181.9	111.1	73.4	751.5
	F	42.5	64.5	123.3	106.3	64.0	33.5	434.1
89	M	61.6	90.1	233.6	189.4	115.1	74.8	764.5
	F	42.5	62.6	124.7	111.1	66.6	33.9	441.4
90	M	61.4	89.1	234.3	197.8	119.6	75.9	777.9
	F	42.2	61.9	125.1	116.0	69.5	34.3	449.0

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 4
ALBERTA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	68.9	93.8	175.4	114.9	95.0	58.4	606.4
	F	47.8	65.0	93.2	66.1	53.3	27.2	352.6
80	M	68.6	95.9	186.0	120.3	96.9	59.9	627.7
	F	47.8	66.4	98.9	69.6	54.2	28.0	364.9
81	M	67.4	97.8	196.2	126.4	98.9	61.7	648.4
	F	46.9	67.6	104.6	73.1	55.3	29.0	376.5
82	M	66.2	99.6	203.1	135.5	100.5	63.6	668.5
	F	46.1	68.7	108.5	78.6	56.3	29.9	388.1
83	M	64.6	101.5	209.9	144.8	101.9	65.8	688.5
	F	44.8	70.3	112.0	84.2	57.5	30.8	399.6
84	M	62.9	103.0	216.8	154.0	103.4	67.9	708.0
	F	43.7	71.2	115.9	89.4	58.7	31.6	410.5
85	M	62.5	102.3	223.9	163.1	104.9	69.8	726.5
	F	43.4	71.1	119.8	94.8	59.9	32.4	421.2
86	M	62.9	100.4	231.0	172.1	107.3	71.5	745.1
	F	43.6	69.7	123.4	100.2	61.5	33.0	431.4
87	M	62.9	98.4	236.8	181.2	110.2	72.8	762.4
	F	43.3	68.4	126.6	105.7	63.4	33.3	440.8
88	M	63.1	95.8	242.1	189.5	114.1	74.5	779.1
	F	43.4	66.3	129.3	111.1	65.9	33.9	449.9
89	M	63.1	93.2	246.2	198.4	118.8	76.1	795.7
	F	43.5	64.5	131.1	116.7	68.8	34.4	459.1
90	M	63.0	92.2	247.7	207.9	123.9	77.4	812.1
	F	43.4	63.8	131.9	122.4	72.1	34.9	468.5

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 1
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.8	103.2	211.2	152.8	129.3	82.8	754.2
	F	64.2	84.0	132.9	95.4	73.3	41.2	491.0
80	M	73.8	106.3	219.3	158.6	130.2	83.2	771.4
	F	63.9	87.3	140.5	101.0	74.8	42.8	510.4
81	M	71.9	109.1	227.7	164.8	131.3	84.2	789.0
	F	63.1	90.6	148.6	107.1	76.6	44.6	530.7
82	M	70.2	111.6	232.5	175.6	132.3	85.7	807.8
	F	62.2	93.8	154.5	116.3	78.9	46.4	552.1
83	M	67.8	113.5	238.6	185.8	133.6	87.3	826.8
	F	60.7	96.7	161.1	125.6	81.6	48.2	573.8
84	M	66.3	114.0	246.0	195.4	135.1	88.9	845.7
	F	59.8	98.8	168.4	134.6	84.2	50.1	595.8
85	M	65.8	112.3	254.0	205.3	136.8	89.6	863.8
	F	59.9	98.8	176.2	144.0	87.3	51.4	617.6
86	M	66.3	109.1	261.5	214.3	139.2	90.4	880.8
	F	60.7	97.8	183.9	153.2	91.0	52.7	639.3
87	M	66.2	106.2	268.1	223.1	142.1	90.8	896.5
	F	61.1	96.5	190.8	162.8	95.4	53.7	660.4
88	M	66.3	102.2	274.2	231.5	146.7	91.4	912.2
	F	61.8	94.3	197.7	172.0	100.6	55.0	681.4
89	M	65.6	99.4	279.3	239.1	152.3	91.6	927.4
	F	61.7	93.0	203.6	181.6	106.8	56.0	702.8
90	M	64.9	98.0	282.2	248.1	158.0	91.8	943.0
	F	61.6	92.8	207.8	191.9	113.1	57.2	724.4

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 2
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.5	102.3	208.8	151.8	128.9	82.6	748.9
	F	63.9	83.2	131.4	94.8	73.1	41.1	487.4
80	M	73.2	105.0	215.4	156.9	129.4	82.8	762.9
	F	63.4	86.0	138.2	100.1	74.4	42.6	504.7
81	M	71.0	107.3	222.1	162.3	130.3	83.9	776.8
	F	62.4	88.9	145.0	105.6	75.9	44.3	522.1
82	M	69.0	109.2	224.9	172.0	130.8	85.1	791.0
	F	61.2	91.5	149.4	114.0	78.0	46.0	540.1
83	M	66.4	110.7	229.5	181.2	131.6	86.6	806.0
	F	59.4	94.0	154.8	122.6	80.3	47.7	558.8
84	M	64.7	110.9	235.7	189.6	132.9	88.1	822.0
	F	58.3	95.9	161.3	130.8	82.7	49.5	578.5
85	M	64.0	109.1	242.8	198.5	134.2	88.6	837.2
	F	58.3	95.8	168.3	139.7	85.6	50.7	598.3
86	M	64.4	105.9	250.1	206.7	136.2	89.3	852.6
	F	59.0	94.7	175.7	148.1	89.0	52.0	618.4
87	M	64.3	103.1	256.8	214.9	139.0	89.5	867.5
	F	59.3	93.5	182.5	157.2	93.3	52.8	638.6
88	M	64.2	99.2	263.2	222.7	143.3	90.1	882.6
	F	59.9	91.2	189.3	165.9	98.3	54.0	658.6
89	M	63.4	96.4	268.8	229.7	148.5	90.2	897.1
	F	59.6	89.8	195.3	174.8	104.2	55.0	678.8
90	M	62.6	94.9	271.9	238.2	153.8	90.4	911.8
	F	59.4	89.6	199.6	184.7	110.3	56.1	699.7

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 3
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.5	102.3	208.9	152.0	128.9	82.6	749.2
	F	63.9	83.2	131.5	94.9	73.1	41.1	487.6
80	M	73.3	105.1	215.5	156.9	129.4	82.8	763.1
	F	63.4	86.0	138.2	100.1	74.4	42.6	504.8
81	M	71.0	107.4	222.3	162.4	130.4	83.9	777.3
	F	62.4	89.0	145.2	105.6	76.0	44.3	522.4
82	M	69.1	109.4	225.2	172.1	130.8	85.1	791.6
	F	61.2	91.6	149.7	114.1	78.0	46.0	540.7
83	M	66.4	110.8	229.6	181.2	131.6	86.6	806.2
	F	59.4	94.1	154.9	122.6	80.4	47.7	559.1
84	M	64.7	110.8	235.2	189.4	132.8	88.0	820.9
	F	58.3	95.7	160.9	130.7	82.6	49.5	577.7
85	M	63.8	108.8	241.4	197.9	134.0	88.5	834.4
	F	58.1	95.4	167.3	139.2	85.4	50.7	596.1
86	M	64.1	105.3	247.6	205.6	135.7	89.0	847.3
	F	58.7	94.1	173.9	147.2	88.7	51.9	614.4
87	M	63.9	102.1	252.8	212.8	138.2	89.2	859.0
	F	58.9	92.5	179.6	155.6	92.7	52.6	631.9
88	M	63.6	97.8	257.7	219.6	142.0	89.6	870.4
	F	59.3	90.0	185.4	163.6	97.4	53.8	649.5
89	M	62.7	94.8	261.9	225.6	147.0	89.7	881.6
	F	58.9	88.4	190.3	171.7	103.1	54.7	667.0
90	M	61.7	93.2	263.8	232.9	151.8	89.7	893.1
	F	58.5	88.0	193.7	180.7	108.8	55.7	685.3

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON HUDSON INSTITUTE PART. RATES AND PROJECTION 4
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.1	101.4	206.6	150.9	128.6	82.4	744.0
	F	63.6	82.4	130.1	94.3	72.8	40.9	484.1
80	M	72.7	103.8	211.9	155.4	128.8	82.5	755.1
	F	62.9	84.8	135.9	99.1	74.0	42.4	499.2
81	M	70.2	105.7	217.0	159.9	129.3	83.4	765.4
	F	61.6	87.3	141.7	104.2	75.3	44.1	514.1
82	M	68.0	107.1	218.0	168.6	129.4	84.4	775.5
	F	60.2	89.5	144.9	112.0	77.1	45.6	529.2
83	M	65.1	108.0	220.5	176.5	129.8	85.8	785.8
	F	58.2	91.5	148.8	119.6	79.1	47.2	544.4
84	M	63.0	107.7	224.5	183.6	130.5	87.1	796.3
	F	56.8	92.8	153.4	126.8	81.1	48.8	559.8
85	M	62.0	105.2	229.1	190.6	131.1	87.3	805.4
	F	56.4	92.1	158.6	134.3	83.5	49.9	574.9
86	M	62.0	101.5	233.8	196.8	132.3	87.7	814.1
	F	56.8	90.4	163.8	141.3	86.4	50.9	589.6
87	M	61.4	98.0	237.6	202.6	134.1	87.8	821.5
	F	56.7	88.6	168.5	148.4	90.0	51.6	603.8
88	M	61.0	93.5	241.4	207.8	137.4	87.9	828.9
	F	56.9	85.8	173.1	155.1	94.3	52.6	617.7
89	M	59.7	90.2	244.3	212.2	141.7	87.8	836.0
	F	56.2	83.9	177.2	161.8	99.4	53.3	631.6
90	M	58.5	88.4	245.4	217.9	145.6	87.6	843.3
	F	55.5	83.2	179.7	169.3	104.5	54.2	646.3

BASED ON 1978 PART. RATES AND PROJECTION 1
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.9	103.7	211.7	152.8	129.5	83.2	755.7
	F	63.6	83.1	130.8	93.7	71.8	40.1	483.1
80	M	73.9	107.3	219.5	158.6	130.5	84.1	773.9
	F	62.8	85.3	136.1	97.5	71.8	40.7	494.2
81	M	72.0	110.6	227.9	164.8	131.8	85.6	792.9
	F	61.4	87.7	141.6	101.6	72.1	41.4	505.8
82	M	70.4	113.7	232.9	175.6	133.0	87.6	813.1
	F	60.0	89.7	145.0	108.5	72.8	42.0	518.0
83	M	68.1	116.2	239.1	185.8	134.5	89.8	833.5
	F	57.9	91.6	148.9	115.2	73.9	42.6	530.1
84	M	66.7	117.2	246.6	195.4	136.2	91.9	853.9
	F	56.6	92.5	153.4	121.4	74.8	43.3	542.0
85	M	66.2	116.1	254.7	205.3	138.0	93.2	873.4
	F	56.2	91.6	158.1	127.9	76.2	43.4	553.3
86	M	66.7	113.3	262.4	214.3	140.6	94.5	891.8
	F	56.5	89.6	162.6	133.9	78.0	43.6	564.2
87	M	66.7	110.7	269.1	223.1	143.8	95.4	908.9
	F	56.4	87.6	166.3	140.1	80.4	43.4	574.1
88	M	66.8	107.1	275.3	231.5	148.6	96.6	925.9
	F	56.5	84.7	169.8	145.8	83.2	43.5	583.6
89	M	66.2	104.7	280.6	239.1	154.5	97.4	942.5
	F	55.9	82.7	172.5	151.5	86.9	43.5	593.1
90	M	65.5	103.7	283.6	248.1	160.4	98.2	959.6
	F	55.3	81.9	173.6	157.8	90.5	43.5	602.8

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 2
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.5	102.8	209.3	151.8	129.1	83.1	750.5
	F	63.3	82.2	129.3	93.1	71.6	40.0	479.5
80	M	73.4	106.0	215.6	156.9	129.8	83.7	765.4
	F	62.2	84.1	133.8	96.6	71.4	40.5	488.7
81	M	71.2	108.8	222.4	162.3	130.8	85.3	780.7
	F	60.7	86.0	138.2	100.2	71.5	41.1	497.6
82	M	69.3	111.3	225.2	172.0	131.5	87.0	796.2
	F	58.9	87.5	140.2	106.3	72.0	41.6	506.7
83	M	66.7	113.3	230.0	181.2	132.5	89.0	812.7
	F	56.7	89.0	143.1	112.4	72.8	42.2	516.2
84	M	65.1	114.1	236.3	189.6	133.9	91.0	830.0
	F	55.2	89.8	146.8	118.1	73.5	42.7	526.2
85	M	64.4	112.7	243.5	198.5	135.4	92.1	846.6
	F	54.7	88.7	151.0	124.0	74.7	42.8	536.0
86	M	64.9	109.9	251.0	206.7	137.6	93.3	863.4
	F	54.9	86.8	155.3	129.5	76.3	42.9	545.7
87	M	64.8	107.5	257.8	214.9	140.6	94.1	879.6
	F	54.7	84.8	159.0	135.2	78.6	42.7	555.1
88	M	64.8	103.9	264.3	222.7	145.1	95.2	896.0
	F	54.8	81.9	162.7	140.6	81.3	42.8	564.1
89	M	64.0	101.5	270.0	229.7	150.7	96.0	911.8
	F	54.0	79.9	165.5	145.9	84.8	42.7	572.8
90	M	63.2	100.4	273.3	238.2	156.2	96.7	928.0
	F	53.4	79.1	166.8	151.9	88.2	42.7	582.1

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 3
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.5	102.8	209.4	152.0	129.1	83.1	750.8
	F	63.3	82.3	129.4	93.2	71.6	40.0	479.8
80	M	73.4	106.1	215.7	156.9	129.8	83.7	765.6
	F	62.2	84.1	133.8	96.6	71.4	40.5	488.7
81	M	71.2	108.9	222.5	162.4	130.9	85.3	781.2
	F	60.7	86.0	138.4	100.2	71.5	41.1	497.9
82	M	69.3	111.4	225.5	172.1	131.5	87.0	796.8
	F	59.0	87.7	140.5	106.5	72.0	41.6	507.2
83	M	66.7	113.4	230.1	181.2	132.5	89.0	812.8
	F	56.7	89.1	143.2	112.4	72.8	42.2	516.4
84	M	65.0	114.0	235.7	189.4	133.8	90.9	828.9
	F	55.2	89.6	146.5	117.9	73.5	42.7	525.5
85	M	64.2	112.4	242.1	197.9	135.2	92.0	843.8
	F	54.5	88.4	150.1	123.6	74.6	42.8	533.9
86	M	64.6	109.3	248.5	205.6	137.1	93.1	858.0
	F	54.7	86.3	153.7	128.7	76.0	42.8	542.2
87	M	64.3	106.5	253.8	212.8	139.8	93.8	871.0
	F	54.3	84.0	156.5	133.9	78.1	42.6	549.3
88	M	64.1	102.5	258.8	219.6	143.9	94.8	883.7
	F	54.2	80.9	159.3	138.6	80.6	42.6	556.3
89	M	63.3	99.8	263.1	225.6	149.1	95.4	896.2
	F	53.4	78.6	161.2	143.3	83.9	42.4	562.8
90	M	62.3	98.6	265.1	232.9	154.1	96.0	909.1
	F	52.6	77.7	161.9	148.5	87.0	42.3	570.1

LABOUR FORCE ESTIMATES BY AGE AND SEX

BASED ON 1978 PART. RATES AND PROJECTION 4
BRITISH COLUMBIA

		15-19	20-24	25-34	35-44	45-54	55-64	TOTAL
79	M	74.2	101.9	207.0	150.9	128.7	82.8	745.6
	F	63.0	81.4	128.0	92.6	71.4	39.9	476.2
80	M	72.8	104.8	212.1	155.4	129.1	83.4	757.6
	F	61.8	82.9	131.6	95.7	71.0	40.3	483.3
81	M	70.4	107.2	217.3	159.9	129.8	84.8	769.2
	F	59.9	84.4	135.1	98.8	70.9	40.9	489.9
82	M	68.3	109.1	218.4	168.6	130.0	86.3	780.7
	F	58.1	85.6	136.0	104.5	71.1	41.3	496.5
83	M	65.3	110.6	221.0	176.5	130.6	88.2	792.3
	F	55.6	86.6	137.5	109.7	71.7	41.7	502.8
84	M	63.3	110.7	225.1	183.6	131.5	90.0	804.2
	F	53.8	86.9	139.7	114.4	72.1	42.2	509.1
85	M	62.4	108.7	229.8	190.6	132.3	90.8	814.6
	F	52.9	85.3	142.3	119.3	72.9	42.2	514.9
86	M	62.4	105.3	234.6	196.8	133.6	91.7	824.5
	F	52.8	82.9	144.8	123.5	74.1	42.1	520.2
87	M	61.9	102.2	238.5	202.6	135.7	92.3	833.1
	F	52.2	80.4	146.8	127.7	75.8	41.7	524.7
88	M	61.5	98.0	242.4	207.8	139.2	92.9	841.8
	F	52.0	77.1	148.8	131.4	78.0	41.6	528.9
89	M	60.3	95.0	245.5	212.2	143.7	93.4	850.0
	F	50.9	74.6	150.1	135.0	80.9	41.4	532.8
90	M	59.1	93.5	246.6	217.9	147.8	93.7	858.7
	F	49.9	73.5	150.2	139.2	83.6	41.2	537.5

APPENDIX III - 4

Net Migration/Wage Rate Differential Regression[18]

$$ANMIG = 20201.08 + \underset{(7.31)}{154766.4}\ WSD + \underset{(2.73)}{23668.15}\ URD \qquad R^2 = 0.869,\ D = 1.83$$

Where

ANMIG represents net migration of those over 18 years of age to western Canada from the rest of Canada.

WSD represents the proportional average wage rate differential between the four western provinces and the rest of Canada

URD represents the proportional unemployment rate differential between the western provinces and the rest of Canada

The time series used to develop this regression was from 1962 to 1977. It is likely that we are forecasting beyond the capabilities of our data. A lagged dependent variable, other income concepts, as well as a dummy variable to account for the energy crisis starting in 1973 were tried. None of these improved the estimation significantly. There has been structural change within western Canada since the first energy crisis of 1973; however, sufficient time has not passed to provide a reliable estimating data base.

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[18] The t statistic is in brackets under the coefficient and d is the Durbin Watson statistic.