



THE DEPOPULATION OF CANADIAN COMMUNITIES, 1981-86

by

Claude Marchand and Janine Charland

ICURR Intergovernmental Committee on Urban
and Regional Research

Comité intergouvernemental de recherches
urbaines et régionales

CIRUR

the Intergovernmental Committee on Urban and Regional Research

Published by ICURR PRESS
Suite 301, 150 Eglinton Avenue East
Toronto, Ontario
Canada M4P 1E8
Tel: (416) 973-5629 Fax: (416) 973-1375

First published June 1991
Copyright © ICURR PRESS 1991
All rights reserved

ISBN 1-895469-06-6



ICURR Intergovernmental Committee on Urban
and Regional Research
Comité intergouvernemental de recherches
urbaines et régionales **CIRUR**

No part of this report can be reproduced in any form without the written consent of the publisher.

The views expressed here are those of the authors and do not represent the views of ICURR.

July 1991

On behalf of the **Intergovernmental Committee on Urban and Regional Research**, I am pleased to present this report on The Depopulation of Canadian Communities, 1981-1986. The purpose of the study was to illustrate the demographic changes having taken place in Canadian communities during that period and to identify the types of settlements most affected by declining population. By documenting these trends and the nature of the affected areas, the objective of the project is to assist in the development of appropriate strategies directed at those communities most at risk. **ICURR** intends to continue looking at demographic conditions throughout the country as a key indicator of our communities health and as a tool to help governments direct adequate resources to the maintenance of a dynamic settlement pattern.

Credit for this report is owed to Dr. Claude Marchand and Janine Charland. Prior to becoming research coordinator at **ICURR**, Claude Marchand was associate professor of Geography at the University of Montréal from 1979 to 1988. Since 1988, she holds the rank of associate professor (status only) in the Department of Geography at the University of Toronto. She is a graduate of the University of Toronto with a doctorate in Geography. In her capacity as research assistant at **ICURR**, Janine Charland also contributed greatly to this study. She is a graduate of York University where she received her M.A. in Environmental Studies specializing in Urban Sociology. She had previously received a degree in Urban Planning from Université du Québec in Montréal.

Gilbert Héroux
Executive Director
Intergovernmental Committee
on Urban and Regional Research

SUMMARY

This report documents the population decline which affected small Canadian Communities between 1981 and 1986. It first reviews population trends from 1976 to 1986, noting that many small towns which grew during the resource boom of the 70s later suffered with the 1980-1982 recession.

More precisely, the report reveals that 182 communities in Canada experienced a decline in population of more than five percent during 1981-1986. This phenomenon occurred principally in small towns of 1,000 to 3,000 inhabitants. The greatest number of such towns was found in Québec, especially in the Saint Lawrence valley. However, the hardship was most severe in Newfoundland, where four communities experienced a decline of more than 20 percent, and in British Columbia, where five towns saw their population decrease by more than 20 percent and six others by more than 15 percent.

The second section of the report reviews the economic conditions of the early 80s and identifies the economic sectors responsible for population decline. Manufacturing labour force data reveals that, with the exception of Québec and Nova Scotia, declining communities are predominantly towns whose economies are based in the processing of resources, especially food and forest products. Unpublished labour force data compiled by Statistics Canada for ICURR also indicate that many declining communities are mining towns.

Beyond sharing a somewhat similar economic base, the 182 communities differ markedly in their demographic characteristics, income distribution, the importance of service industries and the scale of their unemployment. The third section identifies 55 Census variables which are used to establish these relevant community characteristics. As a result of the diversity among communities, the report concludes that community development programs should differentiate according to income potential, the seasonal nature of unemployment, demographic and population stability.

TABLE OF CONTENTS

SECTION 1	INTRODUCTION.....	1
SECTION 2	TRENDS IN POPULATION GROWTH.....	4
2.1	Counterurbanization in the 1970s.....	4
2.2	Reversed trends in the 1980s: the depopulation of the periphery.....	10
2.3	Declining Canadian communities during 1981-86.....	13
SECTION 3	THE RESTRUCTURING OF THE ECONOMY....	21
3.1	The recession of the early 1980s....	21
3.2	The redistribution of the labour force.....	25
SECTION 4	THE CAUSES AND IMPACTS OF DEPOPULATION.....	42
4.1	The neo-classical model and the elimination of regional disparities. 42	42
4.2	Regional disparities and the patterns of the 1981-86 period.....	45
4.3	The identification of community types.....	52
4.4	A review of programs designed to alleviate regional disparities.....	64
SECTION 5	CONCLUSION.....	71
NOTES	74
APPENDIX 1	87
APPENDIX 2	90

SECTION 1 - INTRODUCTION

During the 1970s Canada recorded, for the first time since 1871, a greater population growth rate in rural than urban areas. However, this expansion in the periphery proved ephemeral. By the next decade, there were a greater number of small areas experiencing significant reduction of their population and fewer undergoing rapid expansion. Single-industry or resource-based communities were particularly affected by the 1981-82 recession.

Since the early 1980s, there have been various accounts of drastic population decline in resource dependent or single-industry communities. However, despite the increasing concern about the future of such communities, there has been no national study of this phenomenon. Most such studies have instead given detailed accounts of individual communities, such as the demise of Schefferville documented by Bradbury, or the case studies in two reports on regional unemployment in Canada written by the Employment and Immigration Advisory Council of Canada¹. As discussed in these reports, the depopulation of individual communities brings about enormous financial and social costs to both the federal government and provinces who wish to know more about regional disparities than the global picture provided by provincial averages.

The present ICURR study of Canadian communities with a greater than five percent decline in 1981-86 is an attempt to fill this gap. One of the main objectives of the analysis is to identify individual communities that have experienced significant decreases in population and to determine the extent of their decline during 1981-86. This includes identifying the declining economic activity responsible for depopulation. Such analysis clearly requires the examination of major economic activities of communities most affected by depopulation as well as various socio-economic characteristics of their inhabitants.

In our analysis, 55 census variables have been taken into consideration. The results show that there is not a single profile of declining communities but rather that they vary along six main socio-economic dimensions. Development policies adopted by the federal or provincial governments should therefore take into account the demographic characteristics of the communities concerned, their employment and income potential, the level of education and the presence of white collar positions.

The report is divided into three parts. The first section concerns migration patterns and contrasts major regional migration trends during the seventies and eighties. This sets the broader context for the depopulation phenomenon during the early 1980s. Canadian communities most affected by the depopulation phenomenon during the 1981-86 period are also identified.

The second section comprises two parts. It presents a broad examination of the economic conditions of the early 1980s, including the repercussions of the 1981-82 recession and structural changes affecting employment levels and distribution by sector of the economy. ICURR's results regarding levels of unemployment and the economic base of the 182 declining communities are also presented. In order to better understand the context in which communities experienced significant population decline during 1981-86, this is followed by a discussion of employment conditions by sector of the economy during the early 1980s, their repercussions at regional and community levels and associated migration patterns. This sub-section also includes a closer examination of employment conditions in industries most affected by the 1981-82 recession.

The third section of the report concerns the causes and impacts of depopulation. In this section, the major traditional theories of migration, which link migration trends to a decline in regional disparities are reviewed. Because regional disparities persist despite major interregional migration flows during the 1981-86 period, an alternative theory suggesting that migration may in fact contribute to regional disparities is presented. Finally, results of ICURR's factor analysis of the 182 declining communities are presented. To conclude, Canadian programs and policies in the area of regional development are examined in the context of the results of this study.

SECTION 2 - TRENDS IN POPULATION GROWTH

2.1 - Counterurbanization in the 1970s

During the 1970s, Canada as a whole experienced a major shift in its pattern of population growth. For the first time, since 1871, Canada recorded a greater population growth rate in rural than urban areas. Between 1971 and 1976, rural and urban² population increased by nine percent and six percent respectively³. Similarly, during the 1976-81 period, the rural population grew by nine percent, while the urban population increased by five percent⁴. In sum, the Canadian rural population expanded by almost 15 percent during the seventies while its urban counterpart grew by only 12 percent⁵.

For the 1970s, Coffey and Polèse⁶ observed a tendency for the primary sector (i.e., agriculture, mining, forestry, fishing and trapping) and traditional manufacturing (i.e., food and beverage, clothing and furniture) to grow fairly substantially in peripheral areas. According to their study, 35 percent and 26 percent of the employment growth in the primary and traditional manufacturing sectors took place in peripheral regions over this period. Employment increased by 12 and 34 percent in these sectors of the economy in the 1970s. In the United States, one of the reasons advanced by Garnick⁷ for the increase of jobs in non-metropolitan areas is the growing demand for natural resource products that are available in these regions. This may also partly explain the relative growth of non-metropolitan areas in the 1970s in Canada. Joseph, Keddie and

Smit⁸ associate the substantial growth of rural non-farm populations in British Columbia and Alberta with resource sector expansion during this period.

There was no consistent variation in population growth rate by city size during the 1976-81 period⁹. As a whole, metropolitan areas experienced net out-migration and larger urban areas expanded more slowly than medium and smaller areas. Indeed, the average rate of population growth in middle-sized urban centres of 50,000 to 100,000 population, was more than twice the average population growth of large centres of more than 100,000 population (14.8% vs 5.9%) in 1976-81¹⁰.

TABLE 1.
AVERAGE URBAN GROWTH RATES BY Region AND CITY SIZE, 1976-1981

		REGION					
CITY SIZE		B.C.	PRAIRIES	ONTARIO	QUEBEC	ATL.	CANADA
< 30K	n	9	13	25	15	12	74
	m	14.0	22.9	6.1	3.7	1.3	8.3
30-100K	n	8	6	17	13	8	52
	m	11.9	11.9	3.0	4.6	2.5	5.7
100-300K	n	1	7	4	3	3	16
	m	7.0	12.0	3.2	5.5	3.6	5.0
300K+	n	1	3	4	2	0	10
	m	8.7	14.6	3.4	3.6	-	7.3
TOTAL	n	19	24	53	33	23	152
	m	12.5	18.2	4.5	4.2	0.7	7.0

n=number of cities in categories

m=average growth rate in percent

Source: (Simmons and Bourne 1984, 29: Reproduced with permission of the authors and the Centre for Urban and Community Studies)

The urban growth pattern shows a westward movement with the most rapid growth occurring in Alberta and the west in general (see table 1). In the Prairies and British Columbia, the average population growth rate of urban areas of 10,000 and over was more than double the rate in Ontario and Québec. Among six out of 24 metropolitan areas that gained population from internal migration, five were located in the west.

Calgary, Edmonton and Saskatoon, for instance, witnessed population gains from internal migration of 14.1, 6.2 and 5.8 percent respectively in 1976-81. By contrast, Toronto and Montréal lost 0.7 and 3.8 percent. This reflects the pattern of employment growth in these regions with the three western urban areas undergoing the fastest metropolitan employment growth, and Toronto and Montréal having rates of employment growth well below the national average¹¹.

This westward shift is also apparent when examining the inter-provincial migration pattern during the 1970s. Québec and Ontario experienced annual rates of internal migration loss of 1.8 and 2.0 per thousand during the first half of the decade and 2.2 and 4.4 per thousand respectively during the second half. British Columbia gained 8.3 per thousand in 1971-76 and 20.7 per thousand in 1976-81. During the same period, Alberta witnessed a gain of 9.4 per thousand.

This phenomenon resulted in a drop of Qu&bec and Ontario's share of the Canadian population from 63.7 percent in 1971 to 61.9 percent in 1981. The share of British Columbia and Alberta's population increased from 17.7 percent in 1971 to 20.5 percent of the national population in 1981¹². This westward movement in population growth was particularly important during the second half of the decade with British Columbia and Alberta being the only provinces to gain from interprovincial migration.

This trend in internal migration reflected the regional shift in economic activity during the 1970s¹³. During this period, employment grew more slowly in Qu&bec, Ontario and the Atlantic provinces than in the Prairies and British Columbia. Employment in the manufacturing sector increased at a lower rate than the national average and decreased in its share of employment, especially in Qu&bec and Ontario. Meanwhile, the energy sector expanded considerably, notably in Alberta where 40 percent of the increase in capital investments were made between 1971 and 1981¹⁴. By 1980, the mining sector accounted for more than 7.2 percent of employment in that province which is well above its national employment share of 1.9 percent¹⁵.

Employment in the primary sector grew significantly in the Prairies despite the overall decline of its share of employment in Canada. Similarly, employment in construction increased significantly in British Columbia and the Prairies in comparison to the national average. Producer services¹⁶, the employment sector which expanded most rapidly in the 1970s, grew by more than 200 percent in the Prairies¹⁷.

The reversal in the pattern of urban growth in Canada and the United States during the 1970s does not appear to be confined to these respective countries. Major shifts in migration patterns were also observed in industrial, mature capitalist countries in Western Europe, as well as in Australia, New Zealand and Japan¹⁸.

It has been argued, notably in the United States, that the major shifts in migration patterns were too important and widely spread to be considered merely as an extended suburbanization phenomenon or "spill-over effect". The particularly high rate of population growth in rural areas took place not only in adjacent counties but also in counties non-adjacent to metropolitan areas. One of the main arguments advanced by researchers to explain the counterurbanization movement of the 1970s is the increase in employment opportunities in the service and manufacturing sectors in rural areas. Many of the counties in the U.S. that witnessed a rapid population growth over that period, were counties with substantial recreational amenities¹⁹. An important proportion of in-migrants were of retirement age. In some rural areas, the growth of population was associated with the expansion of the manufacturing sector.

The counterurbanization phenomenon in Canada, however, was not primarily the result of decentralization in manufacturing, or recreational and retirement developments²⁰. Rather, it in part reflected the relatively important expansion of a goods-producing sector which was already well-established in the western periphery. Joseph, Keddie and Smit²¹ report that the important growth of rural populations in British Columbia and Alberta resulted from the expansion of their resource sectors from 1971 to 1981. They assert

that, elsewhere in Canada, the greater population growth rate of rural areas over urban areas is part of a "spill over phenomenon". Coffey and Polase's²² examination of changes in the location of employment in Canada corroborates the argument advanced by Joseph, Keddie and Smit²³. Their study suggests a decongestion movement rather than a decentralization phenomenon. They found that most of the displacement in employment took place within the urban areas of larger centres.

The authors argue that Canada is not endowed with peripheral regions whose climate is as attractive as in the south of France or the United States, for instance. This may partly explain why, in Canada, the counterurbanization migration pattern was not the result of a decentralization trend in economic activity as it was in some other developed countries²⁴. Moreover, population growth in the periphery during the 1970s was fragile, as will be demonstrated in the next section. Because the population growth was based on the expansion of traditional sectors, which are very cyclical, this increase proved temporary.

2.2 - Reversed Trends in the 80s: The Depopulation of the Periphery

While metropolitan areas experienced net out-migration and larger centres grew more slowly than medium and smaller centres during the 1970s, population increases in the early 1980s occurred predominantly in larger centres. Indeed, from 75.6 percent in 1981, the urban population had expanded to 76.3 percent of the total Canadian population by 1986²⁵. Three quarters of the population growth in the 1980s took place in only six metropolitan areas. Burke²⁶ notes that 60 percent of the Canadian population lived in one of 25 CMAs (census metropolitan areas) in 1986, which represents an increase of five percent over a five year period. In 1981-86, the proportion of Canadians residing in rural areas or smaller cities declined²⁷. From 26.9 percent in 1981, the non-urban population represented 24.1 percent of the Canadian total in 1986. Similarly, 16.1 percent of the population lived in cities of 10,000 to 100,000 in 1981. That proportion had dropped to only 14.7 percent five years later.

There was no consistent variation in growth rate with city size during the 1970s. In the early 1980s, there does appear to be a significant relationship between population growth rate and city size. On average, population growth in small urban centres (less than 30,000 population) was slightly negative while in the largest cities (over 300,000) the population increase was more than six percent²⁸. Large centres (those with populations greater than 100,000) expanded more rapidly than middle-sized centres of 50,000 to 100,000²⁹. Indeed, the average population growth rate of middle-sized cities

of 50,000 to 100,000 dropped from 14.8 percent in 1976-81 to 3.6 percent in 1981-86 while the average growth of centres of more than 100,000 jumped from 5.9 percent to 10 percent. Toronto and Montréal, the two major metropolitan areas, saw their population increase at a faster pace than had occurred during the previous decade³⁰.

TABLE 2.
AVERAGE URBAN GROWTH RATES BY REGION AND CITY SIZE, 1981-86 (1976-81)

CITY SIZE		REGION					
		B.C.	PRAIRIES	ONTARIO	QUEBEC	ATL.	CANADA
< 30K	n	13(9)	10(13)	17(25)	12(15)	7(12)	59(74)
	m	-3.7 (14.0)	3.8 (22.9)	0.1 (6.1)	-1.4 (3.7)	-3.6 (1.3)	-0.9 (8.3)
30-100K	n	10(8)	7(6)	14(17)	15(13)	6(8)	52(52)
	m	3.8 (11.9)	8.0 (11.9)	2.6 (3.0)	0.9 (4.6)	1.7 (2.5)	1.7 (5.7)
100-300K	n	1(1)	2(2)	5(7)	3(3)	5(3)	16(16)
	m	5.8 (7.0)	11.2 (12.0)	2.5 (3.2)	2.3 (5.5)	2.5 (3.6)	3.8 (5.0)
300K+	n	1(1)	3(3)	6(4)	2(2)	0(0)	12(10)
	m	8.9 (8.7)	6.3 (14.6)	5.9 (3.4)	2.7 (3.6)	-	5.7 (7.3)
TOTAL	n	25(19)	22(24)	42(53)	32(33)	18(23)	139(152)
	m	0.2 (12.5)	6.1 (18.2)	2.1 (4.5)	0.3 (4.2)	-0.1 (0.7)	1.7 (7.0)

n=number of cities in categories

m=average growth rate

* Values between parentheses refer to the 1976-81 period.

Source: (Simmons and Bourne 1984, 29; Simmons and Bourne 1989, 33)

During the 1970s, urban expansion patterns displayed a westward migration trend. In the following decade, the western provinces were the ones that experienced the most drastic decline in their rates of urban growth. In the Prairies and British Columbia, the rate of urban population increment changed from 18 and 12 in 1976-81 respectively to six and zero in the 1980s. In Ontario and Québec, it remained relatively stable during this period (see table 2)³¹.

Changes in urban growth rates were particularly important in small centres, especially in the west. Urban population increment rates in areas of less than 30,000 dropped from a value of 14 in British Columbia in 1976-81, to almost minus four in 1981-86. During the same period in the Prairies, the rate of growth changed from 23 to six for this category of urban area.

In Ontario and Québec, towns of less than 30,000 experienced an average reduction in their expansion rate from four and six in 1976-81 respectively, to almost no growth in Ontario and a slight decline in Québec during the following period. In areas of more than 300,000 the overall urban population increment rate did not change significantly in the first half of the 1980s in comparison to the previous period, although it decreased in the Prairies from a value of almost 15 in 1976-81 to six in the early 1980s (see table 2).

The decline in attraction of the two most western provinces is also apparent upon examination of internal migration patterns in the early 1980s. From a net gain of 122,000 population in 1976-81, British Columbia gained only 4,000 from internal

migration in 1981-86. Similarly, from a net gain of 186,000 during the previous period, Alberta witnessed a net loss of 29,000 population from internal migration during the latter period³². Population growth rates dropped by 16 percent and six percent in Alberta and British Columbia respectively between these two periods³³. Ontario was the primary beneficiary of this reversal of interprovincial migration pattern of the early 1980s. From a net loss of 58,000 internal migrants during the 1976-81 period, Ontario gained 122,000 people from internal migration during the following period³⁴.

The following section documents the impact of depopulation occurring in Canada between 1981 and 1986. As will be seen, this phenomenon occurs mainly in small towns. Because Québec has a surfeit of such small communities, it also appears more prevalent there. However, the most drastic population declines occur in cities in Newfoundland and British Columbia where most depend on the forest industry.



2.3 - Declining Canadian Communities during the period 1981-86

The purpose of the statistical analysis found later in this report is to document the recent depopulation phenomenon in Canada. One objective is to identify communities with significant population decline and to determine the extent of that decline during the 1981-86 period. Such analysis implies the examination of major economic activities of communities most affected by depopulation and the various

socio-economic characteristics of their inhabitants. A total of 55 census variables have been taken into consideration in the study of the depopulation phenomenon.

The unit of analysis chosen for this study is the urban area as defined and used by Census Canada for the 1981 census: **Communities, incorporated or not, with a minimum population size of 1000 and a minimum population density of 1000 per square mile (or 400 per square kilometre)³⁵.**

The rationale for the selection of this spatial scale is that boundaries are not arbitrary and urban areas correspond to existing economic units. Census divisions represent too coarse a level of analysis whereas subdivisions include sufficient detail to avoid generalizations. In addition, subdivisions have the disadvantage of being very heterogeneous in terms of surface covered and number of inhabitants³⁶. Indeed, size of population in census subdivisions varied from zero to more than 380,000 in 1981. Similarly, the areas corresponded to regions from one square kilometre to those in excess of one million square kilometres. Subdivisions also differ in their legal status. Most of the subdivisions in Québec correspond to municipalities while in British Columbia a considerable number enclose several small municipalities or spatial entities with no particular juridical status.

The 182 urban areas studied here have experienced a decline in population of more than five percent between 1981 and 1986. A threshold of five percent was established because of the risk of overestimating depopulation rates in smaller communities.

The study shows that the communities affected range on average between 1,000 to 3,000 inhabitants. The examination of Figures 1 to 5 reveals that the hardship was most severe in Newfoundland where four communities experienced a decline of more than 20 percent, as well as in British Columbia where five towns saw their population decrease by more than 20 percent and six others by more than 15 percent. The greatest number of declining towns were found in Québec, especially in the St. Lawrence region. These were among the provinces whose resource dependent or single-industry communities witnessed the highest increase in levels of unemployment during the 1981-86 period as will be discussed in the following chapter.

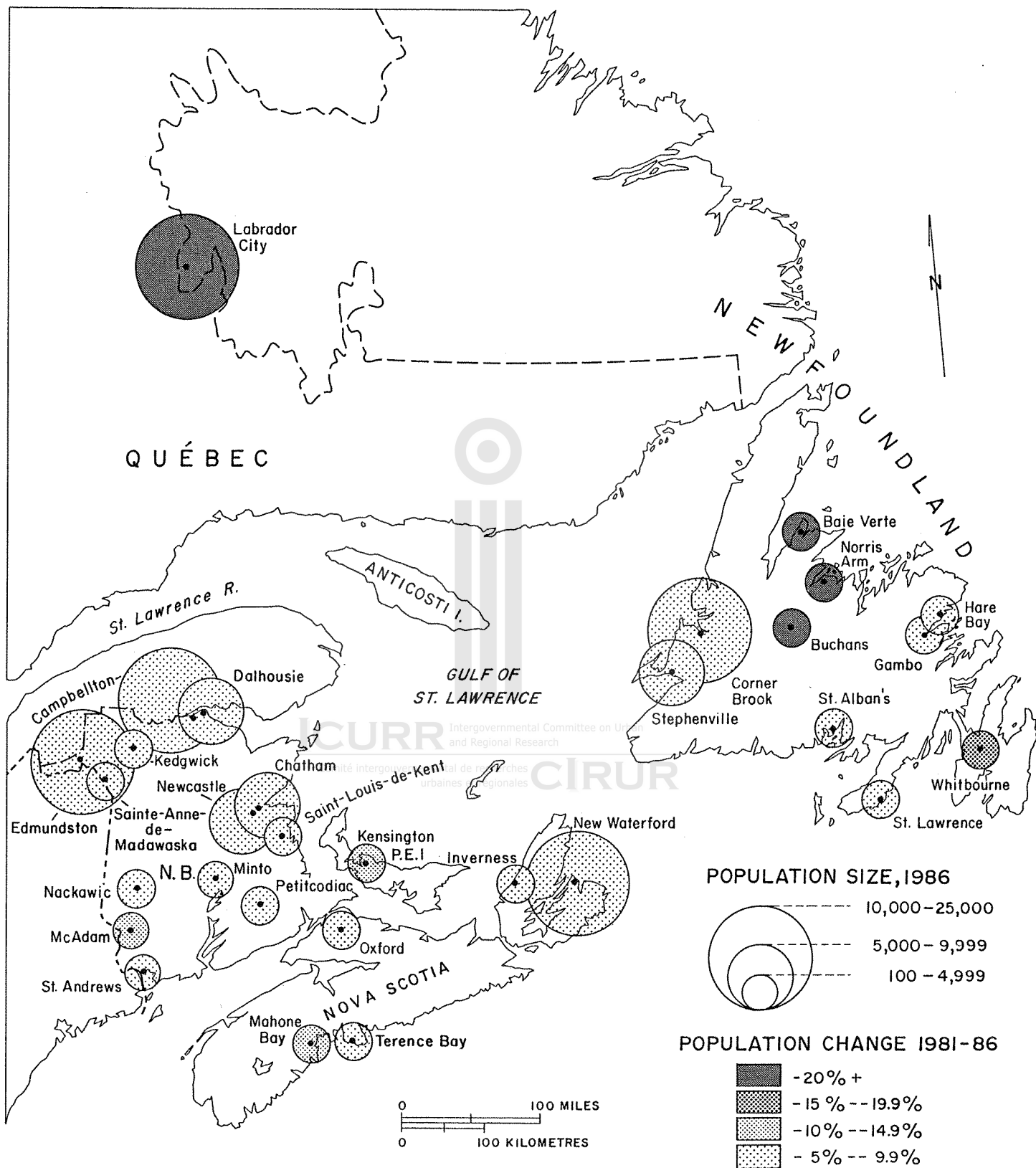


Figure 1. Declining Communities in the Atlantic Provinces

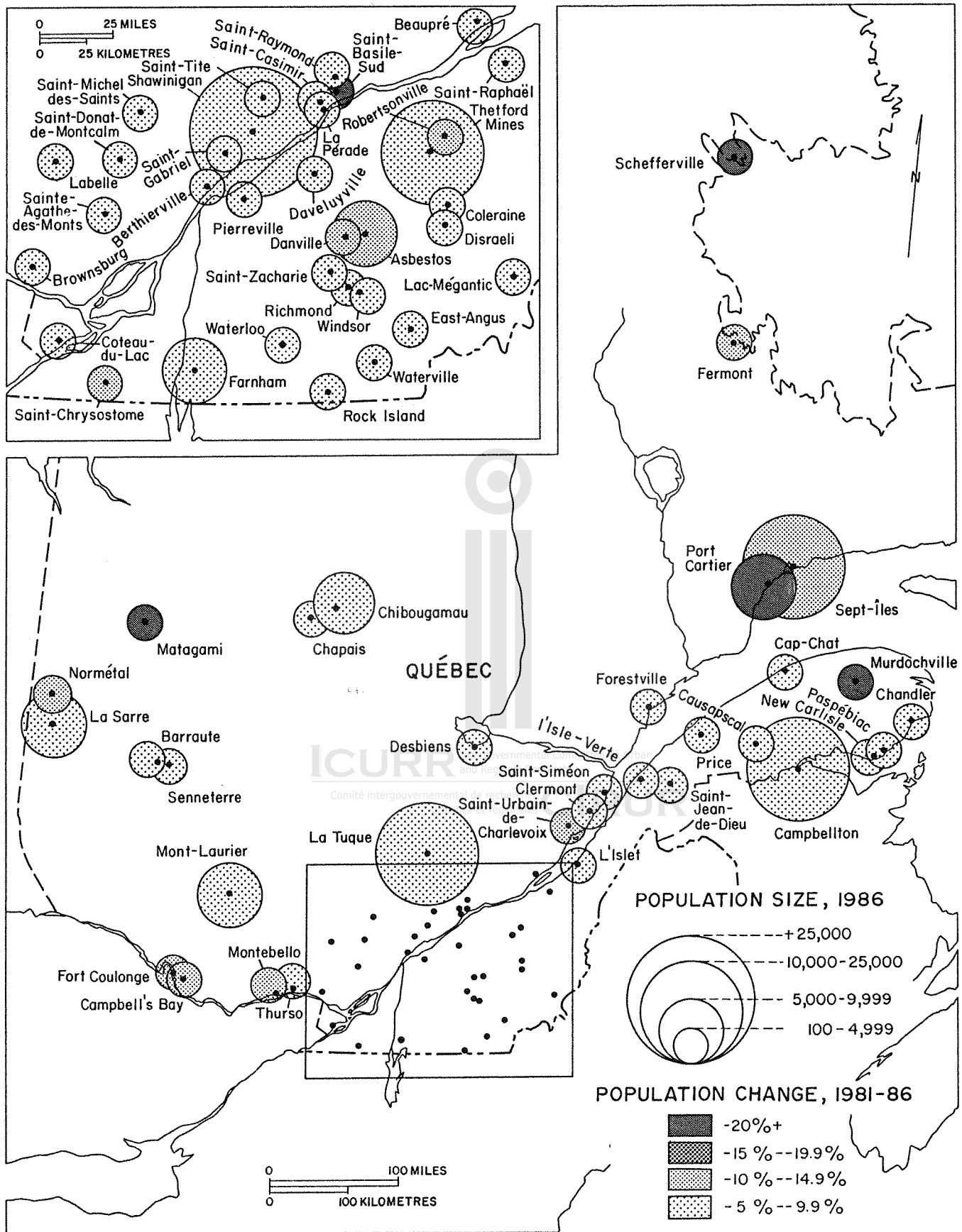


Figure 2. Declining Communities in Québec

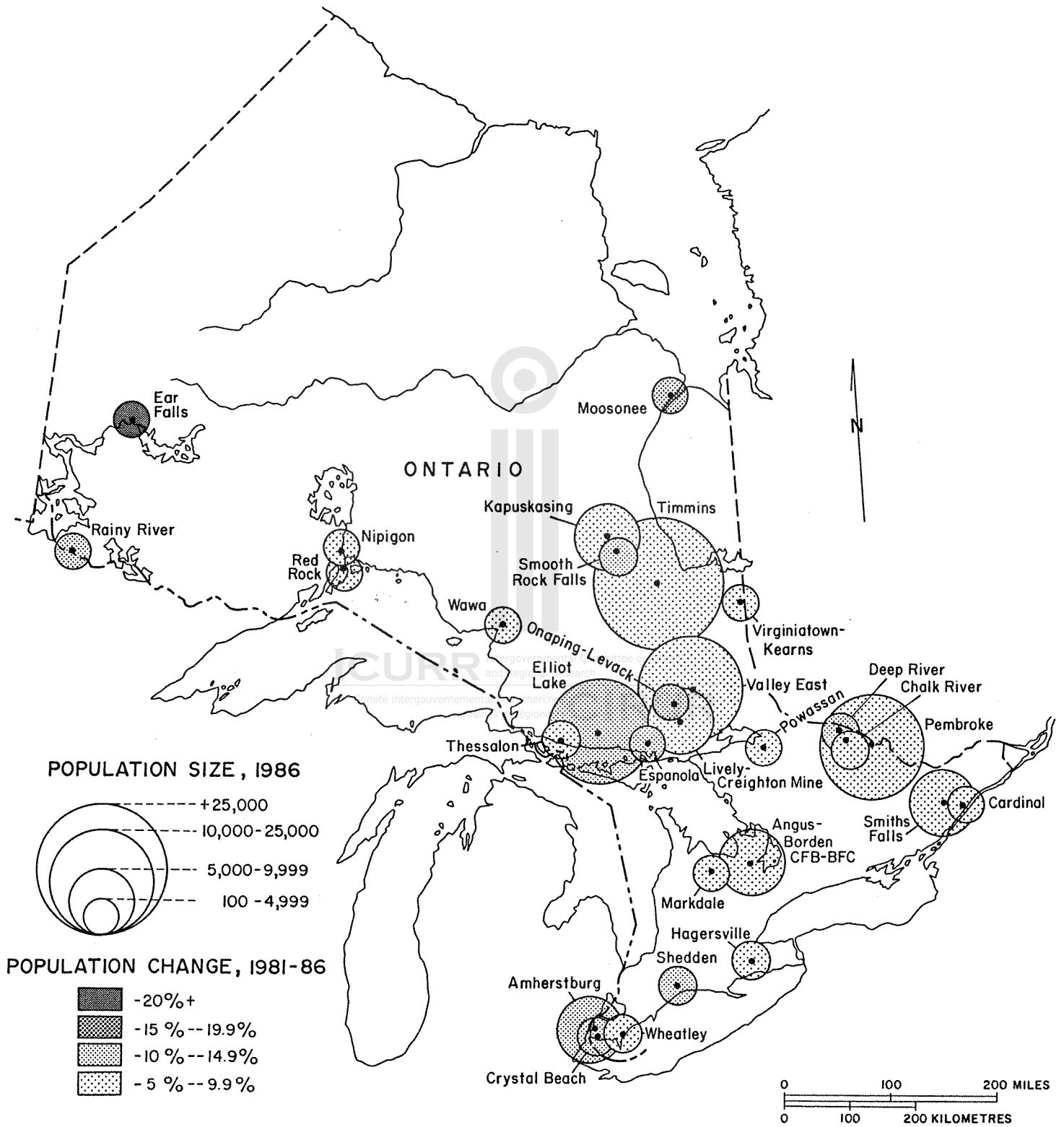


Figure 3. Declining Communities in Ontario

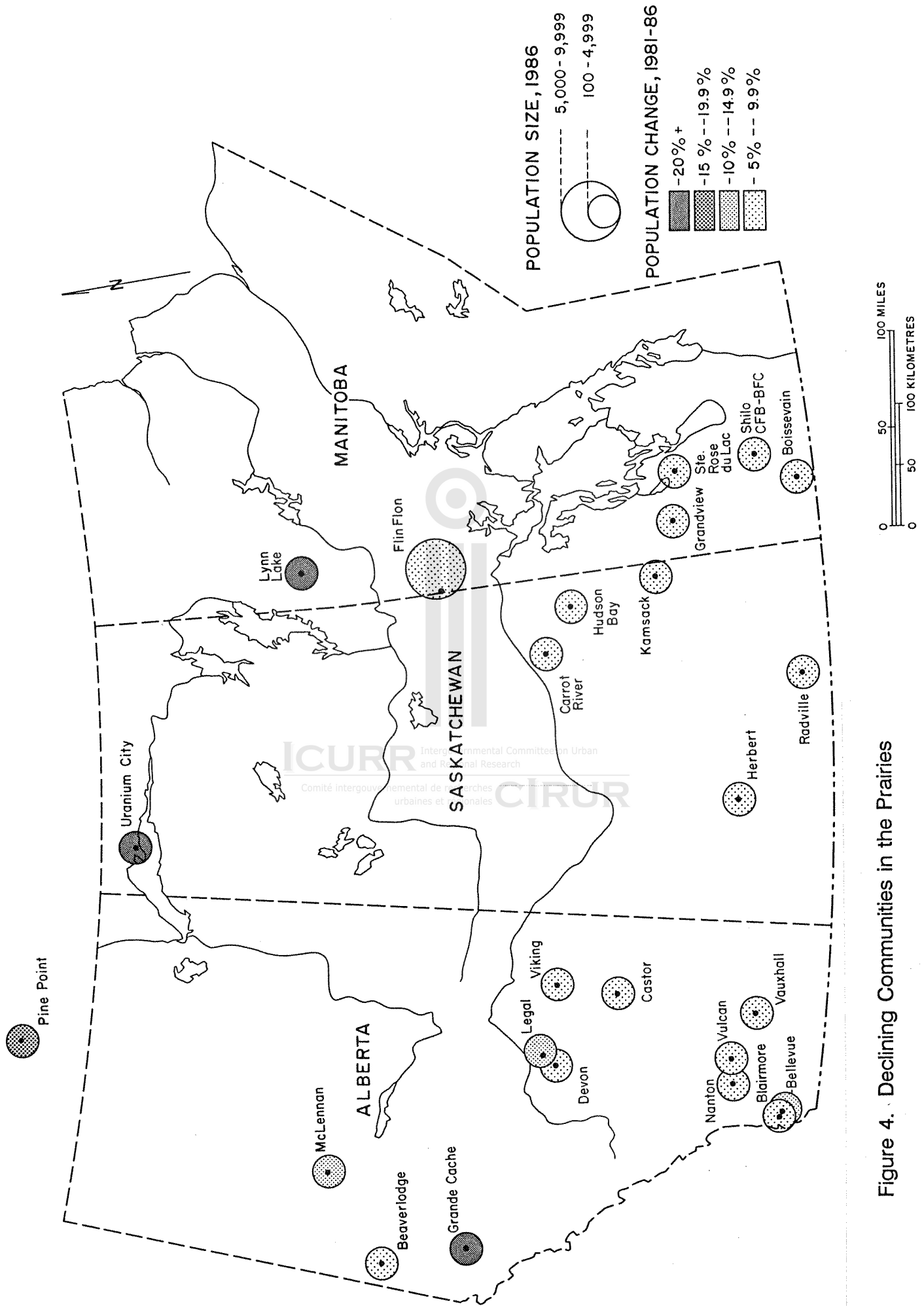


Figure 4. Declining Communities in the Prairies

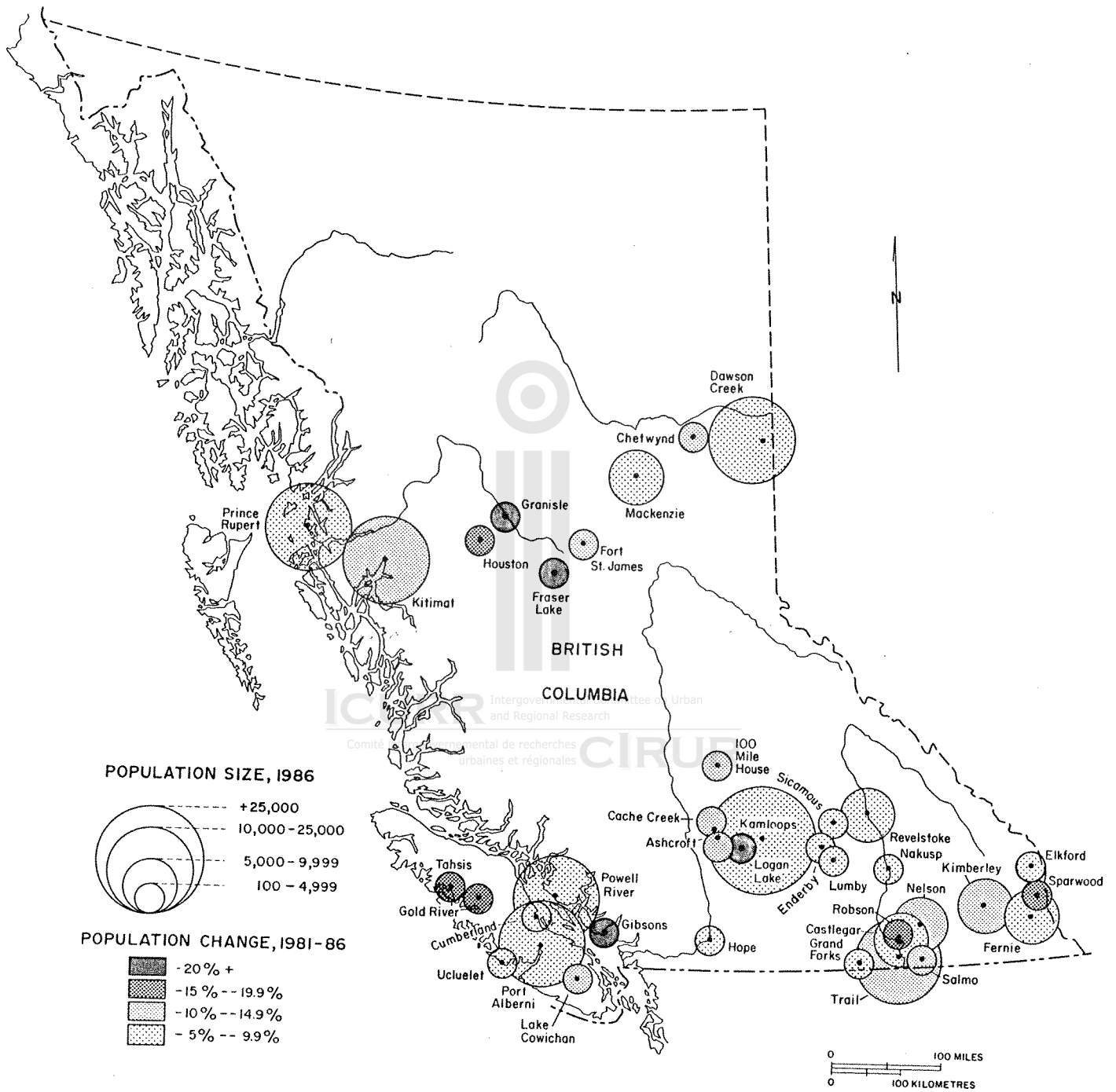


Figure 5. Declining Communities in British Columbia

SECTION 3 - THE RESTRUCTURING OF THE ECONOMY

3.1 - The Recession of the Early 1980s

In the early 1980s, like most western countries, Canada was struck by a severe recession that resulted in sharp increases in unemployment³⁷. From 7.5 percent in 1981, the proportion of unemployed rose to almost 12 percent in 1983. Rates of unemployment of more than 15 percent were found in most of British Columbia, the Atlantic provinces and the Shield areas of Québec and Ontario at the peak of the recession³⁸. Employment increased by 12 percent over the 1975-80 period. In contrast, it decreased by one percent during the recession.

This downturn is also apparent in the changes in employment by sector of the economy. While the labour force employed in services expanded by more than 35 percent between 1975 and 1980, it grew by only seven percent in 1980-82. Employment in manufacturing increased by five percent during the previous period but experienced a loss of more than six percent in the early 1980s³⁹.

Since 1984, the economic situation has moderately improved but not all regions have participated equally⁴⁰. While unemployment in Canada dropped to 9.5 percent in 1986, rates of unemployment reached 20 percent in Newfoundland with very modest decrease in Alberta, British Columbia and most of the Atlantic provinces. Except in some areas in the periphery, Ontario and Québec appeared to be the main beneficiaries

of the economic recovery with unemployment dropping to levels similar to those of the pre-recession period.

The relative decline of commodities-producing industries in favour of service-producing industries corresponds to the continuation of a trend that has been ongoing for more than 30 years. During the 1970s, employment in the service sector increased by five percent annually in comparison to less than two percent in the manufacturing and resource sectors⁴¹. From 8.3 percent in 1971, the resource sector represented 6.6 percent of the labour force in 1986. The manufacturing industry saw its share of employment decrease from 19.8 percent to 16.8 percent over this period. By contrast, employment in the service sector expanded from 57.7 percent in the early 1970s to 67.5 percent of Canadian employment in the mid-1980s⁴².

The shift in employment from goods-producing industries to service-producing industries results from a substantial increase in consumption of services by Canadian consumers and businesses. Domestic demand for medical services, education, and goods requiring sales and servicing, such as television and video equipment has grown considerably since the 1970s. Similarly, Canadian businesses have increased their use of services as intermediate inputs. Their greater reliance on specialized business consultants, financial institutions and technicians to service computers, photocopy machines and other equipment, has contributed to the rapid expansion of the service sector.

More importantly, faster productivity growth in the goods-producing sector has contributed to the overall decrease in share of employment in the manufacturing sector during the 1970s. This sector witnessed a significant drop in employment requirements due to improved productivity. Indeed, Picot and Lavallée⁴³ estimated that employment requirements dropped by 16 percent in manufacturing industries compared to eight percent in the whole commercial economy⁴⁴ because of increased productivity.

Greater foreign competition in both domestic and international markets is an additional factor in structural change in employment distribution. The Canadian demand for manufactured goods expanded substantially during the 1970s but more than half of the increment in employment requirements was filled by imported manufactured products. Employment in the textile, footwear, automobile and steel manufacturing industries has been particularly affected by increased competition from imports.

The more aggressive presence of developing countries such as Singapore, South Korea, Taiwan and Brazil in labour intensive manufacturing industries has a negative impact on the Canadian manufacturing sector⁴⁵. The automotive industry, which constitutes one of the major components of secondary manufacturing in Canada, witnessed an important reduction in output and employment since the mid-1970s because of competition from Japan. The international demand for durable products such as electrical appliances, automobiles, non-ferrous metals, paper, and iron and steel as well as heavy electrical equipment also has grown much more slowly since the 1970s.

On the whole, it has been estimated that the manufacturing sector in Canada witnessed a decrease in employment requirements of 14 percent in 1971-1981 because of changes in trading patterns⁴⁶. The industries most negatively affected by international trade during this period were in machinery industries, electrical products and the leather industry.

Trade has been more and more important in shaping the Canadian economy during the 1970s and early 1980s. Both import-penetration and the share of exports of the total demand (in terms of percentages of the gross domestic product) have increased significantly during this period⁴⁷. External demand for Canadian goods and services expanded from 25 percent of the gross domestic product (GDP) in 1970 to 32 percent in 1985. Meanwhile, from 19 percent in 1970, imported products and services accounted for almost 28 percent of the GDP in 1985. During this period, Canadian demand for domestically produced goods and services fell from 76 percent to 68 percent of the GDP⁴⁸. In the manufacturing sector, from 24 percent in 1971, exports represented 28 percent of the production in 1981. During the same period, the import share of manufactured goods rose from 27 to 34 percent⁴⁹.

In terms of employment, industries most advantaged by trade during the 1970s were associated with the natural resource sector, notably, food and beverage industries, wood industries, paper industries, petroleum and coal products, electrical power and gas and other utilities. However, primary sector and resource-related manufacturing industries, which are heavily dependent on exports for market expansion, showed signs

of stagnation or decline during the 1980s due to price fluctuations for primary products such as oil, gas and grain⁵⁰.

3.2 - The Redistribution of the Labour Force

Manufacturing labour force data for the 182 communities selected, comprising blue collar workers only and selected for overrepresentation of the industry in the community, are displayed in Figures 6 to 14. Figures which show underrepresentation of the industry in the community are included in Appendix 2. The figures indicate that, with the exception of Québec and Nova Scotia, these are towns whose economies are based on the production of resources. The food (PEI, Quebec, Ontario, Manitoba and Alberta), wood (Newfoundland, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia) and paper industries (Newfoundland, New Brunswick, Quebec, Ontario, Alberta and British Columbia) are especially overrepresented in the declining communities of most provinces. These are sectors which have experienced substantial declines in employment. Between 1981 and 1984, 23,000 jobs were lost in food and beverage industries and more than 40,000 in forestry, wood, paper and allied industries⁵¹.

In Nova Scotia, declining communities are dependent on non-durable manufacturing such as textile and knitting while, in small towns in Ontario and Quebec, the furniture industry is important. Labour force data compiled by Statistics Canada for ICURR also indicate that many declining communities are mining towns. It is interesting to note that unlike declining Canadian cities whose economies are mainly based on the production of resources and traditional manufacturing, European and American cities with recent depopulation were among those that experienced a boom in the mid-20th century and whose economies rely on the production of chemicals, motor vehicles and consumer durables⁵².

The goods-producing sector, which forms the backbone of the economies of declining communities, was particularly affected by the 1981-82 recession⁵³. Employment in this sector declined by 14 percent in 1981-82. Despite relative growth in 1983-84, employment in goods-producing industries was still eight percent below pre-recession levels. More specifically, levels of employment in mines, and oil and gas wells decreased by 13 percent during the 1981-84 period. In primary metals industries, employment dropped by almost 20 percent over this period. Declines in employment ranged from 10 to 15 percent in wood, printing, paper and allied products, furniture and fixture industries. Similarly, in the manufacturing of non-durable products such as leather, textiles, knitting, food and beverages, employment levels decreased by 10 to 15 percent during the same period. In machinery and metal fabricating, employment dropped by 38 and 23 percent respectively.

Percentage of Manufacturing Labour Force in FOOD Industry

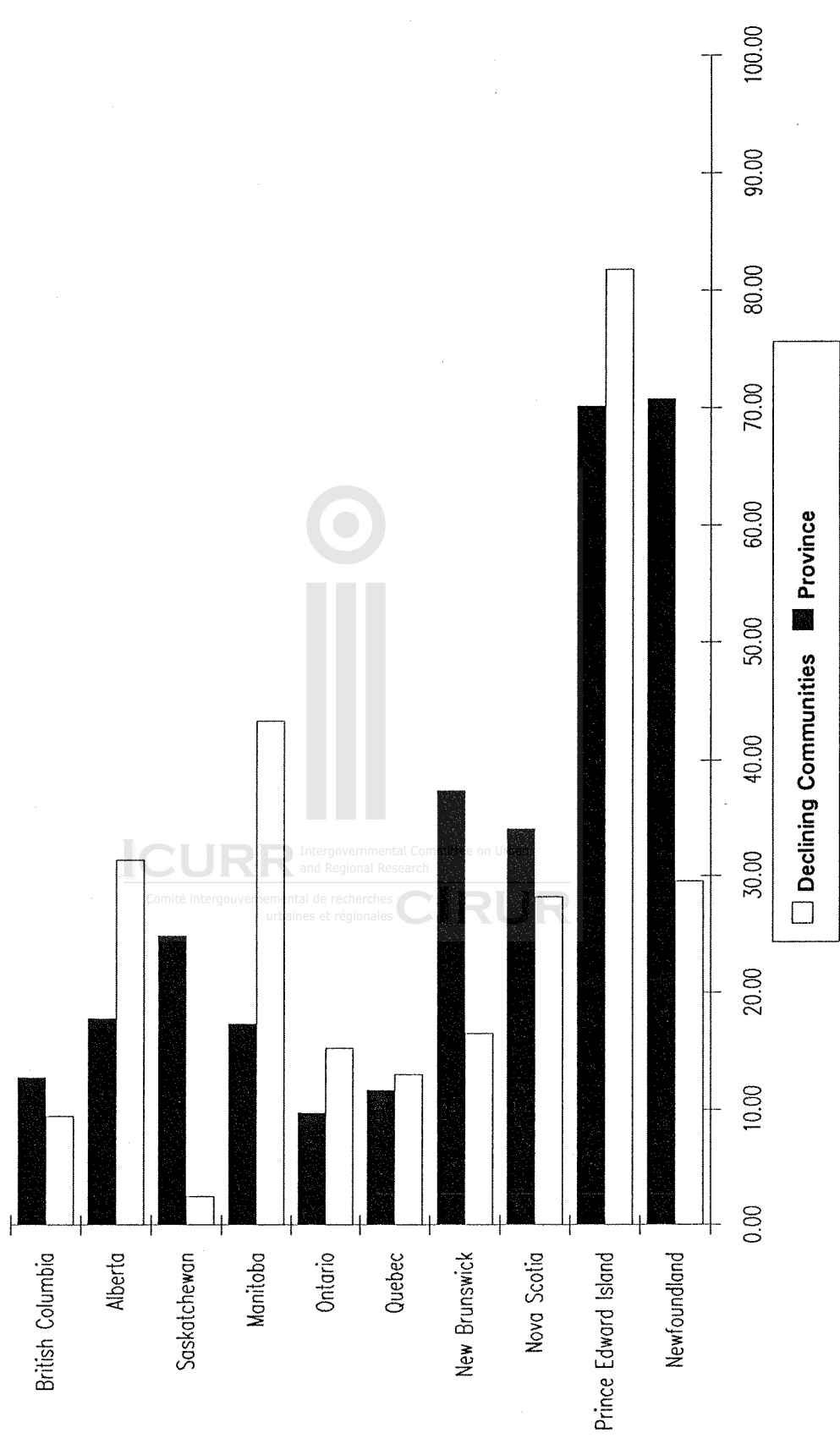


Figure 6. Representation of the manufacturing labour force in the food industry, 1981

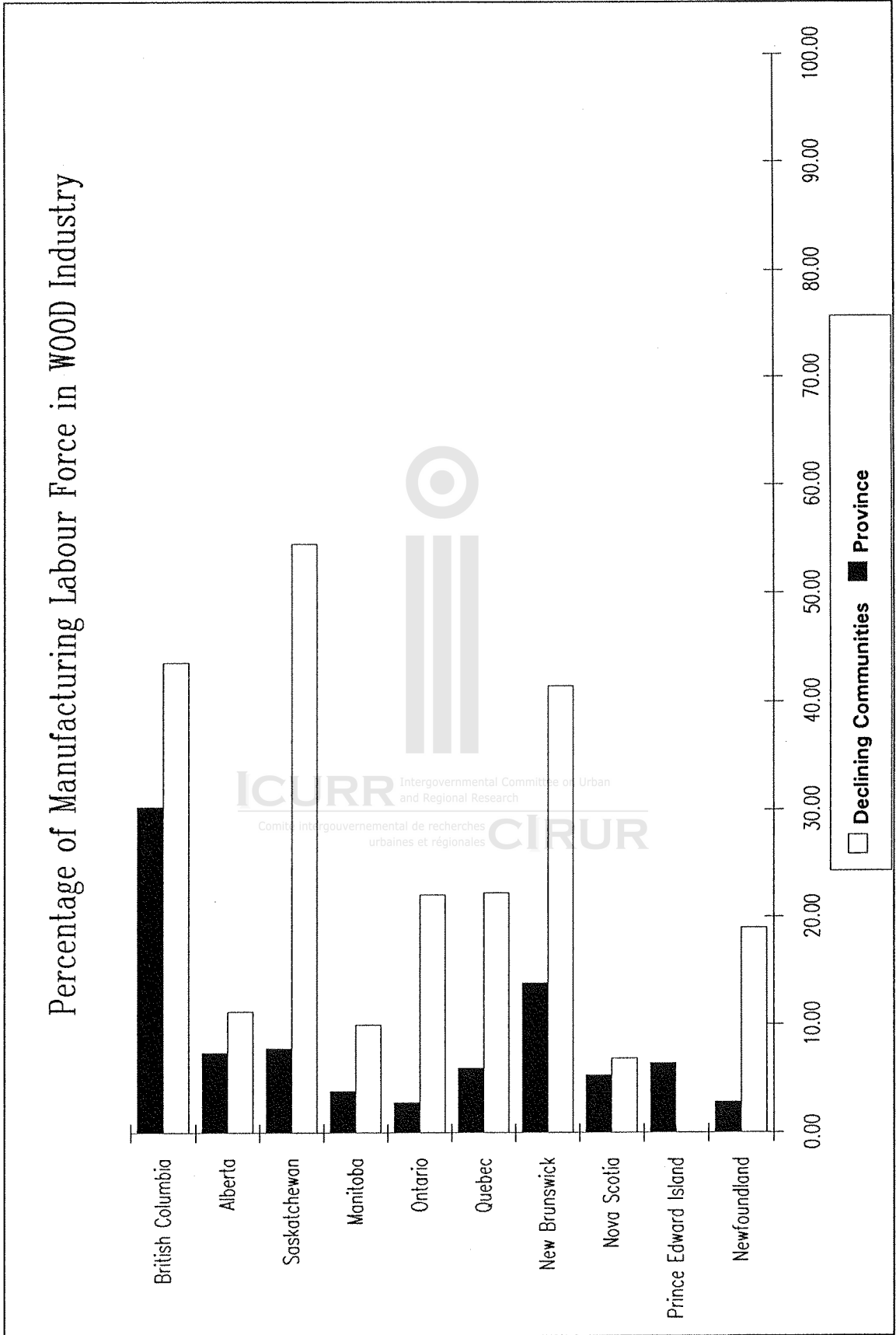


Figure 7. Representation of the manufacturing labour force in the wood industry. 1981

Percentage of Manufacturing Labour Force in PAPER Industry

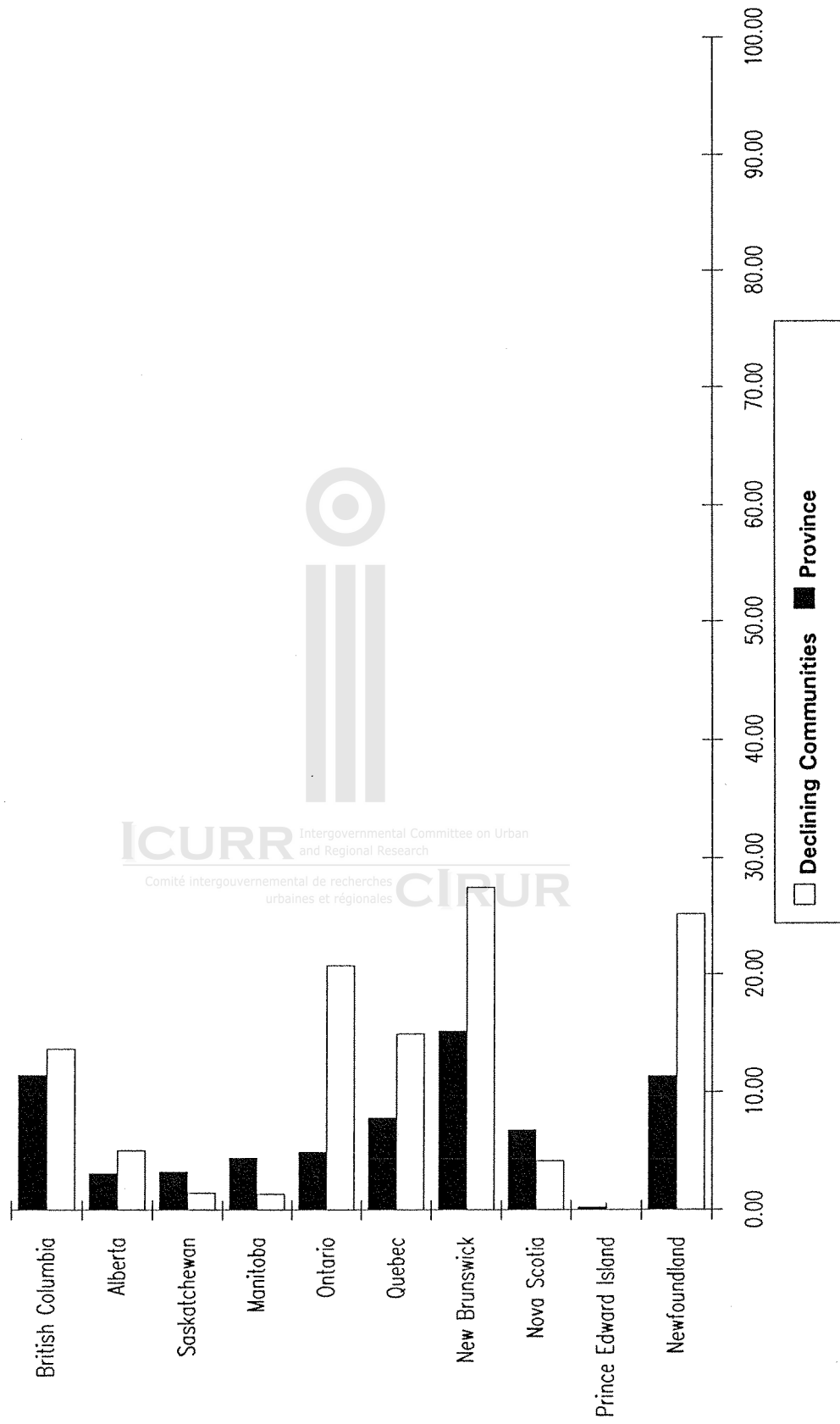


Figure 8. Representation of the manufacturing labour force in the paper industry. 1981

Percentage of Manufacturing Labour Force in PRIMARY METAL Industry

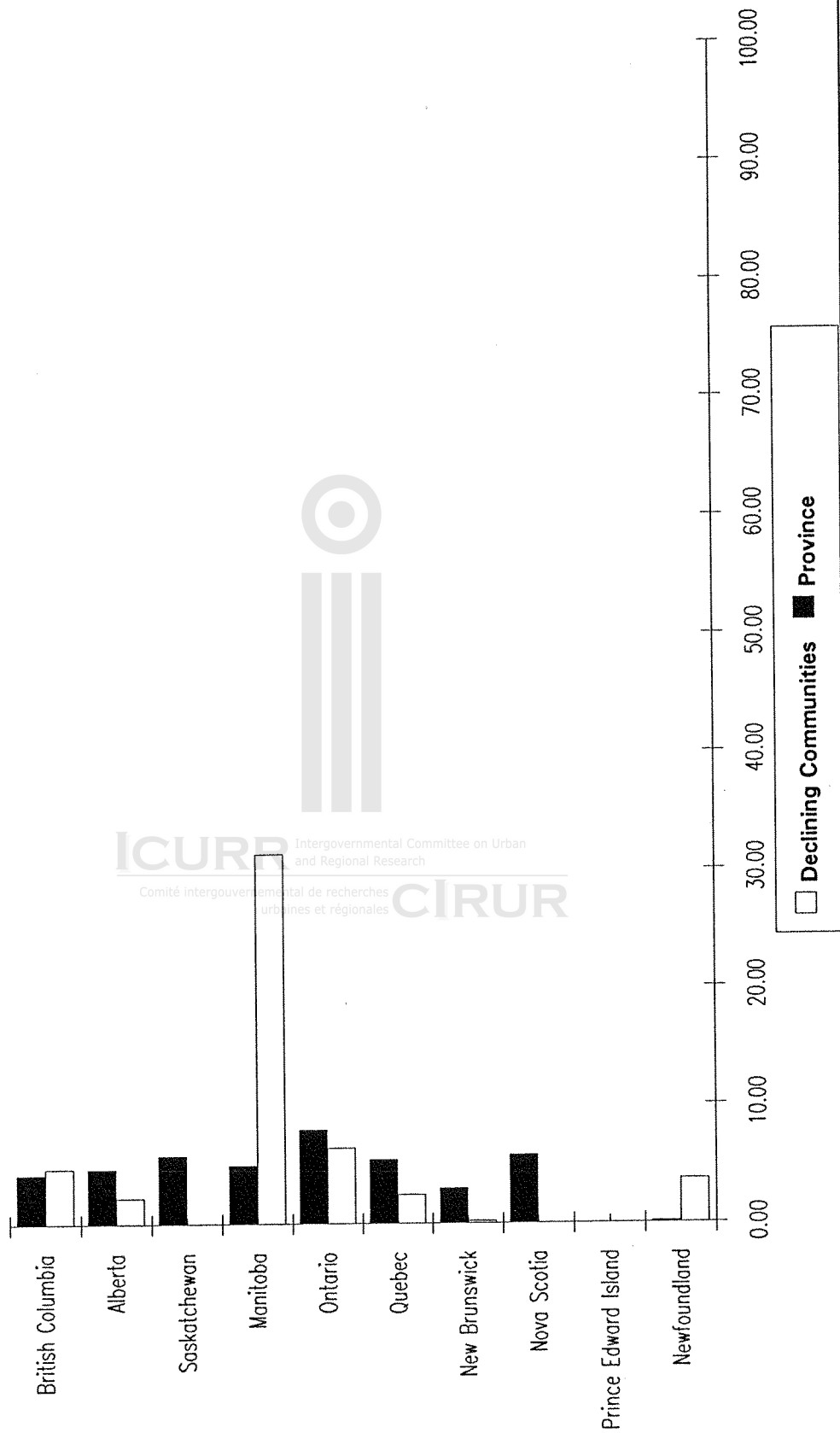


Figure 9. Representation of the manufacturing labour force in the primary metal industry. 1981

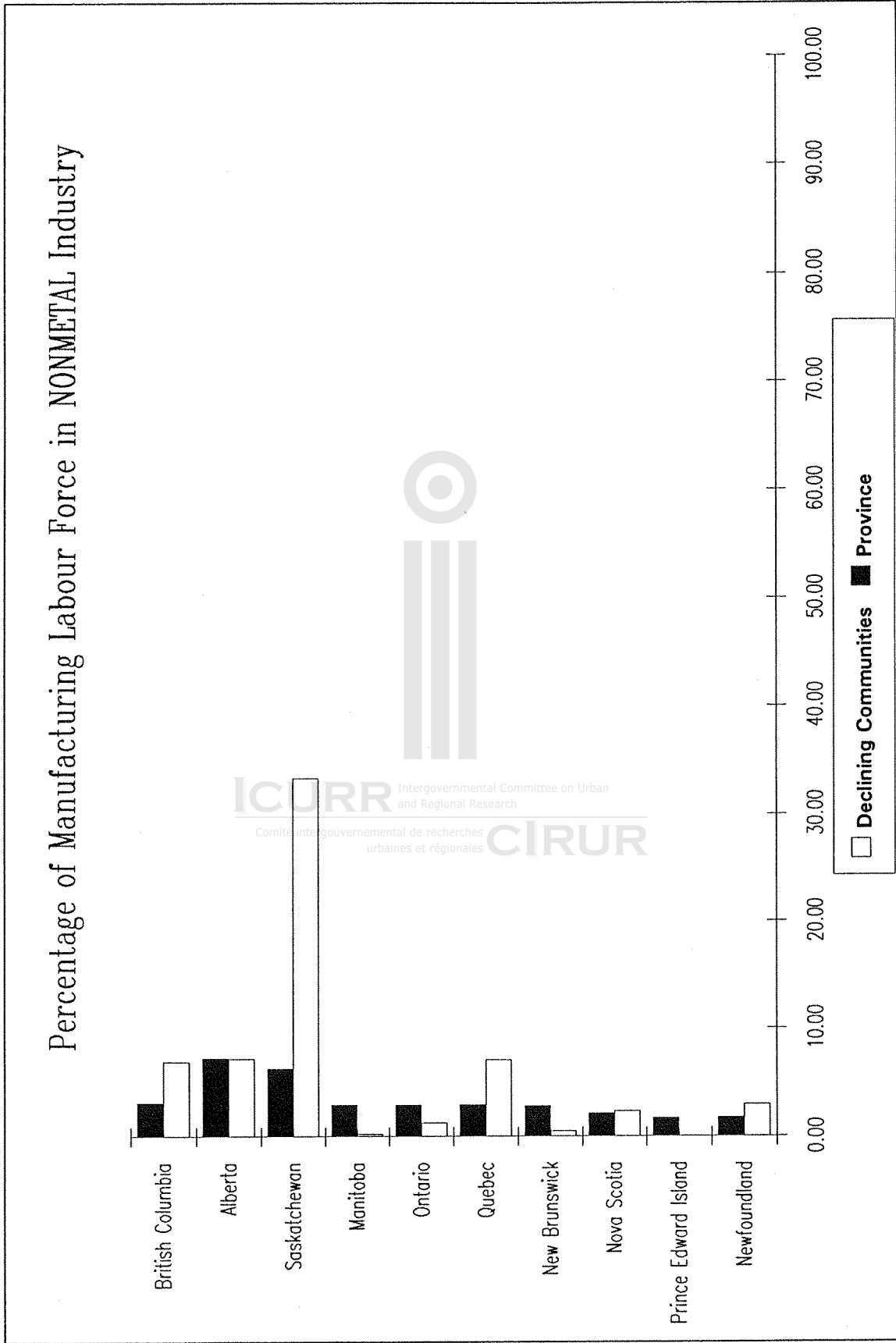


Figure 10. Representation of the manufacturing labour force in the non metal industry. 1981

Percentage of Manufacturing Labour Force in RUBBER Industry

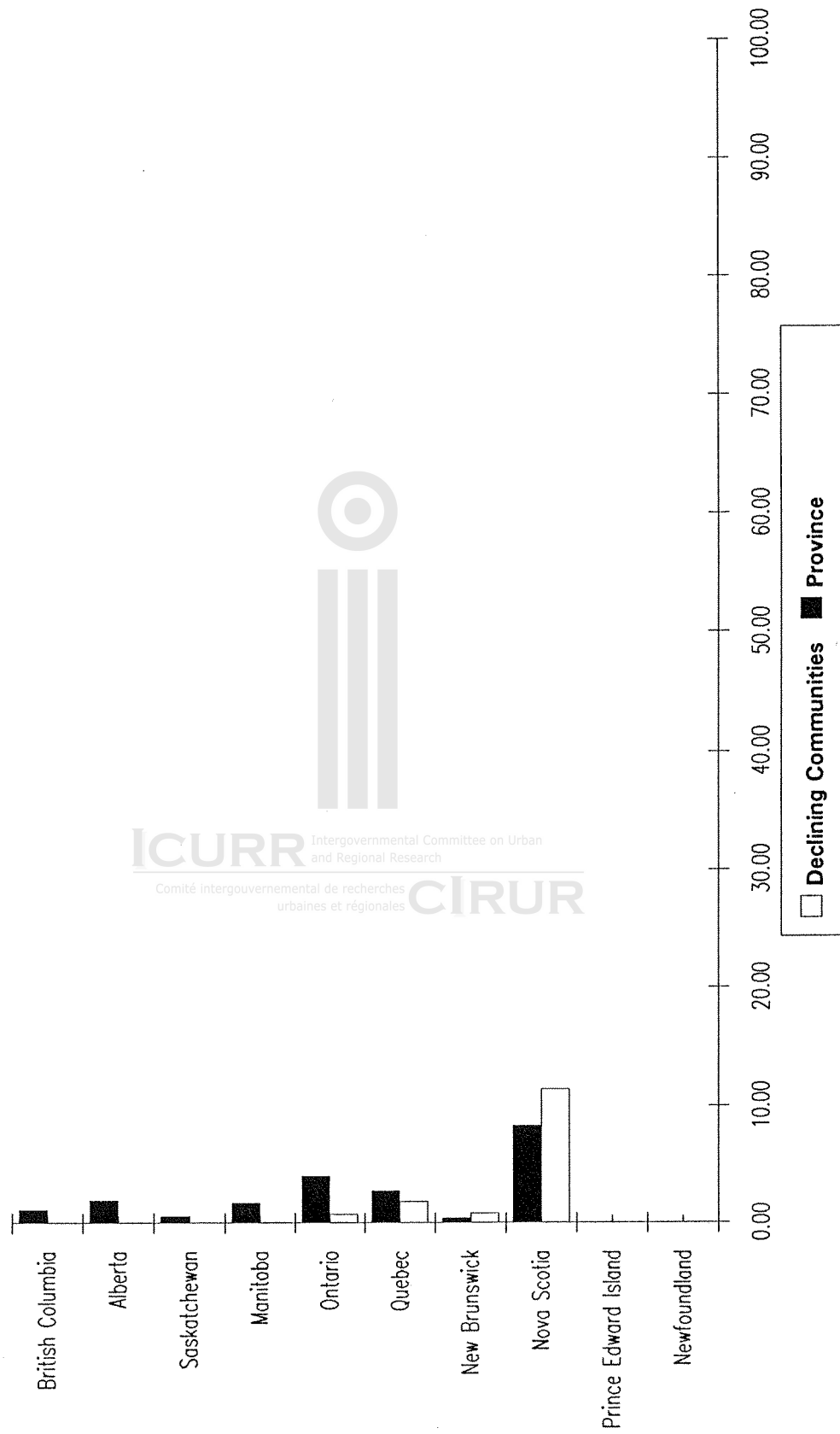


Figure 11. Representation of the manufacturing labour force in the rubber industry. 1981

Percentage of Manufacturing Labour Force in TEXTILE Industry

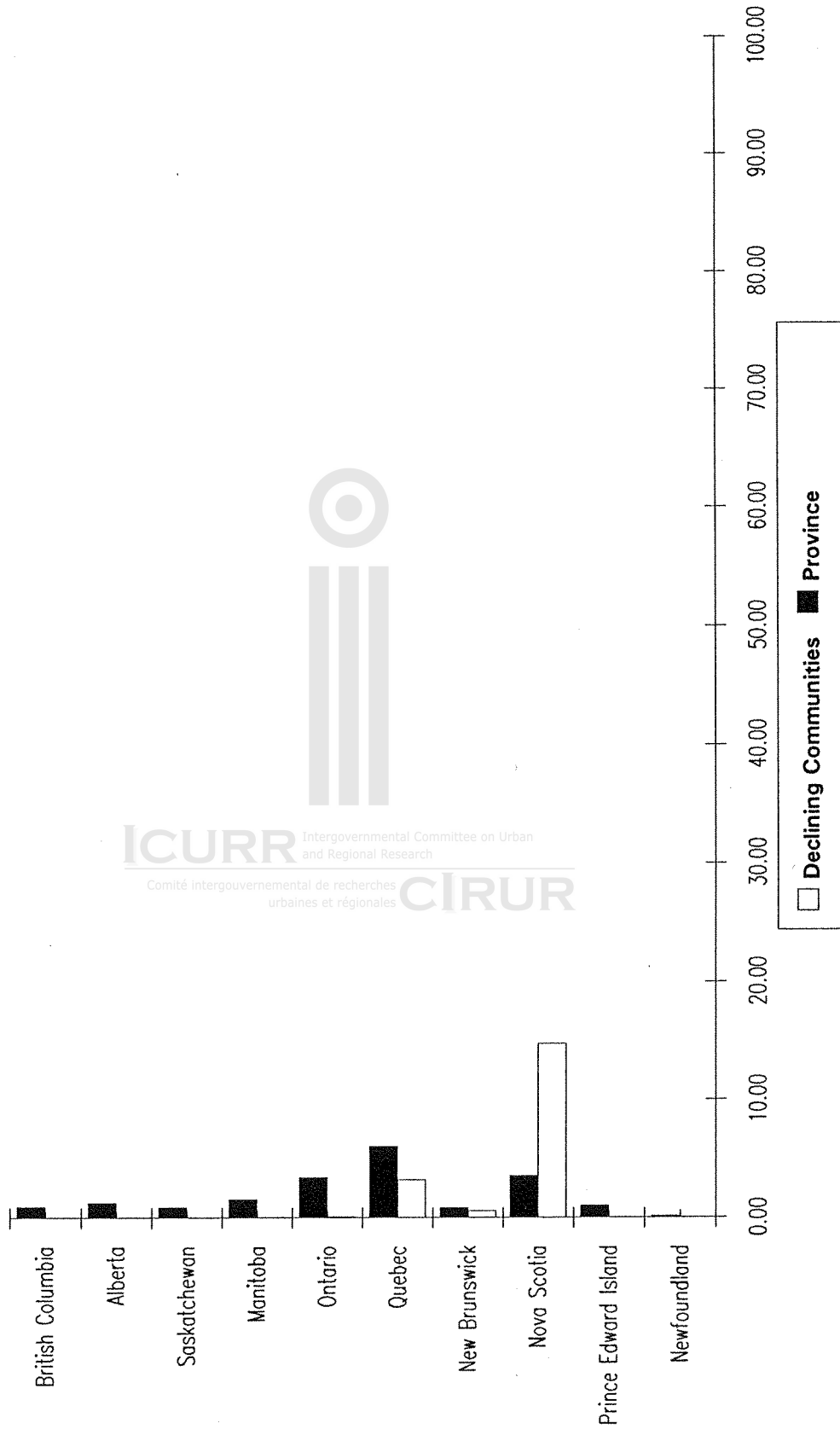


Figure 12. Representation of the manufacturing labour force in the textile industry. 1981

Percentage of Manufacturing Labour Force in KNITTING Industry

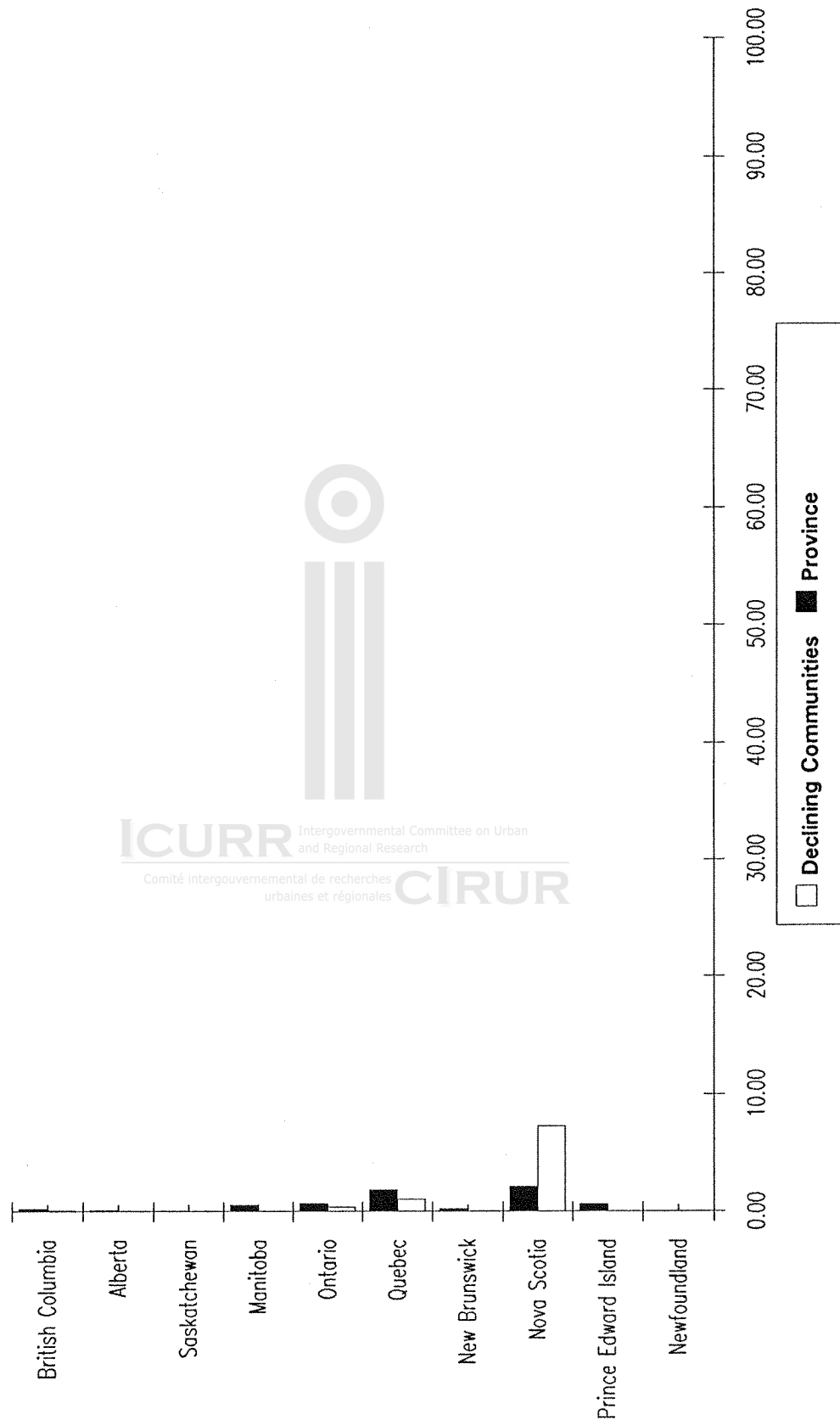


Figure 13. Representation of the manufacturing labour force in the knitting industry. 1981

Percentage of Manufacturing Labour Force in FURNITURE Industry

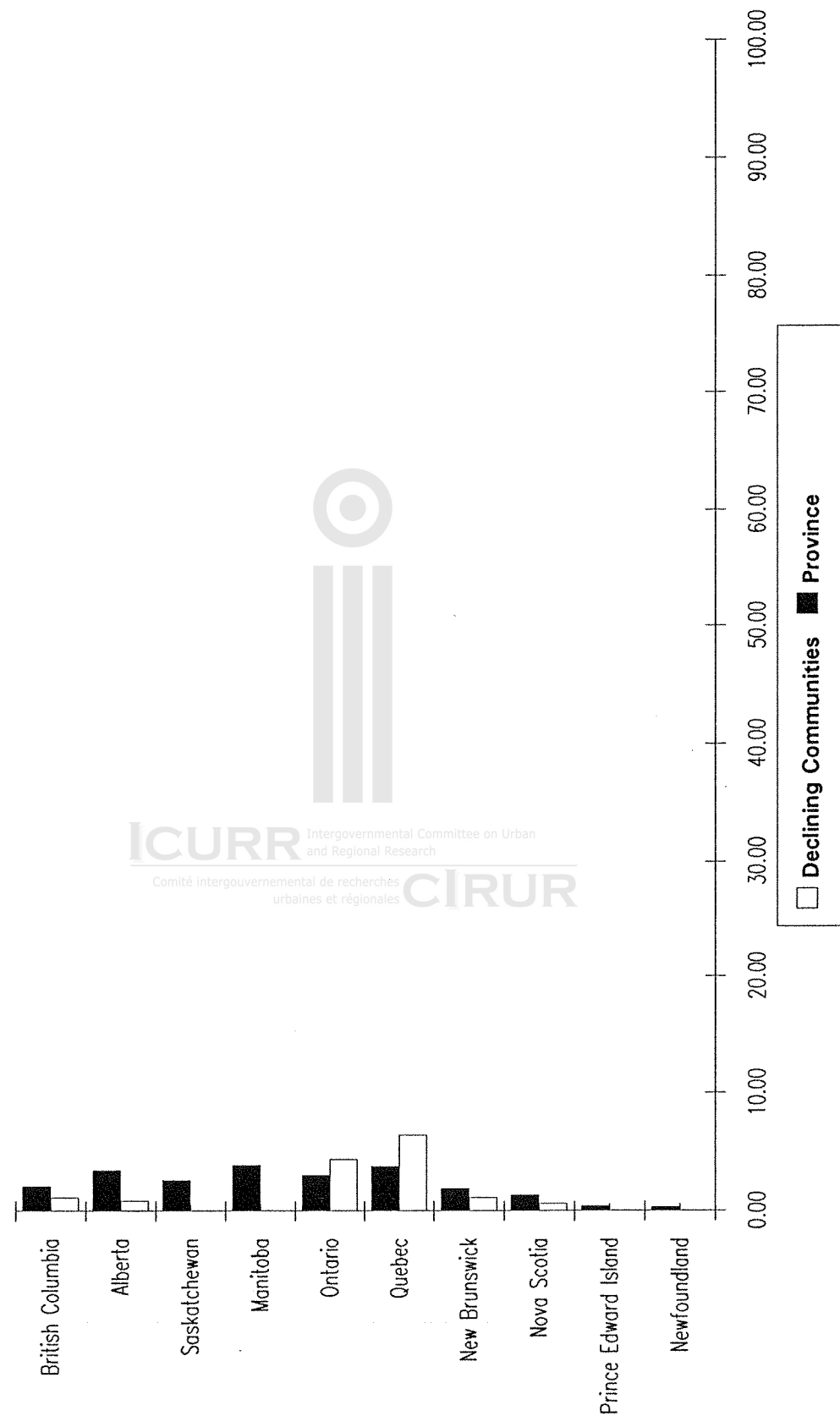


Figure 14. Representation of the manufacturing labour force in the furniture industry. 1981

Regions dependent on resource exports witnessed drastic increases in their levels of unemployment during the 1980s⁵⁴. British Columbia, Alberta and Newfoundland, where an important proportion of the labour force was found in the primary sector⁵⁵, experienced an increase in unemployment of more than seven percent during the economic recession. By 1986, levels of unemployment reached 20 percent in Newfoundland and have since decreased very little in Alberta and British Columbia.

Internal migration flow patterns clearly reflected regional economic conditions of the 1980s. Population growth rates dropped by 16 and six percent in Alberta and British Columbia respectively in 1981-86⁵⁶. In these provinces, levels of unemployment rose drastically over this period. Newfoundland, with the highest level of unemployment in Canada, was also the province that experienced the highest net loss rate of population from internal migration. The province lost almost three percent of its initial population through interprovincial migration exchanges in 1981-86. By contrast, Ontario, which was one of the main beneficiaries of the economic recovery, gained 122,000 people from internal migration during the same period.

One of the most important conclusions to draw from the examination of patterns of urban growth in the early 1980s concerns the drastic drop in population growth in small areas. As Simmons and Bourne⁵⁷ note, in comparison to the 1970s, a greater number of small areas experienced significant population reduction and fewer underwent rapid expansion in 1981-86. Examples of drastic population declines in resource

dependent or single-industry communities include the closure of the town of Shefferville four years after the iron ore mine shut down in 1982⁵⁸. Another example is the closure of the Fox Lake mine in 1985 which resulted in a significant exodus of mine workers from the Lynn Lake region of Manitoba⁵⁹. Similarly, the population in Uranium City in Saskatchewan declined by more than 80 percent after mining activities ceased⁶⁰.

The average rate of unemployment in single-industry or resource-based communities rose in all provinces during the 1981-86 period. In Newfoundland and New Brunswick, the average level of unemployment of such communities was found to be between 20 and 30 percent, while in Québec it reached 15 to 20 percent in 1986. These provinces had relatively high regional unemployment rates in comparison to other provinces at the time. They were also provinces where differences in unemployment levels between these communities and the province as a whole were the largest. Resource dependent or single-industry communities in Newfoundland, New Brunswick and the three most western provinces experienced the highest increase in unemployment during the 1981-86 period. Except for Saskatchewan, these regions also witnessed the greatest increase in provincial unemployment rates between 1981 and 1986 (see Table 3).

Single-industry or resource dependent communities have been particularly affected by the recession and international market conditions. Their reliance on exports of primary products renders them highly vulnerable to economic and commodity price cycles. During the recession, 28,700 mining workers lost their jobs⁶¹. The majority of these jobs were in single-industry towns⁶².

TABLE 3.
UNEMPLOYMENT RATE IN DECLINING COMMUNITIES BY PROVINCE, 1981-86

PROVINCE	1981		1986	
	Male	Female	Male	Female
Newfoundland	20.40 *16.80	27.33 18.80	31.16 24.60	35.92 27.10
Prince Edward Island	10.30 10.30	7.10 14.00	11.10 14.70	20.00 16.80
Nova Scotia	13.83 8.70	15.61 11.90	14.98 12.20	24.14 15.40
New Brunswick	13.54 12.30	17.45 14.10	19.70 16.40	20.92 17.60
Québec	13.96 9.70	18.12 12.70	17.71 12.00	19.33 14.40
Ontario	5.41 4.60	9.78 6.90	8.46 5.90	12.95 8.00
Manitoba	3.76 4.60	5.39 5.80	7.53 7.10	6.88 8.30
Saskatchewan	1.43 3.60	8.90 5.90	8.67 7.30	6.62 9.00
Alberta	2.14 3.30	4.45 4.30	8.24 9.80	7.25 9.60
British Columbia	6.40 5.60	11.95 7.70	13.97 12.90	17.66 13.40

*The second row is the corresponding provincial average rate (%)

Source: (ICURR tabulations)

Although the recession severely affected the demand for metal products in the early 1980s, it was not the only cause of shrinking demand for such products. Consumption of lead and tin, for instance, has been gradually declining since the Second World War⁶³ and consumption of steel since the beginning of the 1980s⁶⁴. Also, the global consumption growth rate of nickel has declined considerably since the mid-1970s⁶⁵.

In addition, the increasing number of producers has boosted the international competition for metal exports⁶⁶. Overall, mineral industries have been plagued by widespread excess capacity which, in the long run, engenders the lowering of prices and the necessity of reassessing production techniques⁶⁷. This situation often results in the reduction of the labour force and, in some cases, in mine closures. This was the case of the iron ore mine in Shefferville which considerably reduced its labour force in 1975-82 and finally terminated its mining operations entirely in 1982⁶⁸.

The non-metal mining industry has also been affected by international market conditions. The pervasive impact of fluctuations in the price of oil on employment levels is widely recognized. Although fairly stable until 1984-85, the production of potash declined significantly in 1985-86 as a result of an important drop in price of this product⁶⁹.

Mining communities are not the only ones sensitive to external forces. Pulp and paper communities, forestry communities and fishing communities are also vulnerable to economic and commodity price cycles. Rates of unemployment in forest dependent communities reached an average of 16 percent in 1986, up five percent from 1981⁷⁰. In the early 1980s, the forest industry was harshly hit by a recession and, until 1985, was affected by unfavourable exchange rates. More than 40,000 jobs were lost in forestry, wood, paper and allied industries during the 1981-84 period⁷¹. Increasing competition in pulp and paper markets from the United States and Europe has forced the industry to improve its productivity⁷². Corner Brook in Newfoundland is an example of a pulp and paper community that faced a major lay-off of workers after the renovation of the mill.

Employment in farming has declined steadily over the last twenty years. From 6.3 percent of employment in 1970, it decreased to 4.4 percent in 1981 and 4.0 percent in 1987⁷³. This reduction in employment share is partly explained by greater mechanization and the trend to larger-scale production which have taken place in the farming industry in the 1970s⁷⁴. During the following decade, the farming economy in the Prairies was plagued by a stagnant demand for wheat and a drop in export prices. As increasing numbers of countries became exporters or self-sufficient, an oversupply in the world market created a sharp decline in grain prices in 1985⁷⁵. Almost 10,000 jobs were lost in this sector of the economy between 1981 and 1984⁷⁶.

Single-industry communities whose economic base is traditional manufacturing have been particularly affected by the 1981-82 recession. The number of jobs in the food and beverage industries declined by 23,000 over the 1981-84 period. In the manufacturing of other non-durable products such as textiles, leather, knitting and clothing, employment decreased by more than 20,000 during the same period. The economic situation for durable manufactured products was not brighter in the early 1980s. More than 38,000 and 23,000 jobs were lost in machinery and metal fabricating industries respectively in 1981-84⁷⁷.

In addition to economic and commodity-price cycles, depletion of stocks and exhaustion of resources have seriously affected the economies of a large number of single-industry or resource dependent communities. On the Pacific Coast, the fishing economy has been threatened by severe depletion of salmon stocks⁷⁸. Similarly, lobster and crab stocks have declined significantly on the East Coast as a result of catches by large processing ships and foreign fishing vessels. In Uranium City, the exhaustion of the mineral has resulted in the plant closure and a 80 percent reduction of the local population⁷⁹.

The next section briefly reviews the literature dealing with the causes and potential effects of migration on depopulation. It will lead to the examination of the results of a factor analysis of census variables for the 182 declining communities in Canada.

SECTION 4 - THE CAUSES AND IMPACTS OF DEPOPULATION

4.1 - The Neo-classical Model and the Elimination of Regional Disparities

The importance of economic factors in explaining inter-regional migration patterns and depopulation, is well accepted in the research literature. This section reviews depopulation theories and summarizes the evidence gathered in Canada on the long term effects of depopulation. A typology of declining communities is then analyzed. Programs developed to remedy the problem are described in the context of the present study.

Traditionally, migration flows have been interpreted in terms of push and pull factors. Among economic push factors that were identified by Bogue⁸⁰ are: "decline in a national resource or in the prices paid for it; decreased demand for a particular product or the services of a particular industry; exhaustion of mines, timber, or agricultural resources; loss of employment resulting from mechanization or automation of tasks previously performed by more labour-intensive procedures". Examples of pull factors are: "superior opportunities for employment in one's occupation or opportunities to enter a preferred occupation and opportunities to earn a larger income".

It has been argued that migration cannot be interpreted solely as the result of the simple calculus of the comparative advantages and disadvantages of the places of origin and destination. There are costs or "intervening obstacles" to migration such as

distance, children and other dependents, family attachments, etc..

In addition, "the traditional economic approach, essentially based on a "push-pull" phenomenon,... [presupposes] that in-migration is directly related to the economic attractiveness of an area, and that outmigration is inversely proportional to in-migration"⁸¹. There is evidence in the research literature that determinants of in- and out-migration are not symmetrical⁸².

Courchene (1970)⁸³ and Vanderkamp (1971)⁸⁴ suggest that the effects of income and unemployment are asymmetrical. Regional income at the place of origin has a negative impact on migration but it is inferior in absolute terms to the positive impact of income at the place of destination. Conversely, unemployment at the place of destination has a negative impact on migration but it is less than the positive impact of unemployment at the place of origin. The effects of the variable "change in employment" have also been found to be asymmetrical. Increase in employment is more important in explaining in-migration than the reverse for out-migration⁸⁵.

In addition, the influence of economic variables on migration appears to vary between areas experiencing net in-migration and areas facing net out-migration. Chalmers and Greenwood⁸⁶ found that employment change was an important factor for in-migration to growing areas, while decreased employment in declining areas was not strongly associated with net out-migration.

Migration is supposed to eliminate regional economic disparities. According to the neoclassical model of regional economic adjustment, migration is "an equilibrating mechanism which optimally allocates the demand and supply of labour and equalizes labour rates across labour markets"⁸⁷. Theoretically, migration from a region of low wages and high unemployment to a region of high wages and low unemployment should result in an increase of labour supply and subsequent decrease in wages at the place of destination. It should also contribute to the decrease of unemployment and rise of wages at the place of origin. According to classical economic theory, migration will occur until wages between the two regions are equalized and unemployment eliminated.

The neoclassical regional adjustment model does seem adequate for the prediction of migration patterns. On the whole, labour "moves from regions of low relative labour demand to areas of high relative demand and high relative wages"⁸⁸. Two analyses of internal migration flows in Canada provide evidence of such a pattern⁸⁹. As predicted by the regional adjustment model, there appears to be a significant association between migration and regional unemployment. According to the analysis, the impacts of migration on levels of unemployment depend on the migratory balance⁹⁰. Thus, regions with net out-migration, such as the Atlantic provinces, should experience a decline in unemployment rates while regions with net in-migration, such as British Columbia in the 1970s, should see increased levels of unemployment. However, it is noted that the elasticities are less than unity which implies in this case, that a one

percent increase in migration would result in a rise of unemployment rate of approximately 0.3 percent.

In a study conducted by Wrage⁹¹, the impact of migration on wages predicted by the regional adjustment model is questioned. Wrage found in- and out-migration to have a negligible effect on wages in Canada despite the model suggestion of a negative association between wages and rates of unemployment. A study carried out by Vanderkamp(1988a)⁹² does not corroborate this theoretical relationship either. He found wage differentials to be unrelated to levels of unemployment. Because of the relative rigidity of regional wages, it was argued that the adjustment mechanism works mostly through employment opportunities.

4.2 - Regional Disparities and the Migration Patterns of the 1981- 86 period.

Despite the significant association between migration and rates of unemployment, interregional migration on the whole has not succeeded in eliminating disparities in unemployment levels between regions in Canada. Furthermore, the gap between the unemployment rate in Ontario and most of the other provinces appears to have widened in the 1980s⁹³. In 1981, the difference in unemployment levels between Newfoundland, the most disadvantaged province, and Ontario was 12 percent. By 1986, the gap between these two provinces had increased to 19 percent (see Table 3).

Regional disparities in income levels also persist, especially in the Maritimes where provincial per capita income was only 65 to 80 percent of the national average during the early 1980s⁹⁴. Although differences in regional income levels have been gradually narrowing over the years, it appears that most of this convergence is attributed to income transfers to persons, not to "real" improvements in the relative economic performance of the regions. When transferred income is excluded, this convergence is substantially reduced. We then find, overall, a relatively persistent difference in per capita income between regions over the same period⁹⁵.

The migration flow between provinces during the first half of the 1980s was considerable. Almost one million people migrated to a different province during this period⁹⁶. On the whole, migrants tend to follow perceived economic opportunities and hardships, with Ontario being the main beneficiary⁹⁷. The Atlantic provinces experienced a net loss of 8,000 people from internal migration in 1981-86. During this period they lost more than 13,000 migrants to Ontario.

Similarly, 68,000 people left Québec to migrate to Ontario, which represents more than two-thirds of its outflow⁹⁸. Over the same period, Alberta lost 29,000 people from internal migration with Ontario being the main beneficiary of the outflow. From British Columbia, 42 percent and 30 percent of the migrants moved to Alberta and Ontario respectively. Manitoba and Saskatchewan witnessed a net loss of only 6,000 people in 1981-86, with Alberta (40 percent) and Ontario (28 percent) being the main destinations of out-migrants during the same period.

As previously discussed, regional economic disparities still persist in Canada despite important migration movements between provinces. This also appears to be true at the sub-regional or local level. There is increasing acknowledgement in the literature of high levels of unemployment in areas experiencing important outmigration movements. It has been argued that the persistence of such regional economic disparities despite major interregional migration flows is mainly due to "market dysfunction".

In a perfect free market economy, migration should result in the elimination of disparities of income levels and unemployment rates between regions. In the Canadian economic context, however, incomes do not truly reflect the relative scarcity of labour because of government intervention through transfer payments to the provinces such as unemployment insurance benefits, welfare assistance, etc.. According to neoclassical economists, transfer payments to the provinces prevent labour from adequately responding to wage and unemployment changes through migration.

There is some support in the literature for the contention that unemployment insurance payments inhibit migration. In his study on regional migration patterns in Canada, Courchene⁹⁹ found that unemployment insurance benefits discourage migration.

Similarly, Winer and Gauthier's study¹⁰⁰ suggests that unemployment insurance payments have a retarding effect on migration out of the Atlantic provinces, especially for low-income people. It is interesting to note that the 1971 unemployment insurance legislation, which introduced regional variations in weeks of employment required to

qualify as well as the maximum number of weeks during which a person can receive benefits, has affected migration patterns, particularly among low-income people. An increase in the generosity of the unemployment insurance system in the province of destination favours migration to this region. According to Winer and Gauthier's findings, "the regional variations in the unemployment insurance have on balance retarded out-migration from the Atlantic region to central Canada, while they have tended to encourage outflows from central Canada to Alberta and British Columbia"¹⁰¹.

The contention that migration eliminates regional disparities is therefore questionable at best. Contrary to traditional economic theory, it has been argued that migration might in fact contribute to the economic decline of a given region. Myrdal¹⁰² refers to a process of circular causation with cumulative effects. The layoff of employees after the closure of the major plant in the community for instance, results in a decrease of incomes and demands. Lower incomes and demands engender unemployment in other businesses which in turn will contribute to declines in incomes and demands. As the situation worsens, workers and businesses leave the area which consequently further diminishes incomes and demands. Another consequence is the reduction of the tax base in the community. The tax rate increases while the level of services provided deteriorates. This becomes an additional incentive for people to leave and further decreases incomes and demands in the region. This also results in a reduction of the tax base. As residents move out of the area, the region becomes less and less attractive for new people and businesses. This is a vicious circle in which the initial closing of a

major source of employment and subsequent migration of the people out of the region have a cumulative negative effect. Out-migration from the community is perceived as contributing to the economic decline of the area.

Proponents of the local development approach suggest that, in the long term, migration increases disparities in income levels and unemployment between regions. Because migration favours the young and educated, it has been argued that migration will translate into a loss of human capital at the place of origin and a gain at the place of destination. In contrast to the neoclassical model, migrants are therefore not only considered to represent a source of labour but also represent other sources of economic expansion such as capital, education and advances in knowledge. If in-migrants are relatively more resourceful than the population of the region of destination, they are likely, in the long run, to contribute to the increase of per capita income of that region¹⁰³.

The selective nature of migration is well documented in the literature. The majority of migrants are in their twenties or early thirties¹⁰⁴, they are generally better-educated than non-migrants and occupy higher positions. This selective migration has been observed in slow-growth regions as well. According to the local development model, youth, the better educated and people of higher occupational position are the first to leave declining areas, resulting in a loss of human capital in the regions vacated. This situation is likely to contribute to regional disparities and to the deterioration of socio-economic conditions in general in these regions.

The research literature indicates that, in certain situations, migration is a contributing factor to regional disparities. Chalmers and Greenwood¹⁰⁵ found a positive association between outmigration from declining areas and rates of unemployment. Additional indirect support for the contention that migration may contribute to regional disparities is provided by Termote¹⁰⁶ in his study of Québec. Because immigrants contribute to the "advance in knowledge", immigration to Québec was found to slightly improve per capita income.

In addition to the loss of youth, aging populations in declining rural areas and single industry regions are widely acknowledged¹⁰⁷.

The tax base erodes after the winding down or termination of activities of the main local employer and subsequent exodus of residents. In Shefferville for instance, Bradbury and St-Martin¹⁰⁸ reported that during the disinvestment period, the company withdrew its public services subsidies. The ensuing cessation of plant operations resulted in a loss of municipal revenues from property taxes. As residents left the region, the tax base declined further.

The erosion of the tax base results in higher taxes for the remaining residents and the eventual reduction in the level of services provided in the community. In some cases, the cost of providing public services becomes so prohibitive that residents have no choice but to leave. Four years after the mine in Shefferville closed, service costs were 14 times the provincial average. The cost for services such as schools and hospitals was estimated at \$18,000 dollars per capita¹⁰⁹. In such critical situations, the

abandonment of the area by the residents represents an additional social loss in terms of community infrastructure¹¹⁰.

Intensive migration flows from resource dependent communities have other negative consequences. They clearly contribute to the deterioration of commercial activity in these regions. Local revenues decrease and in some cases result in the closure of small businesses. The devaluation of housing and other private property results in equity loss.

A significant number of single industry communities are plagued by very high levels of unemployment. In many of the regions where an important proportion of the labour force is concentrated in seasonal work, unemployment benefits become an integral part of the local economy. This is the case, for instance, in non-urban Newfoundland where the "ten week syndrome is increasingly dominating labour force activity"¹¹¹. House, White and Ripley¹¹² report that in this province there is an implicit willingness among government officials and politicians to design projects that maximize the number of people eligible for unemployment insurance benefits. Based on their study of two communities, the authors conclude that "fishing activity, other forms of paid employment, and job-creation programmes have all become integrally tied into the unemployment insurance system in rural Newfoundland".

The next section examines the impact of depopulation on the declining communities during the 1981-1986 period.

4.3 - The Identification of Community Types

While sharing a somewhat similar economic base as well as declining populations, the 182 communities identified in **Figures 1 to 5** differ remarkably in their demographic make-up, income distribution, the importance of service industries and the scale of their unemployment. A critical step in examining such communities consists therefore in the identification of community types with similar sets of attributes which may be influenced by policies specifically designed for each type.

Factor analysis is the statistical technique used here to provide a taxonomy of declining communities on the basis of demographic, cultural and economic criteria listed in **Appendix 1**. The chief advantage of factor analysis lies in the fact that it can collapse a very large set of correlated variables (55 in all) into a smaller number of basic components called factors that elucidate the underlying structure of the urban system being studied.

In the principal axis solution which is employed here, most of the variance is explained by the first few factors; moreover the factors are independent thus introducing new details not accounted for. An analysis of 55 census variables for 1981 and 1986 thus collapsed the major sources of variation into six factors accounting for 60 percent of the variance contained in the original correlation matrix. As the results of the two analyses show that little fundamental change took place in the socio-demographic make up of the communities during the five intervening years, only 1986 data will be

discussed here.

The solution yields loadings between the original variables and the factors enabling us to interpret them as can be done by looking at Table 4. Positive loadings identify the factor content through one end of the spectrum and vice versa. For instance, variables loading positively on Factor 1 identify a youthful, single population mostly located in mining towns. By contrast, negative loadings indicate the presence of a widowed, aging population. The solution also yields factor scores which are mapped in Figures 15 to 20 identifying the position of each community with respect to the main factors. Negative scores are related to negative variable loadings and vice versa. For example, in Map 1 a negative score identifies an aging center while a positive score indicates the presence of a youthful population in the mining towns.

This statistical procedure was employed successfully in a 1979 study on single industry towns¹¹³ which, however, failed to provide a taxonomy since factor scores were not computed. Nonetheless the results concerning factor structure, in particular the bipolar nature of demographic variables loading on Factor 1, coincide with our findings.

The first factor, which accounted for 19.5 percent of the variance, clearly identifies the demographic impact of out-migration on the declining communities. In particular, it contrasts mining towns to manufacturing towns producing non-durable goods. Most mining towns in the sample have a young population, a high participation rate in the labour force among the males and a household income of more than \$30,000.

TABLE 4: Dimensions of Variation Between 182 Declining Communities
Factor Structure 1986

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6
Male 0-14	.88176					
Male 15-44	.90445					
Male 45-64	-.59669					
Female 0-14	.88054					
Female 15-44	.87679					
Female 45-64	-.86508					
Female 65+	-.90616					
Single	.84294	.69135				
Married						
Widowed	-.89690					
Divorced						-.63355
English speaking			.89452			
French speaking			-.89901			
Owned dwelling				.74400		
Husband/Wife				.67949		
Lone female parent						
British origin		-.71437				
Other origin			.73525			
Non mover			.50561			
Mover					.55523	
Grade 9		-.51458				-.53010
Grade 9-13 without certificate			.81261			
Grade 9-13 with certificate			-.58642			
University degree						.65640

TABLE 4: Dimensions of Variation Between 182 Declining Communities
Factor Structure 1986

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6
Male participation rate	.61214	.58273				
Male unemployment rate		-.77177				
Female participation rate		.51932				
Female unemployment rate		-.66077				
Labour force agriculture						
Labour force forestry						
Labour force fishing						
Labour force mines						
Labour force manufacturing						.72865
Labour force construction						
Labour force transportation						
Labour force trades						
Labour force finance						.72488
Labour force service						.62879
Labour force public admin.						.52426
Manager						.56016
Teaching						.51794
Health						
Clerical						
Sales						
Service						
Primary						
Processing						
Machinery						
Construction						.76567
Transportation equipment						
Income less than \$1,000						
Income more than \$30,000						
Income employment	.65038	.59437				
Govt transfer payments	.66816	.54892				
Population change		-.73371				

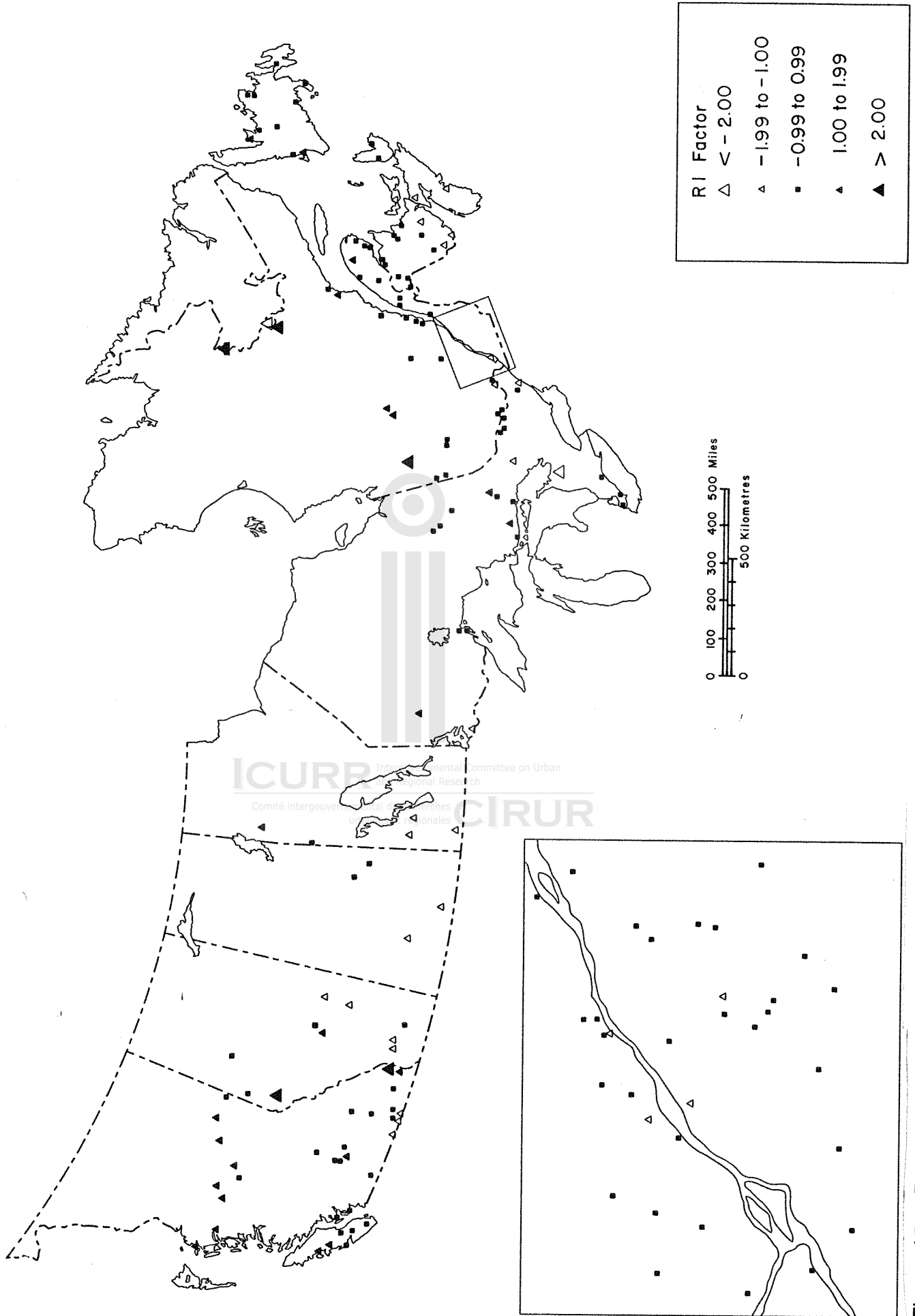


Figure 15. R1 Factor Scores, 1986: Aging Centers

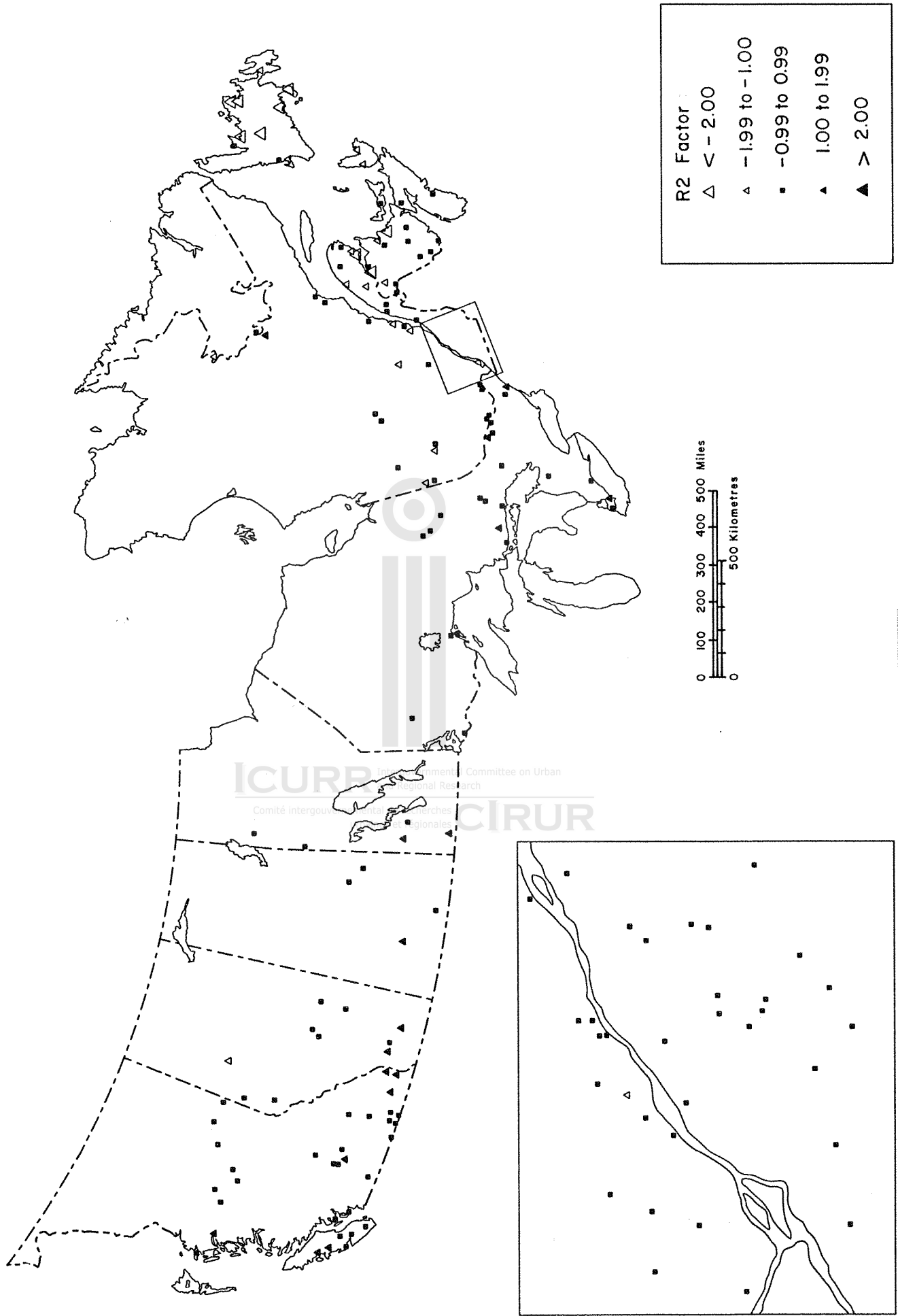


Figure 16. R2 Factor Scores, 1986: Centers with high unemployment

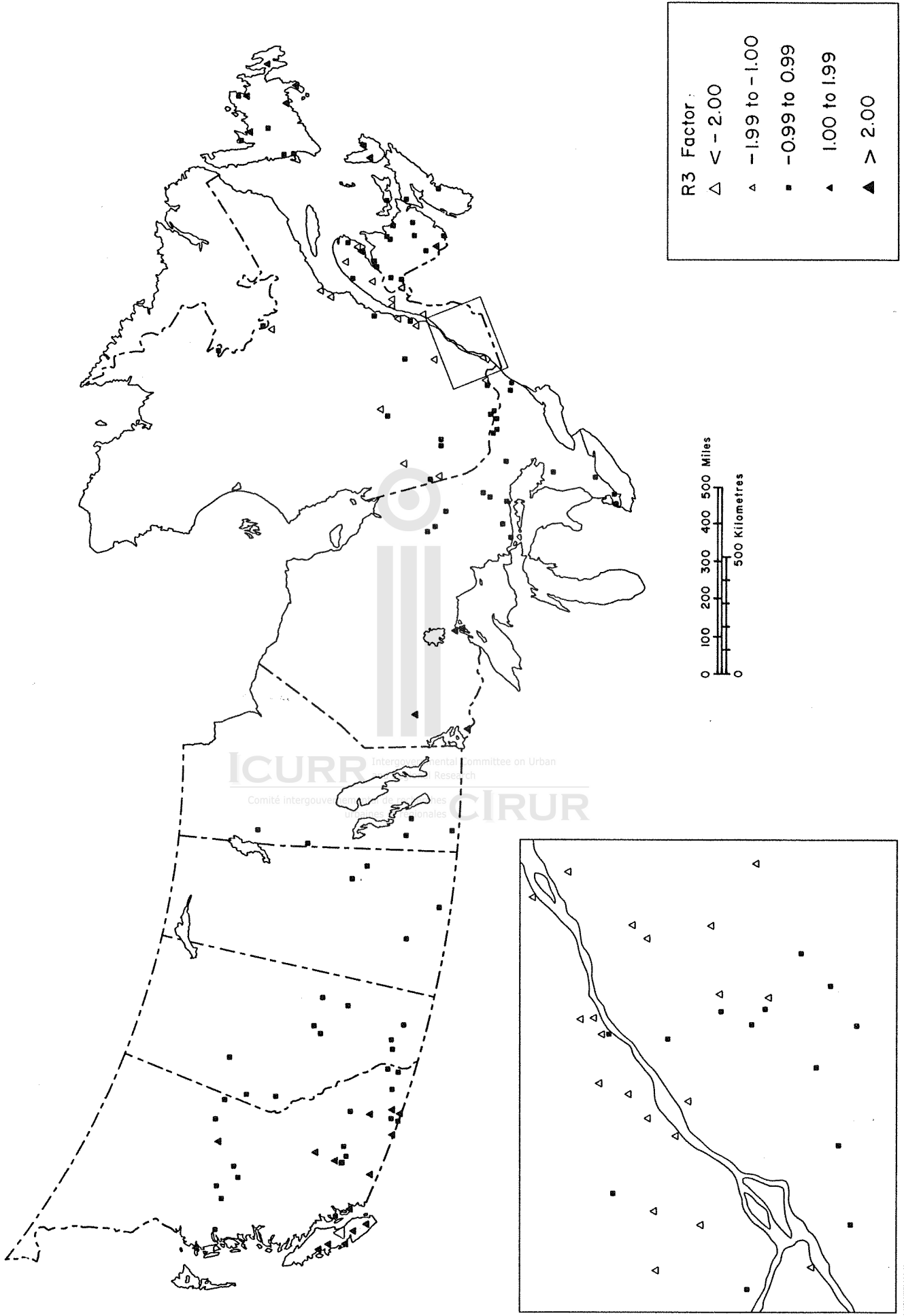


Figure 17. R3 Factor Scores, 1986: French/English Centers

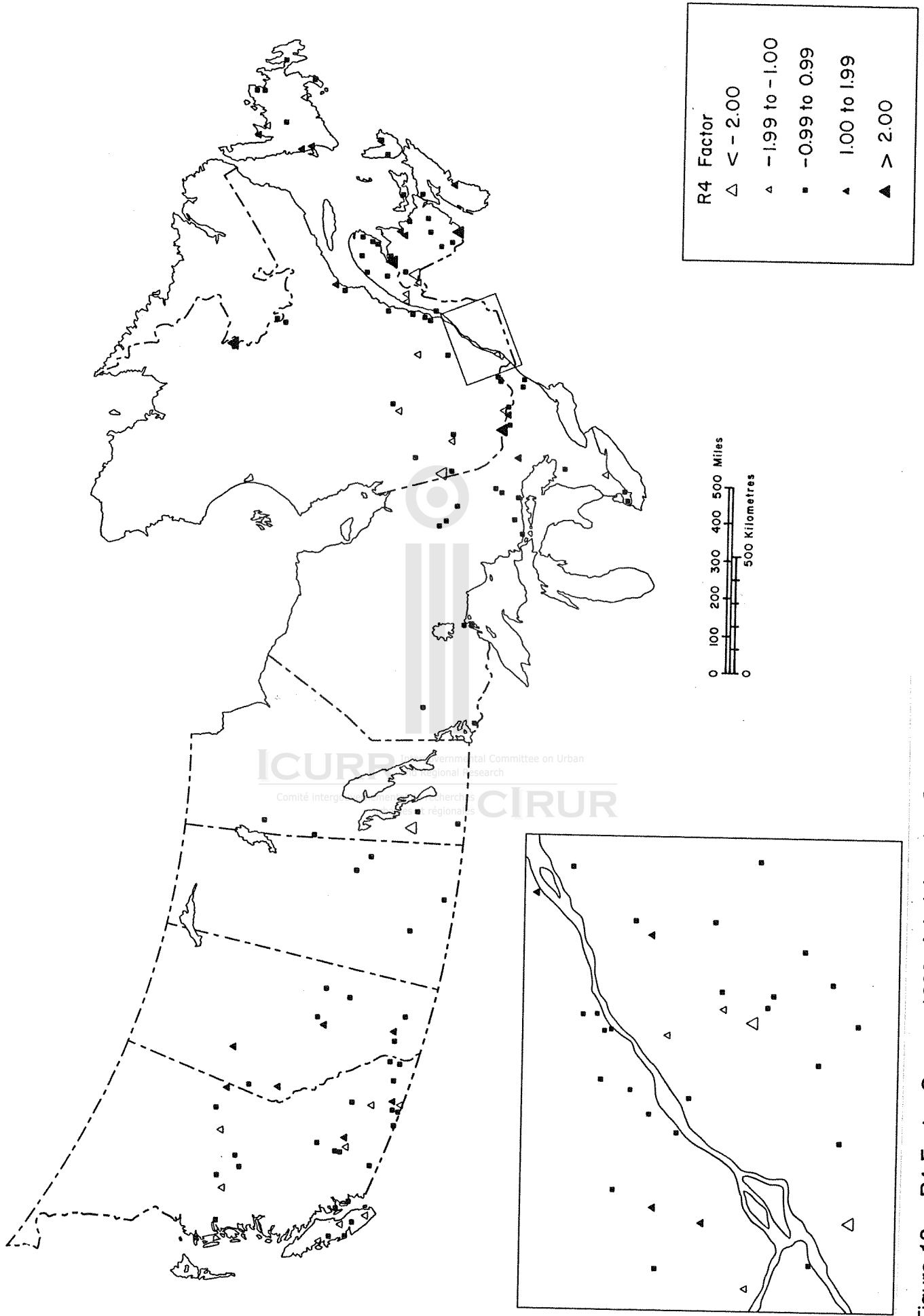


Figure 18. R4 Factor Scores, 1986: Administrative Centers

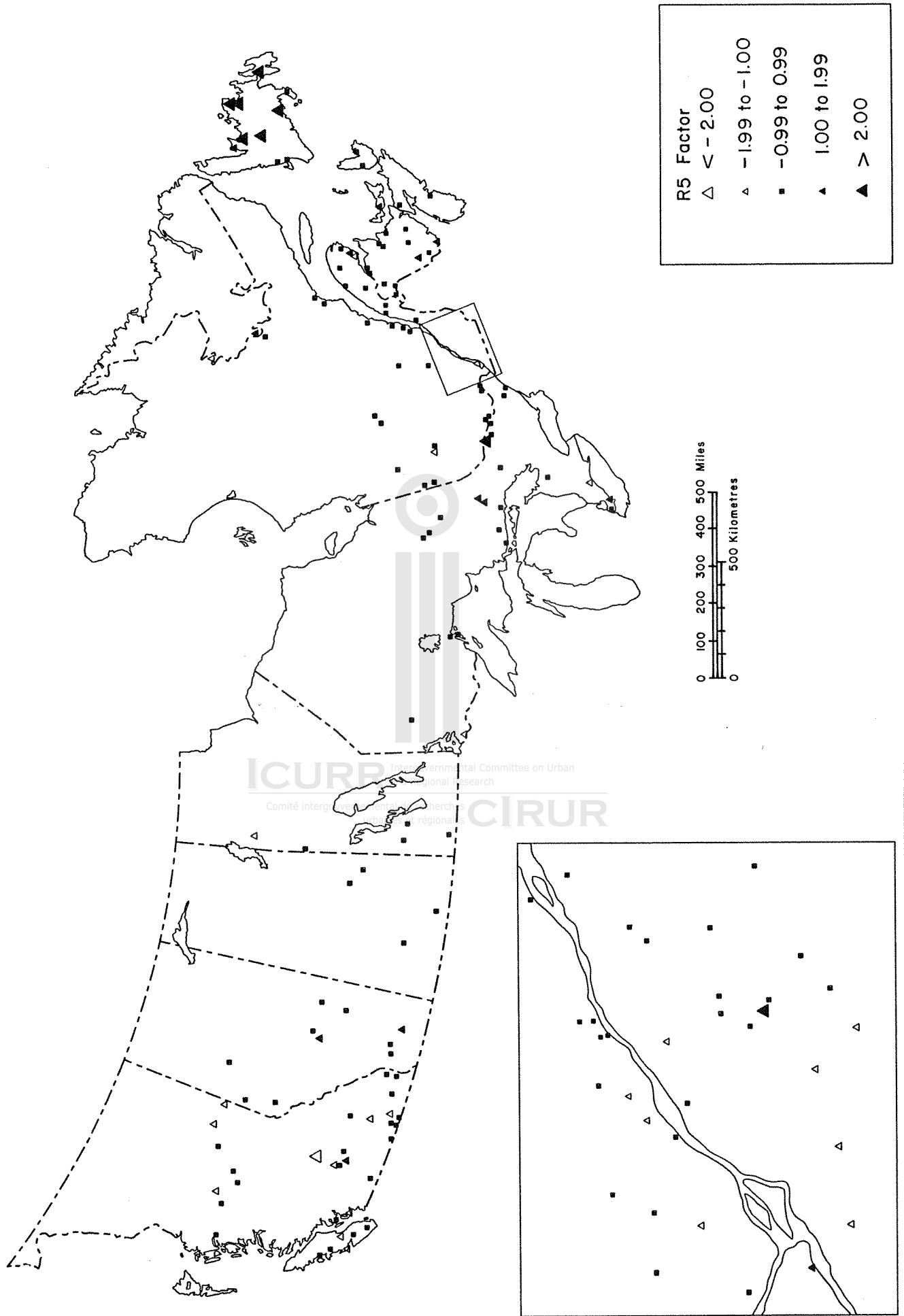
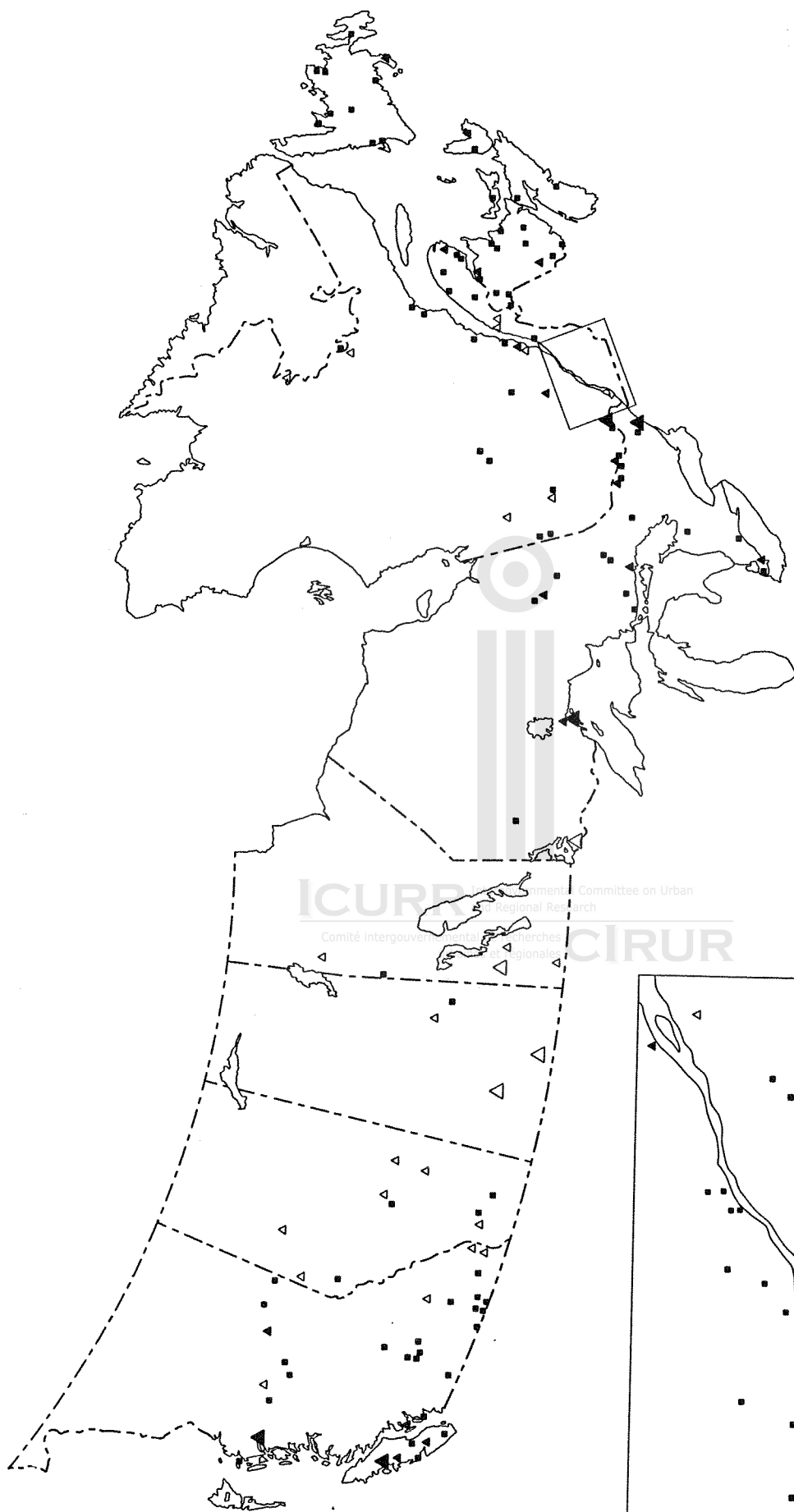


Figure 19. R5 Factor Scores, 1986: Unstable Centers



R6 Factor	
△	< - 2.00
◻	- 1.99 to - 1.00
◼	- 0.99 to 0.99
▲	1.00 to 1.99
▲	> 2.00

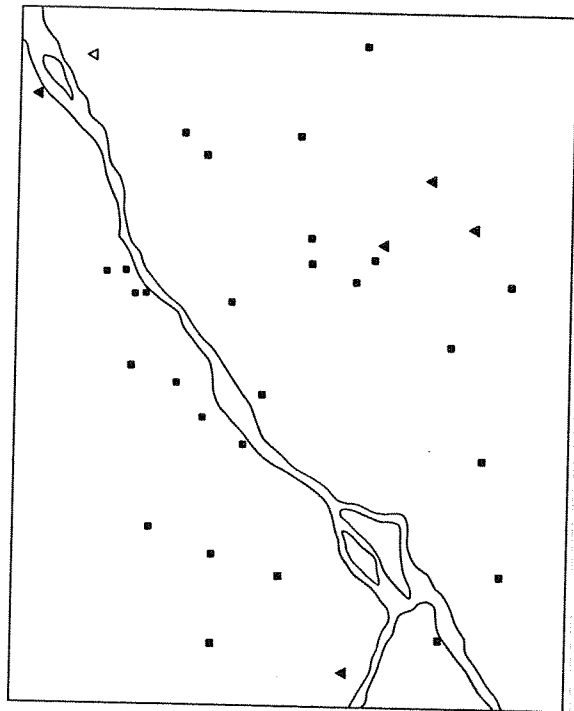
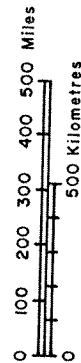


Figure 20. R6 Factor Scores, 1986: Manufacturing Centers

At the opposite end of the spectrum, towns specializing in the manufacturing of food, leather, rubber and other nondurable items have suffered lasting effects from continuous depopulation. Their revenue base is very low and their demographic make-up biased toward an aging, often widowed, population. Ironically, although manufacturing towns are not numerous in the sample, they are clearly the ones on which the recession of the early 80s had the most negative impact. In contrast, mining towns either survive with a wealthy economic base or close down.

Factor 2 contrasts high level of participation in the labour force among females to high levels of unemployment among both males and females as well as high levels of government transfer payments. The pattern of factor scores here contrasts the eastern part of the country, especially Newfoundland and Gaspésie, to central and western Canada. Depopulation is thus synonymous with unemployment in the east only where the employment is seasonal and government transfer payments traditionally make up a part of the annual income.

Factor 3 contrasts the degree of educational attainment in French and English populations. Contrary to earlier findings, the French population of Quebec has a higher rate of secondary school completion than the English population in the rest of the country. This is perhaps attributable to the fact that the high school certificate is obtained in Quebec in a shorter time than in English Canada. The correlation between educational attainment and French/English ethnicity may have become meaningless when comparing Quebec and the rest of Canada.

Factor 4 identifies those towns with a significant component of white collar workers who have a university degree and work in administration, teaching or the health profession.

Factor 5 identifies population instability in forestry, wood and pulp and paper towns in British Columbia, where the rates of divorce , moves and non-ownership of dwellings are much higher than in the rest of the country. The recession of the early 1980s had thus an immediate impact on the social structure of British Columbia forestry communities. In contrast, the communities of Newfoundland show the highest degree of stability.

Finally Factor 6 identifies areas where processing dominates the labour force. In general, these results show that declining communities are very diverse and programs designed to help them should respond to the income potential, seasonal employment patterns, demographic traits and population stability of each.

4.4 A Review of Programs Designed to Alleviate Regional Disparities

Since the 1960s, various government initiatives have attempted to alleviate regional disparities in slow-growth areas of Canada. One of the first federal programs focused on rural communities. This program, the Agriculture Rehabilitation and Development Act (ARDA), aimed to increase income in rural areas by stimulating agricultural development¹¹⁴. Renamed the Agricultural and Rural Development Act in 1966, ARDA's mandate was extended to include non-agricultural programs that deal with surplus labour from farming in rural communities. This program was criticized for its lack of geographical focus and a new program, the Fund for Rural Economic Development (FRED), was introduced in 1966 to fill the gap. The FRED program applied to five designated areas and included various employment initiatives, including incentives to private enterprises, industrial infrastructure and services.

In addition to these programs, other sectorial or regional programs called for greater co-ordination of initiatives in regional development. The creation of the Department of Regional Expansion (DREE) in 1969 allowed for a more co-ordinated and comprehensive approach to regional development¹¹⁵. Unlike previous programs designed to encourage rural development, DREE gave greater importance to industrialization in a certain number of growth centres. Under the Special Areas Program and the Regional Development Incentives Act (RDIA), various measures were provided to encourage industrialists to establish in specific regions, notably in eastern Québec and the Atlantic

provinces¹¹⁶. Based on the growth-pole concept, it was argued that industrial expansion in strategic areas would induce economic development throughout the entire region.

The emphasis in regional development shifted in the early 1970s in favour of the "developmental opportunities" approach. Under the General Development Agreements (GDAs), which allowed for subsidiary accords on various development projects with the provinces, assistance or support was provided to any "viable opportunities" or projects located in urban or rural areas. Unlike the Special Areas Program and the RDIA, assistance was not restricted to a certain number of designated areas. More importantly, these changes in policy were also translated into a more flexible approach which sought greater input from the provinces and various federal departments in regional development matters.

However, Ottawa's preoccupation with achieving greater public visibility for expenditures, and its concern over provincial abuse of development opportunities in order to obtain project approval, resulted in the establishment of a more centralized structure in the late 1970s. Indeed, the creation of a new central agency in 1978, the Ministry of State for Economic and Regional Development (MSERD), ensured the federal government greater control over regional development policies, programs and spending. The replacement of GDAs by the Economic Regional Development Agreements (ERDAs) in 1983, also allowed the federal government to directly deliver programs to the regions.

The approach to regional development adopted in the late 1970s and early 1980s, was one of "regional comparative advantages". It was felt that efforts in regional development should be focused on initiatives relevant to the region's comparative advantage or natural strength. Several mega-projects were undertaken during this period, notably in the energy sector in the Atlantic region.

DREE was replaced in the early 1980s by the Department of Regional Industrial Expansion (DRIE); MSERD subsequently disbanded. A new program, the Industrial and Regional Development Program (IRDP), was created in 1983¹¹⁷. Criteria for eligibility for this program were based on a "development index" which essentially measured the level of disparity at the sub-provincial level. However, because of its sectorial perspective and the insufficient importance attached to regional considerations, DRIE's programs ended up favouring the most economically advantaged regions. Data from the 1986-87 fiscal year, for instance, indicated Ontario and Quebec derived the most benefit from DRIE development grants¹¹⁸.

DRIE was disbanded in 1989 and replaced by the Department of Industry, Science and Technology (ISTC). Major new regional development institutions include the Atlantic Canada Opportunities Agency (ACOA), FedNor and the Western Economic Diversification (WED). They have responsibility for the co-ordination of various programs in their regions. ACOA administers the ACOA Action Program which provides financial assistance to small- and medium-sized businesses in the Atlantic provinces to conduct feasibility or market studies, develop new or improved products, increase the

productivity of the enterprise, or establish new facilities, modernize or expand existing ones.

FedNor, a development agency operating in Northern Ontario, is responsible for the Core Industrial Program, Tourism Assistance Program and the Rural Small Business Assistance Program. As for the ACOA Action Program, FedNor programs offer financial support to cover a portion of the capital costs of establishment, modernization or expansion of facilities, part of the costs of qualified consulting services, or a percentage of development costs of new or improved products.

Businesses in Northern Ontario can also benefit from a complementary program called the Loan Insurance Program. WED is responsible for the Western Diversification Program. The program presents incentives to businesses similar to the ones offered by ACOA and FedNor. As the name suggests, one of the eligibility criteria for WED Program assistance is the contribution the business will make to the diversification of the regional economic base.

In Québec, the Enterprise Development Program (EDP) and the Manufacturing Productivity Improvement Program provide assistance to small- and medium-sized enterprises. ISTC programs for specific regions of Québec include the Atlantic Enterprise Program for the Gaspé region and Magdelan Islands¹¹⁹, the Industrial Recovery Program for East End Montréal (PRIEM), the Industrial Recovery Program for the South-west region of Montréal, the LaPrade and Thedford-Mines Special Program and the Assistance Program to Disadvantaged Regions¹²⁰.

Other industrial and business development incentive programs exist in northern Alberta and the Northwest Territories under the Canada/Alberta Northern Development Subsidiary Agreement and the Canada/Northwest Territories Economic Development Agreement. Of particular interest in northern Alberta are programs in the areas of human resource development, community-based development and community and regional infrastructure support for economic development.

Three programs, the Opportunity Identification Program (OIP), Small Business Development Incentives Program (SMDIP) and Business Service Centres Program (BSCP) have been created under the Small Business Development Agreement in the Northwest Territories. It is interesting to note that the BSCP offers start-up accommodation and managerial, technical and operational assistance to micro-businesses located in one of these business service centres. Up to three Business Service Centres will be established in this program. Programs such as the ACOA Action Program and WED Program have made funds available to community development organizations to assist them in stimulating local economic activity¹²¹.

The Community Futures Program, administered by Employment and Immigration Canada, helps communities affected by significant lay-offs, high unemployment levels or economic decline. Once a community is selected, financial assistance for the creation and operation of a Community Futures Committee is provided. This committee, with representation from business, labour, government and the local community, has a mandate to analyze the community's employment and economic development problems,

identify possible solutions and advise Employment and Immigration Canada on economic development matters, including recommending the most appropriate Community Futures option. Options available through this program are the Self-Employment Incentive, the Business Development Centre, the Community Initiative Fund, Relocation and Exploratory Assistance and Direct Purchase of Institutional Training. By the end of March 1989, more than 200 communities had been selected for assistance. Almost half the Community Futures Program budget for 1989-90 was allocated to the Business Development Centre, which provides advisory services and loan assistance to small businesses for the creation of permanent employment¹²².

On the whole, it appears that, from the 1970s through the 1980s, the focus in regional development has been gradually moving away from the reduction of regional disparities toward national industrial development. Despite the considerable resources that have been allocated to economic development in the Eastern provinces over the last 20 years, the gap in income levels between the Atlantic provinces and the rest of the country has not decreased significantly. In the Atlantic provinces employment is highly seasonal and a fairly large proportion of the population relies on unemployment insurance benefits as a source of income.

It has been argued that many of the past failures were the result of a "top-down approach" in the implementation of government programs¹²³. A community-based approach to development is increasingly regarded as an alternative to regional development¹²⁴. A significant number of Canadian community-based development

initiatives undertaken with or without the assistance of Community Development Corporations reflects the growing interest in the local development approach¹²⁵. Particular attention has also been paid to entrepreneurship as shown by the significant number of programs available to small- and medium-sized businesses.

For proponents of the local development approach, people are the source of economic growth. It is a bottom-up process where decisions about economic development are made by the community¹²⁶. Although such development might entail the use of resources from outside the region, members of the community are responsible for determining priorities and ways of achieving economic development. Their involvement in implementing local initiatives is also a key element in ensuring the success of such initiatives.

Under a community development approach, local entrepreneurship is considered an important component of development. It is viewed as an answer to the need for economic diversification, since part of the problem in single-industry or resource dependent areas stems from their reliance on a single economic activity. However, a community based approach is not limited to the stimulation of businesses. This is an approach that integrates both social and economic goals. Human resources development is considered one of the critical elements of diversification of single-industry or resource dependent regions.

SECTION 5 - CONCLUSION

To find appropriate solutions to the problems of communities experiencing significant population loss is not simple. ICURR's analysis reveals that the depopulation phenomenon occurs mainly in small towns of 1,000 to 3,000 inhabitants. Among these towns, the hardship was found to be most severe in Newfoundland where four communities experienced a decline of more than 20 percent and in British Columbia where five towns saw their population decrease by more than 20 percent and six others by more than 15 percent. However, the greatest number of declining towns was found in Québec, especially in the St. Lawrence region.

ICURR's study also indicates that the average rate of unemployment in declining communities rose in all provinces during the 1981-86 period. In Newfoundland and New Brunswick, the average level of unemployment in such communities was between 20 and 30 percent, while in Québec it reached 15 to 20 percent in 1986. The manufacturing labour force data for the 182 declining communities further reveal that, with the exception of Québec and Nova Scotia, they are predominantly towns whose economies are based on the production of resources, especially food and forest products. Labour force data compiled by Statistics Canada for ICURR also indicate that many declining communities are mining towns.

Beyond sharing a somewhat similar economic base and suffering population loss, the 182 communities differ remarkably in their demographic make-up, income distribution, the importance of service industries and unemployment levels. A factorial analysis of 55 census variables for 1981 and 1986 has enabled us to collapse the major sources of variation into six factors accounting for 60 percent of the variance. The first two factors are particularly significant and are summarized here.

The first factor contrasts mining towns with manufacturing towns producing non durable goods. Most mining towns in the sample have a young population, a high participation rate in the labour force among the males and a household income of more than \$30,000. At the opposite end of the spectrum, towns specializing in the manufacturing of food, leather, rubber and other non durable items have suffered lasting effects from continuous depopulation. Their revenue base is very low and their demographic make-up is biased toward an aging, often widowed, population.

The second principal factor is one which contrasts high levels of participation in the labour force among females in central and western Canada to high levels of unemployment among both males and females and high levels of government transfer payments in the eastern part of the country, especially Newfoundland and Gaspésie.

It has been found that communities suffering decline differ remarkably in their demographic make-up, income distribution, the importance of service industries and the scale of unemployment. Mining towns with a relatively high wage labour force, for instance, are as affected as manufacturing towns or other resource-based communities

by economic decline and depopulation. Because of this diversity, we conclude that development programs designed to help them should differentiate according to specific income potential, seasonal employment, demographic characteristics, and population stability.



NOTES

1. Canada Employment and Immigration Advisory Council. 1989. Regional Unemployment in Canada: A Nation out of Balance. Interim report. Canada : Minister of Supply and Services.
1987. Canada's Single Industry Communities: A Proud Determination to Survive. Canada: Minister of Supply and Services.
2. Urban areas are defined as having a population of 1,000 or more with a density of 1,000 people or more per square. By extension, rural areas are places of less than 1,000 population with a density of less than 1,000 people per square mile. Urban areas represent about 75 per cent of the Canadian population.
3. Beaujot, Roderic, and Kevin McQuillan. 1982. Growth and Dualism - The Demographic Development of Canadian Society. Toronto: Gage Publishing Limited. During this period, the rural non-farm population grew by 23 per cent while the rural farm population decreased by 27 per cent. Rural population shifts in Canada are essentially associated with its non-farm population component. In Joseph, Alun E., Philip D. Keddie, and Barry Smit. 1988. "Unravelling the Population Turnaround in Rural Canada". The Canadian Geographer 32(1): 17-30.
4. Artibise, Alan F. J., and Matthew J. Kierman. 1989. Canadian Regional Development: The Urban Dimension. Ottawa: Economic Council of Canada.
5. Dasgupta, Satada. 1988. Rural Canada - Structure and Change. Queenston, Ontario: The Edwin Mellen Press.
6. Coffey, William J., and Mario Polase. 1988. "Locational Shifts in Canadian Employment, 1971-81: Decentralization Versus Decongestion". The Canadian Geographer 32(3): 248-256.
7. Garnick, Daniel H. 1984. "Shifting Balances in U.S. Metropolitan and Nonmetropolitan Area Growth". International Regional Science Review. 9(3): 257-273.

8. Joseph, Keddie, and Smit. 1988. "Unravelling the Population Turnaround in Rural Canada".
9. Simmons J. W., and L. S. Bourne. 1989. Urban Growth Trends in Canada 1981-86: A New Geography of Change. Toronto: Centre for Urban and Community Studies. See also Simmons and Bourne. 1984. Recent Trends and Patterns in Canadian Settlement 1976-81. Toronto: Centre for Urban and Community Studies.
10. Artibise and Kierman, Canadian Regional Development: The Urban Dimension.
11. Gertler observed a relative decline in traditional manufacturing occupations in the Toronto metropolitan area over the 1975-1980 period. In Gertler, Meric S. 1985. "Industrialism, Deindustrialism and Regional Development in Central Canada". The Canadian Journal of Regional Science 8(3): 353-375.
12. Burke, Mary Anne. 1987a. "Interregional Migration of the Canadian Population". Canadian Social Trends. Autumn 1987: 17-23, 25.
13. Coffey, William J. 1987. "Structural Changes in the Canadian Space-Economy, 1971-1981". Still Living Together: Recent Trends and Future Reactions in Canadian Regional Development. Edited by Coffey Williams J. and Mario Polase. Montréal: Institute for Research on Public Policy.
14. Simmons and Bourne, Recent Trends and Patterns in Canadian Settlement 1976-81.
15. Andrews, Peter W. 1981. "Regional Mineral Developments". Canadian Mining Journal 102(2): 30, 32, 34, 39, 40, 42.
16. Producer services include accounting, advertising, consulting, management and so forth.
17. Coffey, "Structural Changes in the Canadian Space-Economy, 1971-1981".

18. Fielding, A. J. 1986. "Counterurbanization". Population Geography: Progress and Prospect. Edited by Michael Pacione. Beckerham, United States: Croom Helm Ltd.
19. Berry, Brian J. L., and Donald C. Dahman. 1980. "Population Redistribution in the United States in the 1970s". Edited by Berry Brian J. L. and Lester P. Silverman. Population Redistribution and Public Policy. Washington, D. C.: National Academy of Science.
20. Except in the Toronto metropolitan area where Gertler found some indications of the decentralization of the economic activity. In Gertler "Industrialism, Deindustrialism and Regional Development in Central Canada".
21. Joseph, Keddie, and Smit, "Unravelling the Population Turnaround in Rural Canada".
22. Coffey and Polase, "Locational Shifts in Canadian Employment, 1971-81: Decentralization Versus Decongestion".
23. Joseph, Keddie, and Smit, "Unravelling the Population Turnaround in Rural Canada".
24. Coffey and Polase, "Locational Shifts in Canadian Employment, 1971-81: Decentralization Versus Decongestion".
25. Burke Mary Anne. 1987b. "Urban Canada". Canadian Social Trends. Winter 1987: 12-18.
26. Ibid.
27. Simmons and Bourne, Urban Growth Trends in Canada 1981-86: A New Geography of Change.
28. In Simmons and Bourne (1984; 1989), rates of urban growth were computed for urban areas of 10,000 population or more.
29. Artibise and Kierman, Canadian Regional Development: The Urban Dimension.

30. Burke, "Urban Canada".
31. In 1981-86, average growth rates are based on a slightly different but comparable number of urban areas than in the previous period.
32. Burke, "Interregional Migration of the Canadian Population".
33. House J. D., Sheela M. White, and Paul Ripley. 1989. Going Away... and Coming Back: Economic Life and Migration in Small Canadian Communities. Newfoundland: Memorial University of Newfoundland, Institute of Social and Economic Research, Department of Sociology. See also Simmons and Bourne, Urban Growth Trends in Canada 1981-86: A New Geography of Change.
34. Burke, "Interregional Migration of the Canadian Population".
35. Dasgupta, Rural Canada - Structure and Change.
36. Dugas, Clermont. 1988. Disparités socio-économiques au Canada. Sillery, Québec: Presses de l'Université du Québec.
37. Cohen, Marjorie. Forthcoming. "Exports, Unemployment and Regional Inequality: Economic Policy and Trade Theory". In the New Era of Global Competition: State Policy and Market Power. Edited by Brache Daniel and Meric S. Gertler. Montréal: McGill-Queen's University Press.
38. Norcliffe, Glen. 1988. "Industrial Structure and Labour Market Adjustments in Canada During the 1981-84 Recession". Canadian Journal of Regional Science 11(2): 201-226.
39. Gertler, "Industrialism, Deindustrialism and Regional Development in Central Canada".
40. Norcliffe, "Industrial Structure and Labour Market Adjustments in Canada During the 1981-84 Recession".
41. Picot, Garnett W., and Laval Lavallée. 1986. Structural Changes in Employment of Industries and Occupations, 1971-81: An Input-Output Analysis. Ottawa: Economic Council of Canada.
42. Silver, Trends in Occupation and Industry.

43. Picot and Lavallée, Structural Changes in Employment of Industries and Occupations, 1971-81: An Input-Output Analysis.
44. Commercial economy is defined by the author as "the entire economy excluding public administration, hospitals, most of the education sector, and religious and welfare organizations". In Picot and Lavallée, Structural Changes in Employment of Industries and Occupations, 1971-81: An Input-Output Analysis.
45. Voyer, D. Roger, and Mark G. Murphy. 1984. Global Economy: Canada - A View of Canadian Economic Development Prospects, Resources and the Environment. Toronto: Pergamon Press.
46. Picot and Lavallée, Structural Changes in Employment of Industries and Occupations, 1971-81: An Input-Output Analysis.
47. Picot, Canada's Industries: Growth in Jobs Over Three Decades - A Review of the Changing Industrial Mix of Employment 1951-84.
48. Cohen, "Exports, Unemployment and Regional Inequality: Economic Policy and Trade Theory".
49. Picot and Lavallée, Structural Changes in Employment of Industries and Occupations, 1971-81: An Input-Output Analysis.
50. Seward, Shirley B. 1987. "Demographic Change and the Canadian Economy: An Overview". Canadian Studies in Population 14(2): 279-299.
51. Picot, Canada's Industries: Growth in Jobs Over Three Decades - A Review of the Changing Industrial Mix of Employment 1951-84.
52. Organization for Economic Co-operation and Development (OECD). 1987. Revitalising Urban Economies. Paris: OECD.
53. Picot, Canada's Industries: Growth in Jobs Over Three Decades - A Review of the Changing Industrial Mix of Employment 1951-84.

54. Cohen, "Exports, Unemployment and Regional Inequality: Economic Policy and Trade Theory".
55. Indeed, the primary sector represented 14 per cent of the labour force in Alberta, 7 per cent in British Columbia and 11 per cent in Newfoundland in 1981. In Cohen, "Exports, Unemployment and Regional Inequality: Economic Policy and Trade Theory". In Alberta and Newfoundland, more than 7 and 4 per cent of employment respectively, was concentrated in mining. In Andrews, "Regional Mineral Developments".
56. Simmons and Bourne, Urban Growth Trends in Canada 1981-86: A New Geography of Change.
57. Ibid.
58. Canada Employment and Immigration Advisory Council. 1987. Canada's Single-Industry Communities: A Proud Determination to Survive. Canada: Minister of Supply and Services.
59. Walker, David C. 1988. Lynn Lake and Northwest Manitoba: An Alternative Community Future. Winnipeg: Institute for Urban Studies.
60. Decter, Michael B. 1989. Diversification and Single Industry Communities: The Implications of a Community Economic Development Approach. Ottawa: Economic Council of Canada.
Intergovernmental Committee on Urban and Regional Research
Comité intergouvernemental de recherches urbaines et régionales
61. Picot, Canada's Industries: Growth in Jobs Over Three Decades - A Review of the Changing Industrial Mix of Employment 1951-84.
62. Employment declined by 10 percent in the overall mining industry in 1981-86. In Simmons and Bourne, Urban Growth Trends in Canada 1981-86: A New Geography of Change. It fell by 24 percent in the base metals industry ie. lead, zinc, copper and nickel mining. In the Globe and Mail 1989.
63. Crowson, Philip. 1986. "Prospects for the Minerals Industry: A View from the Mining Company". IDS Bulletin 17(4): 30-33.
64. Premier's Council. 1988. Competing in the New Global Economy. Report of the Premier's Council, volume 2. Toronto: Queen's Printer of Ontario. See also

- Bradbury John H. 1984b. "The Impact of Industrial Cycles in the Mining Sector: The Case of the Québec-Labrador Region in Canada". International Journal of Urban and Regional Research 8(3): 311-331.
65. From six per cent in 1946-1973, the annual growth rate of consumption of this metal dropped to one per cent in 1974-76. Since then, annual consumption growth rates for nickel has been almost nil. In Telewiak R. G. 1981. "Nickel". Canadian Mining Journal 102(2): 73-74, 77, 79. See also Mizzi, Philip J., S. Charles Maurice, and Gerhard Anders. 1987. "The Nickel Industry - Continued Response to a Changing Environment". Resources Policy 13(1): 35-46.
66. For instance, new sources of iron were developed in Brazil, West Africa and Australia. Competitors in the steel industry from Brazil, Korea and Mexico have also exerted pressure on the external markets. Major sources of nickel were found, notably in Australia and Indonesia. In Mizzi, Maurice, and Anders, "The Nickel Industry - Continued Response to a Changing Environment".
67. Crowson, Philip. 1986. "Prospects for the Minerals Industry: A View from the Mining Company". IDS Bulletin 17(4): 30-33.
68. Bradbury, "The Impact of Industrial Cycles in the Mining Sector: The Case of the Québec-Labrador Region in Canada".
69. Russell, Alison. 1988. "Potash - Long Haul Recovery Under Way". Industrial Minerals 244: 16-18, 20, 23, 25, 27-29, 31-34.
70. Pharand, Nicole L. 1989. Forest Dependent Communities in Canada. Ottawa: Minister of Supply and Services.
71. Picot, Canada's Industries: Growth in Jobs Over Three Decades - A Review of the Changing Industrial Mix of Employment 1951-84.
72. MacMillan Bloedel's investments in new technology in three pulp and paper mills in British Columbia, for instance, resulted in a loss of employment in two of these mills during the early 1980s. In Barnes, Trevor J., Roger Hayter and, Eric Grass. Forthcoming. "Corporate Restructuring and Employment Change in a Resource Economy: A British Columbian Case Study". A Geography of Enterprise. Edited by Schmidt Marc and Egbert Weaver. London: Croom Helm.

73. Ibid.
74. Auer, L. 1989. Canadian Prairie Farming, 1960-2000 - An Economic Analysis. Ottawa: Minister of Supply and Services Canada. See also Silver, Trends in Occupation and Industry.
75. Ibid.
76. Picot, Canada's Industries: Growth in Jobs Over Three Decades - A Review of the Changing Industrial Mix of Employment 1951-84.
77. Ibid.
78. Voyer and Murphy, Global Economy: Canada - A View of Canadian Economic Development Prospects, Resources and the Environment.
79. Decter, Diversification and Single Industry Communities: The Implications of a Community Economic Development Approach.
80. Bogue, Donald J. 1969. Principles of Demography. New York: John Wiley and Sons.
81. Cordey-Hayes, M. 1975. "Migration and the Dynamics of Multiregional Population Systems". Environment and Planning A vol. 7: 793-814.
82. Williams, James D. 1981. "The Nonchanging Determinants of Nonmetropolitan Migration". Rural Sociology 46(2): 183-202.
See also Carel, G., W. J. Coffey, and M. Polase. 1989. L'Impact de la migration sur le développement régional: deux courants de pensée. Montréal: Etudes et Documents #60, INRS-Urbanisation.
83. Courchene, Thomas J. 1970. "Interprovincial Migration and Economic Adjustment". Canadian Journal of Economics 111(4): 549-576.
84. Vanderkamp, John. 1971. "Migration Flows, Their Determinants and the Effects of Return Migration". Journal of Political Economy vol. 79: 1012-1032.

85. Shaw, Paul R. 1985. Intermetropolitan Migration in Canada: Changing Determinants Over 3 Decades. Toronto: NC Press.
86. Chalmers, James A., and Michael J. Greenwood. 1985. "The Regional Labour Market Adjustment Process: Determinants of Changes in Rates of Labour Force Participation, Unemployment, and Migration". The Annals of Regional Science 19(1): 1-17.
87. Clark, W. A. 1982. "Recent Research on Migration and Mobility: A Review and Interpretation". Progress in Planning vol. 18: 1-56.
88. Polèse, Mario. 1981. "Regional Disparity, Migration and Economic Adjustment: A Reappraisal". Canadian Public Policy 7(4): 519-525.
89. Courchene, "Interprovincial Migration and Economic Adjustment". See also Wrage, Peter. 1981. "The Effect of Internal Migration on Regional Wage and Unemployment Disparities in Canada". Journal of Regional Science 21(1): 51-63.
90. Wrage, "The Effect of Internal Migration on Regional Wage and Unemployment Disparities in Canada".
91. Ibid.
92. Vanderkamp, John. 1988. "Regional Disparities: A Model With Some Econometric Results for Canada". Regional Economic Development: Essays in Honour of Francois Perroux. Boston: Allen and Unwin.
93. Canada Employment and Immigration Advisory Council. 1989. Regional Unemployment in Canada: A Nation Out of Balance. Interim report. Canada: Minister of Supply and Services.
94. Polèse, Mario. 1987. "Patterns of Regional Economic Development in Canada: Long Term Trends and Issues". Still Living Together: Recent Trends and Future Directions in Canadian Regional Development. Edited by Coffey William J. and Mario Polèse. Montréal: The Institute for Research on Public Policy.

95. Polase, "Patterns of Regional Economic Development in Canada: Long Term Trends and Issues". See also Watson, William G. 1988. Demographic Change, Fiscally-Induced Migration, and Regional Economic Growth. Prepared for the Demographic Review Health and Welfare Canada. Mainstream neoclassical economists such as Watson (1988), interpret this as being a slow tendency for regional per capita income to converge over the years.
96. Simmons and Bourne, Urban Growth Trends in Canada 1981-86: A New Geography of Change.
97. Burke, "Interregional Migration of the Canadian Population".
98. It represents also more than 85 percent of its net loss from internal migration. In Burke, "Interregional Migration of the Canadian Population".
99. Courchene, "Interprovincial Migration and Economic Adjustment".
100. Winer, Stanley L., and Denis Gauthier. 1982. International Migration and Fiscal Structure - An Econometric Study of the Determinants of Interprovincial Migration in Canada. Ottawa: Minister of Supply and Services.
101. The period of reference under study was between 1951 and 1978. In Winer and Gauthier, International Migration and Fiscal Structure.
102. Myrdal Gunnar. 1964. Economic Theory and Under-Developed Regions. London: Methuen and Co Ltd.
103. Polase, "Regional Disparity, Migration and Economic Adjustment: A Reappraisal".
104. Grindstaff, Carl F. 1986. "Demography and Population Study". Introduction to Sociology - A Canadian Focus. Edited by Teevan James J. Canada, Scarborough: Prentice-Hall.
105. Chalmers and Greenwood, "The Regional Labour Market Adjustment Process: Determinants of Changes in Rates of Labour Force Participation, Unemployment, and Migration".

106. Termote, March G. 1978. "Une mesure de l'impact économique de l'immigration internationale: le cas du Québec, 1951-74". Canadian Studies in Population vol. 5: 55-68.
107. Peirce, Jon. 1990. The Process of Local Development in Canada: As Illustrated by 4 Recent Canadian Cases. Ottawa: Economic Council of Canada. See White P. E. 1980. "Migration Loss and Residual Community: A Study in Rural France 1962-75". The Geographical Impacts of Migration. Edited by White P. E. and Wood. London: Longman. See also, Advisory Committee on Resource Dependent Communities in Northern Ontario, Final Report and Recommendations of the Advisory Committee on Resource Dependent Communities in Northern Ontario and Walker, Lynn Lake and Northwest Manitoba: An Alternative Community Future.
108. Bradbury, John H., and Isabelle St-Martin. 1983. "Winding Down in a Québec Mining Town: A Case Study of Shefferville". Canadian Geographer 27(2); 128-144.
109. Canada Employment and Immigration Advisory Council, Canada's Single-Industry Communities: A Proud Determination to Survive.
110. Decter, Diversification and Single Industry Communities: The Implications of a Community Economic Development Approach. See also, Canada Employment and Immigration Advisory Council, Canada's Single-Industry Communities: A Proud Determination to Survive.
111. Beale, Elizabeth. 1989. Regional Development in Atlantic Canada: An Overview and a Case Study of the Human Resources Development Association. Ottawa: Economic Council of Canada.
112. House, White, and Ripley, Going Away... and Coming Back: Economic Life and Migration in Small Canadian Communities.
113. Department of Regional Economic Expansion. 1979. Single Sector Communities. Canada: Minister of Supply and Services.
114. Savoie, Donald J. 1986a. Regional Economic Development - Canada's Search for Solutions. Toronto: University of Toronto Press.

115. Beale, Regional Development in Atlantic Canada: An Overview and a Case Study of the Human Resources Development Association.
116. Under the Special Areas Program, six regions among 23 designated areas were expected to realize faster industrial expansion than the other areas. These regions were St-John's, Halifax-Dartmouth, Saint-John, Moncton, Québec City and Trois-Rivieres. Designated regions under the RDIA program comprised the Atlantic provinces, eastern and northern Québec, parts of northern Ontario and the northern regions of the four western provinces.
117. Beale, Regional Development in Atlantic Canada: An Overview and a Case Study of the Human Resources Development Association.
118. Canada Employment and Immigration Advisory Council, Regional Unemployment in Canada: A Notion Out of Balance.
119. This program will be phased out in December 1990.
120. Regional County Municipality of Argenteuil, D'Autray, L'Amiante, Le-Centre-de-la-Mauricie, Le Granit, Le Haut-Saint-François, L'Erable, Les Etchemins, L'Islet, L'Or-Blanc, Maskinongé, Matawinie, Mékinac, Montcalm and Montmagny.
121. Economic Council of Canada. 1990. From the Bottom Up - The Community Economic-Development Approach: A Statement by the Economic Council of Canada. Ottawa: Minister of Supply and Services Canada.
122. Economic Council of Canada. 1990. From the Bottom Up - The Community Economic-Development Approach. Ottawa: Supply and Services Canada.
123. Ibid.
124. Perry, Stewart E. 1989. The Community As a Base for Regional Development. Ottawa: Economic Council of Canada. See Decter, Diversification and Single Industry Communities: The Implications of a Community Economic Development Approach. See also, Advisory Committee on Resource Dependent Communities in Northern Ontario, Final Report and Recommendations of the Advisory Committee on Resource Dependent Communities in Northern Ontario; Peirce, The Process of Local Development in Canada: As Illustrated by 4 Recent

Canadian Cases and Walker, Lynn Lake and Northwest Manitoba: An Alternative Community Future.

125. Brodhead Dal, Francois Lamontagne, and Jon Peirce. 1990. The Local Development Organization: A Canadian Perspective. Ottawa: Economic Council of Canada. A ten year project in Manitoba Interlake region in the early 1970 for instance, was carried out with the participation of the local government. In Decter and Kowall, Manitoba's Interlake Region: The Fund for Rural Economic Development Agreement, 1967-77. The establishment of Area Development Boards allowed the community to get involved in planning and setting priorities on regional economic development. Projects chosen by the participants of these boards were diversified in the fields of education; agricultural development and land drainage; recreational and park development and; water and sewage services upgrading. Among other examples are: Yukon 2000, Yukon; Nelson, British Columbia; Legal Industrial Diversification, Alberta; Kitsaki Dev. Corp., Saskatchewan; Restigouche, New Brunswick and; MRC Pontiac, Québec.
126. Canada Employment and Immigration Advisory Council, Regional Unemployment in Canada: A Notion Out of Balance. See also, Perry, The Community As a Base for Regional Development.



APPENDIX 1

ICURR Intergovernmental Committee on Urban
and Regional Research
Comité intergouvernemental de recherches
urbaines et régionales **CIRUR**

APPENDIX 1:
Description of Census Variables Used in the Factor Analysis

1. Percentage of male population 0-14 years
2. Percentage of male population 15-44 years
3. Percentage of male population 45-64 years
4. Percentage of male population 65 years and over
5. Percentage of female population 0-14 years
6. Percentage of female population 15-44 years
7. Percentage of female population 45-64 years
8. Percentage of female population 65 years and over
9. Percentage of population single
10. Percentage of population married
11. Percentage of population widowed
12. Percentage of population divorced
13. Percentage of population English speaking
14. Percentage of population French speaking
15. Percentage of dwellings owned
16. Percentage of families husband-wife
17. Percentage of families lone female parent
18. Percentage of population British origin
19. Percentage of population French origin
20. Percentage of population other origin
21. Percentage of population non mover
22. Percentage of population mover non immigrant
23. Percentage of population of 15 years and over with less than grade 9
24. Percentage of population of 15 years and over between grades 9 and 13 without certificate
25. Percentage of population of 15 years and over between grades 9 and 13 with certificate
26. Percentage of population of 15 years and over with university degree

APPENDIX 1:**Description of Census Variables Used in the Factor Analysis**

27. Male participation rate
28. Male unemployment rate
29. Female participation rate
30. Female unemployment rate
31. Percentage of labour force in agriculture
32. Percentage of labour force in forestry
33. Percentage of labour force in fishing
34. Percentage of labour force in mines
35. Percentage of labour force in manufacturing
36. Percentage of labour force in construction
37. Percentage of labour force in transportation
38. Percentage of labour force in trade
39. Percentage of labour force in finance
40. Percentage of labour force in services
41. Percentage of labour force in public administration
42. Percentage of population in managerial occupation
43. Percentage of population in trading occupation
44. Percentage of population in health profession
45. Percentage of population in clerical occupation
46. Percentage of population in sales occupation
47. Percentage of population in service occupation
48. Percentage of population in primary occupation
49. Percentage of population in processing occupation
50. Percentage of population in machinery occupation
51. Percentage of population in construction occupation
52. Percentage of population in transportation equipment
53. Percentage of population with household income less than \$1,000
54. Percentage of population with household income greater than \$30,000
55. Percentage of population with employment income
56. Percentage of population with government transfer payments
57. Population change



APPENDIX 2

ICURR Intergovernmental Committee on Urban
and Regional Research

Comité intergouvernemental de recherches
urbaines et régionales **CIRUR**

Percentage of Manufacturing Labour Force in TOBACCO Industry

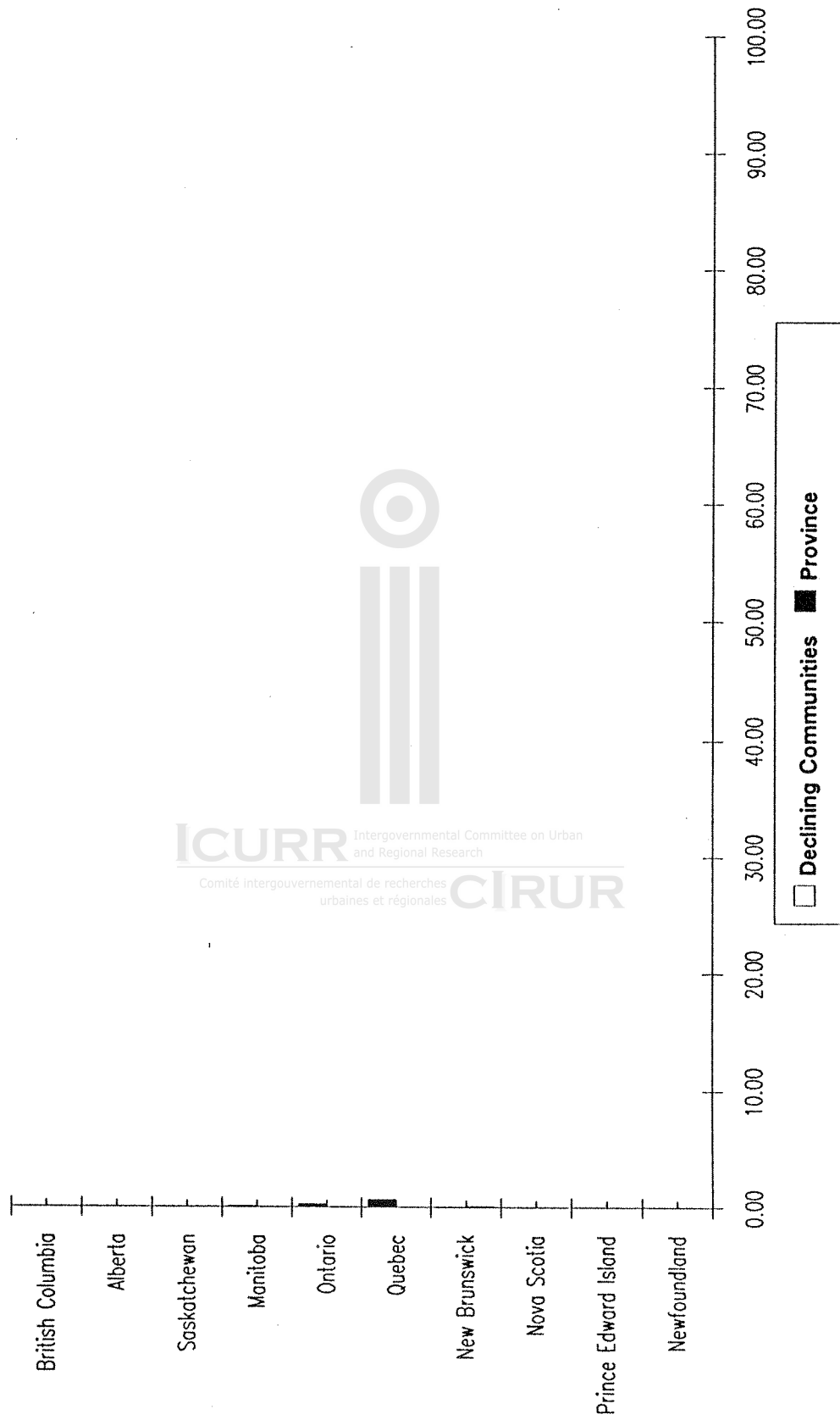


Figure 21. Representation of the manufacturing labour force in the tobacco industry. 1981

Percentage of Manufacturing Labour Force in CLOTHING Industry

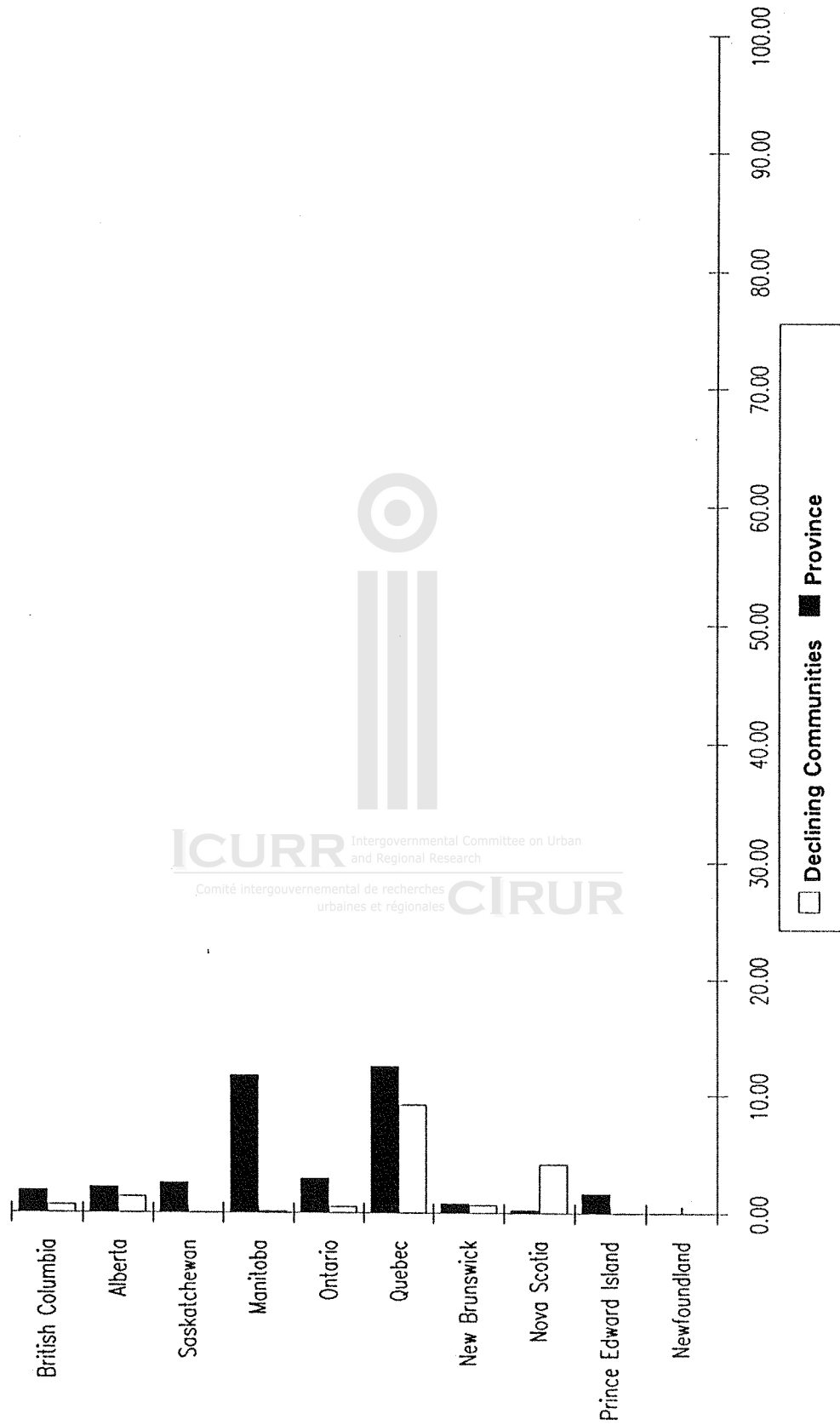


Figure 22. Representation of the manufacturing labour force in the clothing industry. 1981

Percentage of Manufacturing Labour Force in LEATHER Industry

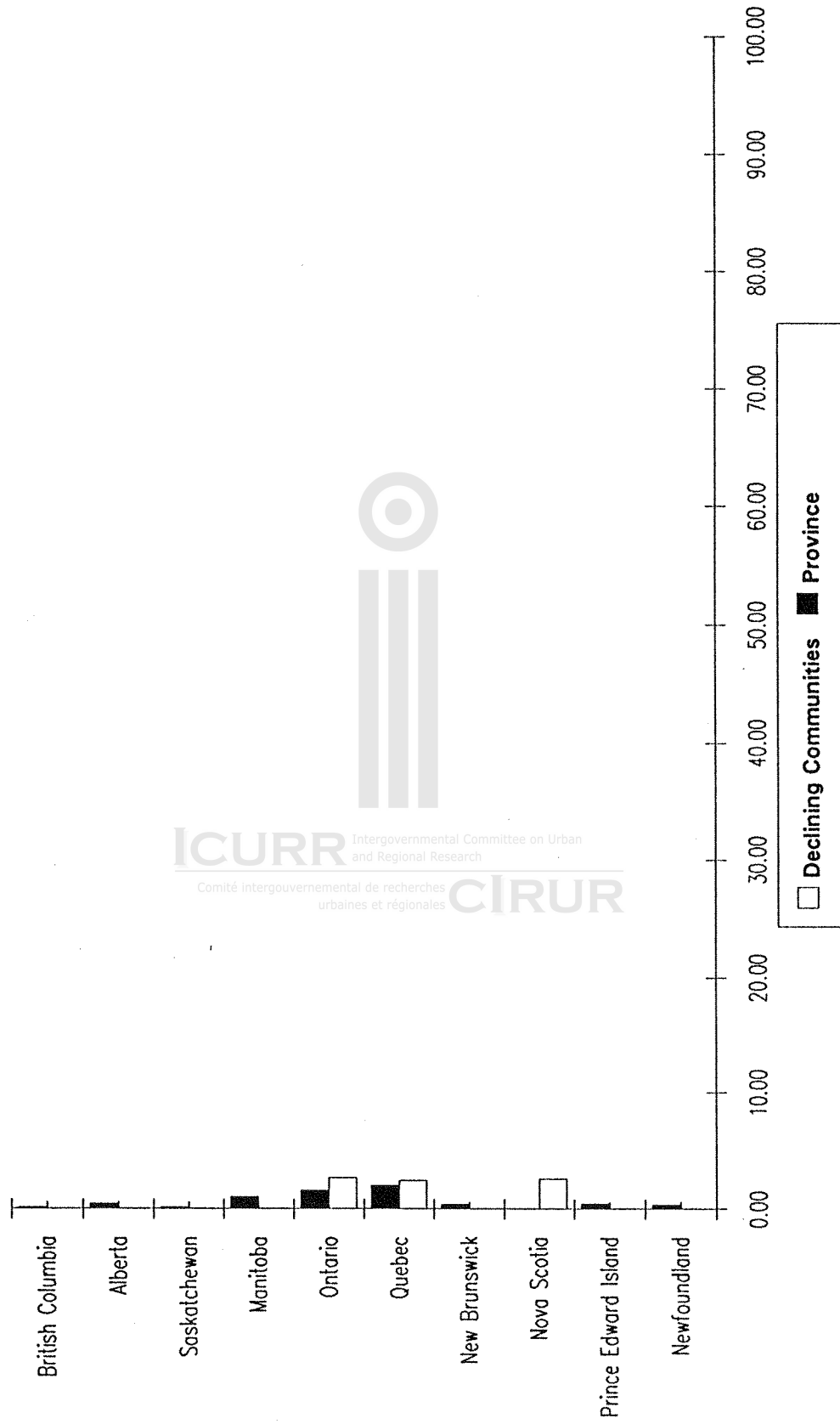


Figure 23. Representation of the manufacturing labour force in the leather industry. 1981

Percentage of Manufacturing Labour Force in PRINTING Industry

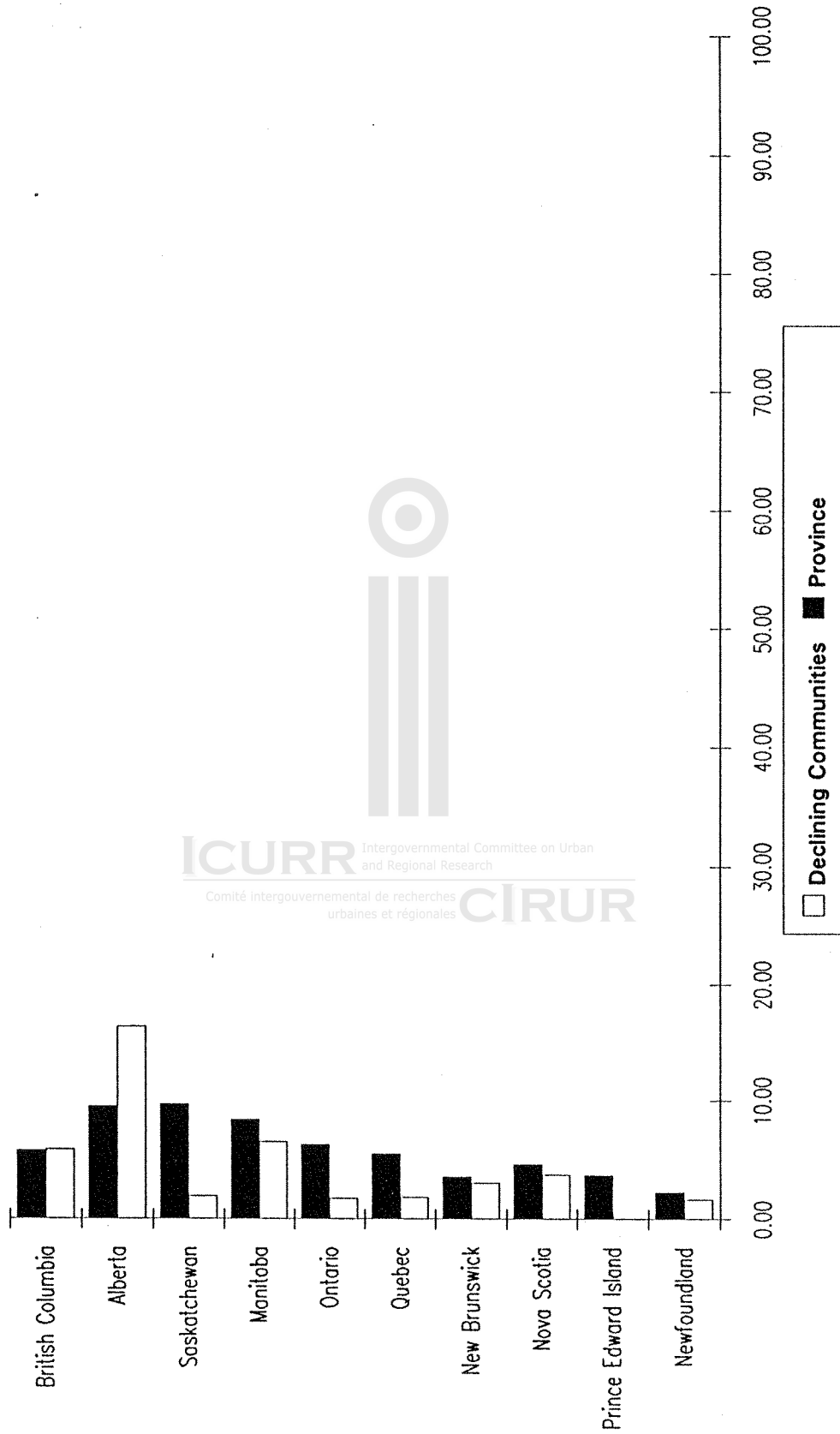


Figure 24. Representation of the manufacturing labour force in the printing industry. 1981

Percentage of Manufacturing Labour Force in METAL FABRICATING Industry

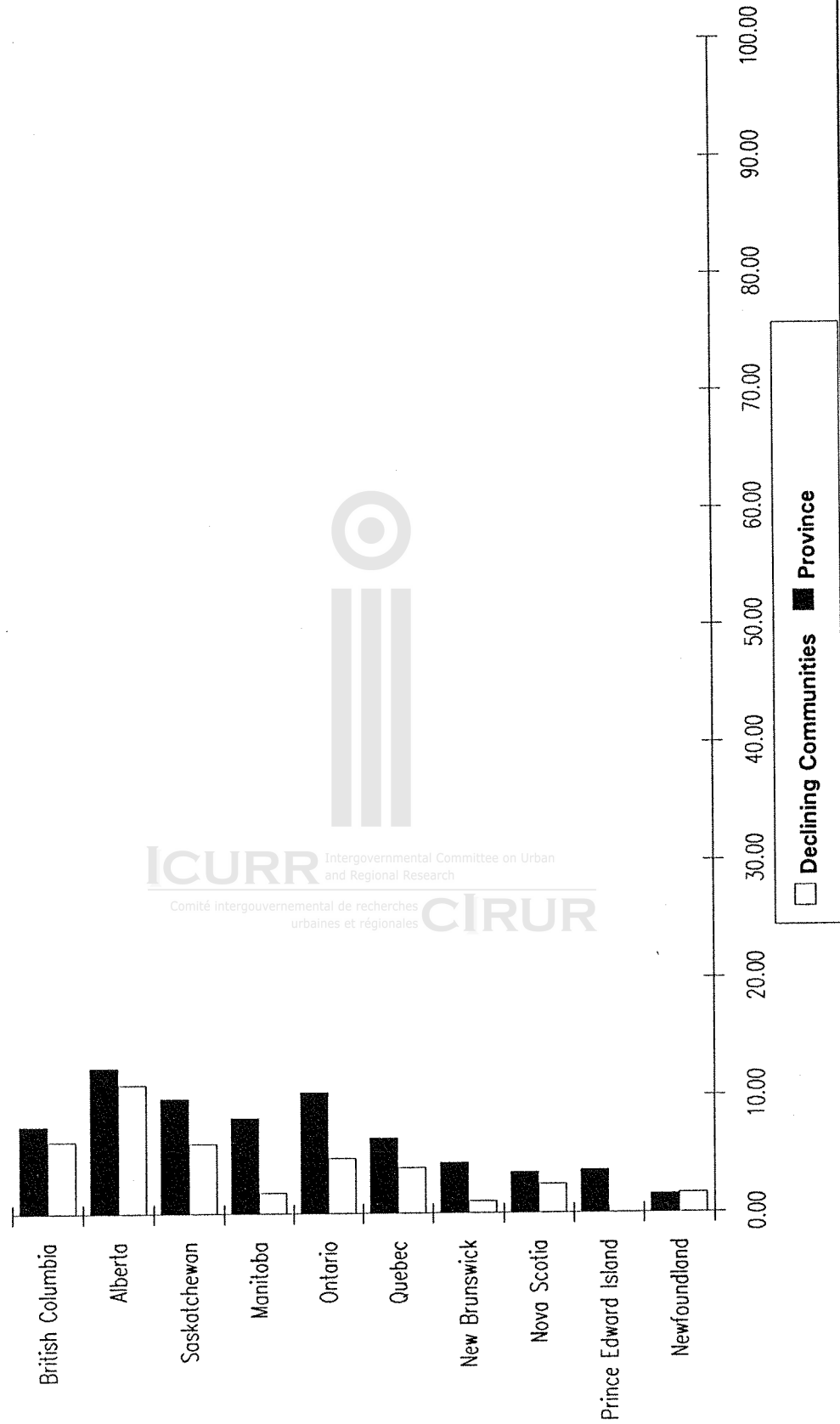


Figure 25. Representation of the manufacturing labour force in the metal fabricating industry. 1981

Percentage of Manufacturing Labour Force in MACHINE Industry

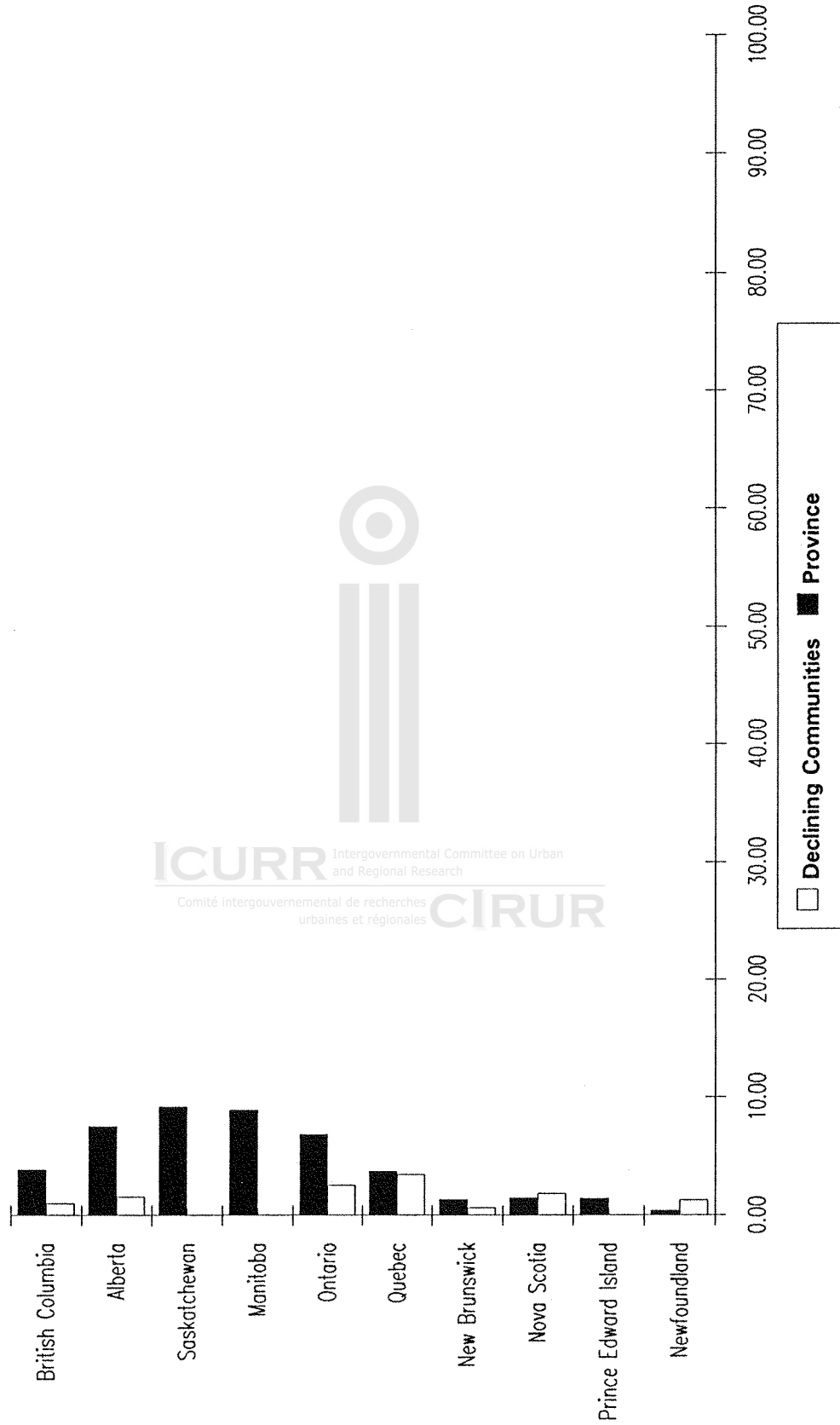


Figure 26. Representation of the manufacturing labour force in the machine industry. 1981

Percentage of Manufacturing Labour Force in TRANSPORTATION Industry

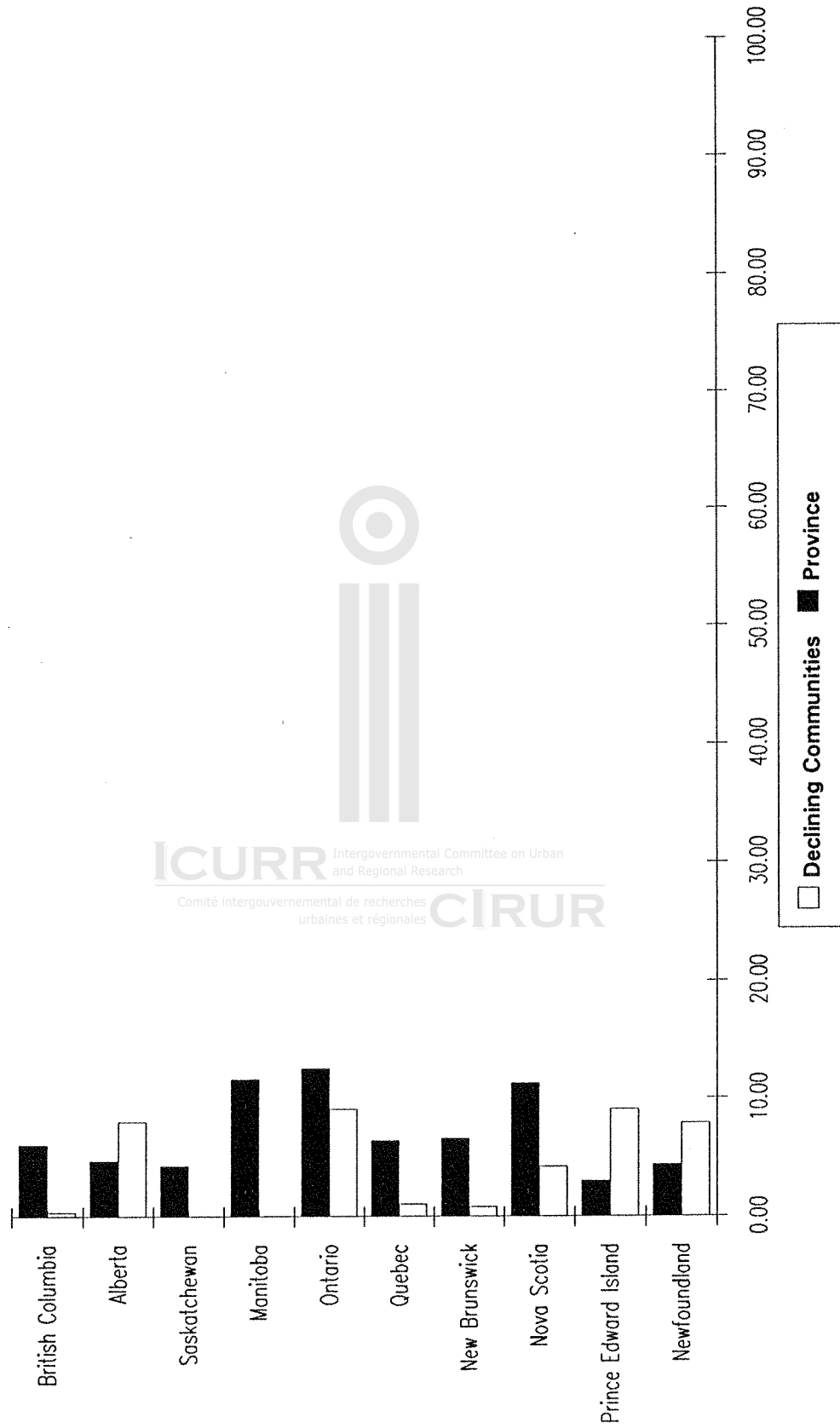


Figure 27. Representation of the manufacturing labour force in the transportation industry. 1981

Percentage of Manufacturing Labour Force in ELECTRICAL Industry

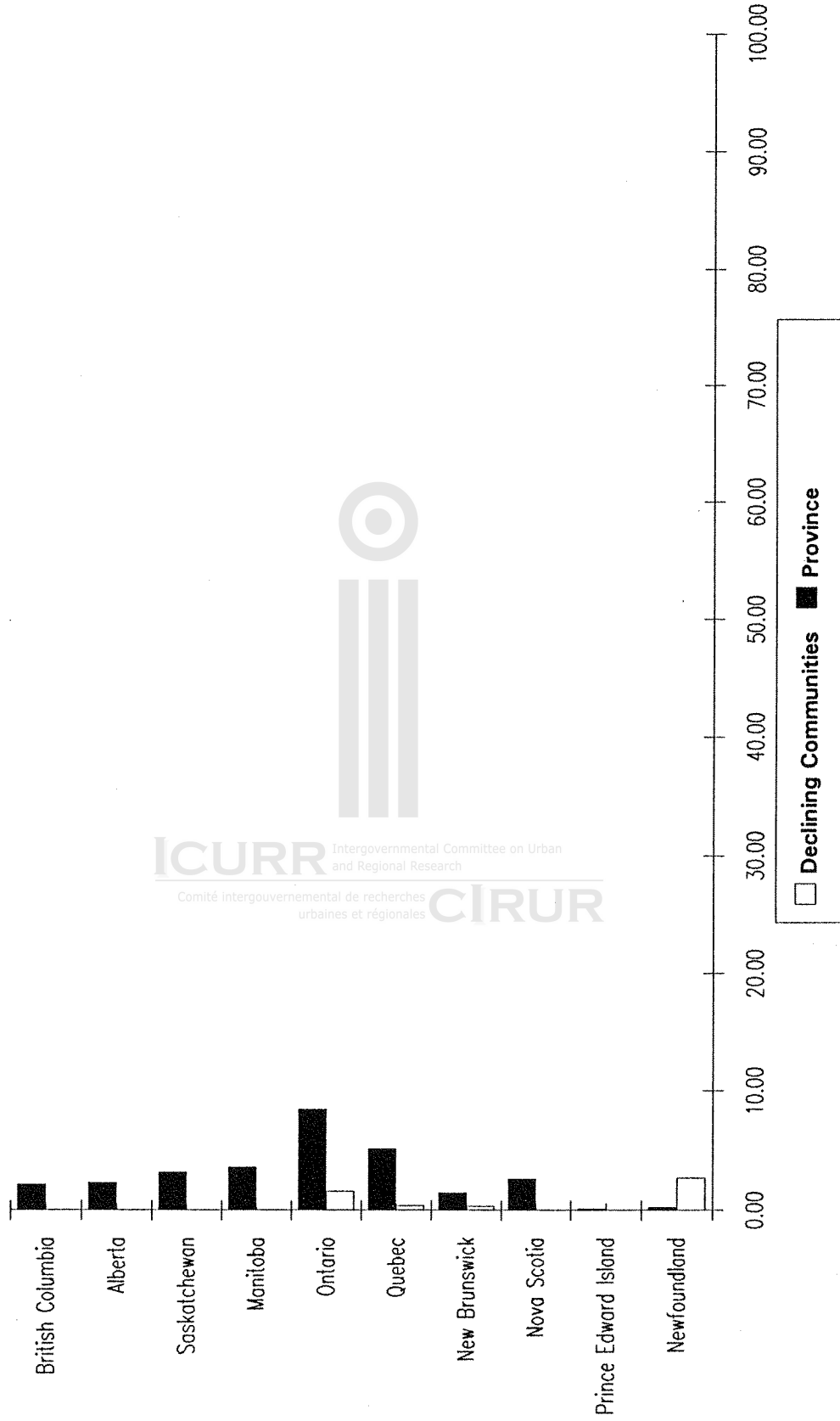


Figure 28. Representation of the manufacturing labour force in the electrical industry. 1981

Percentage of Manufacturing Labour Force in PETROLEUM Industry

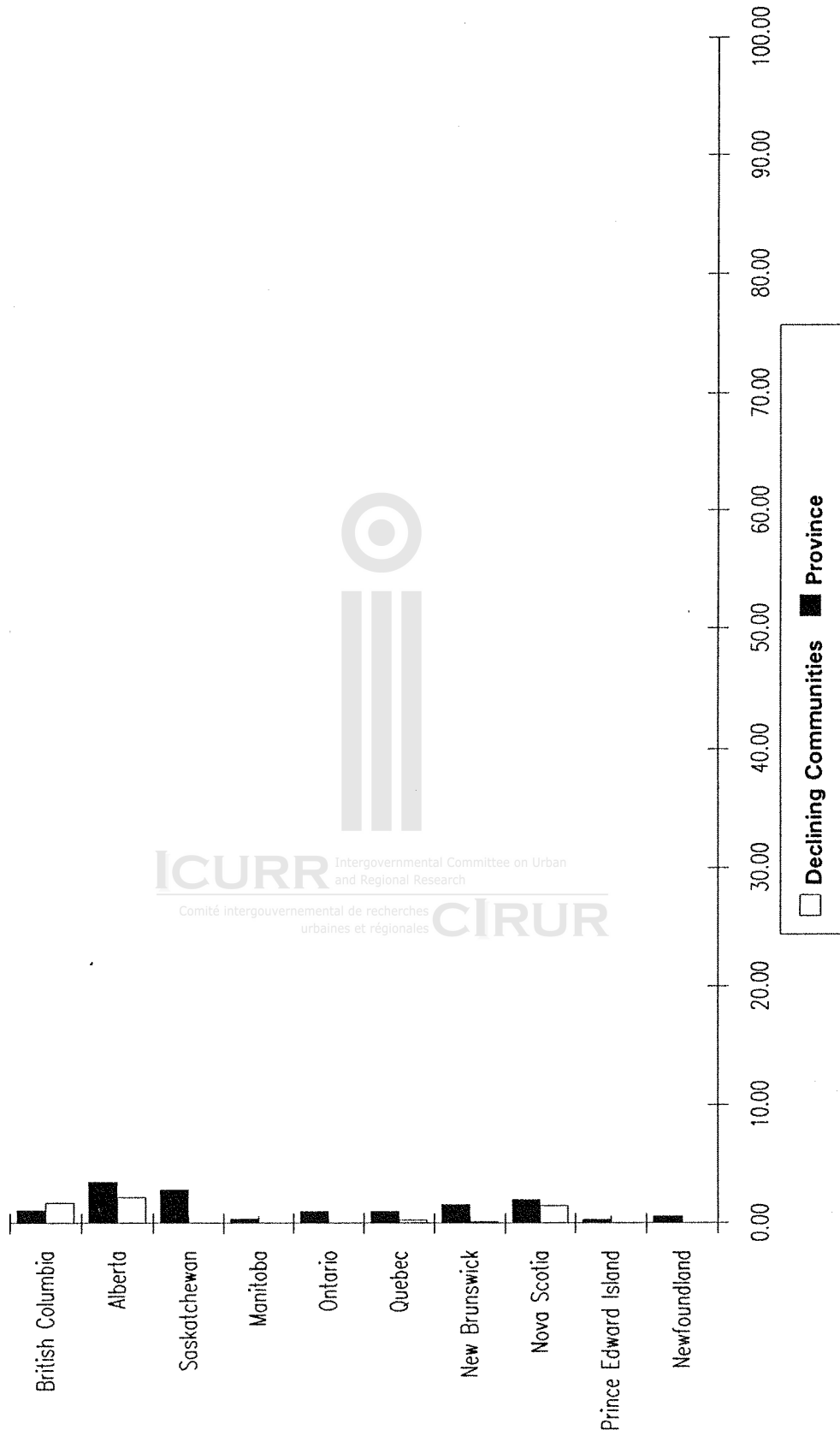


Figure 29. Representation of the manufacturing labour force in the petroleum industry. 1981

Percentage of Manufacturing Labour Force in CHEMICAL Industry

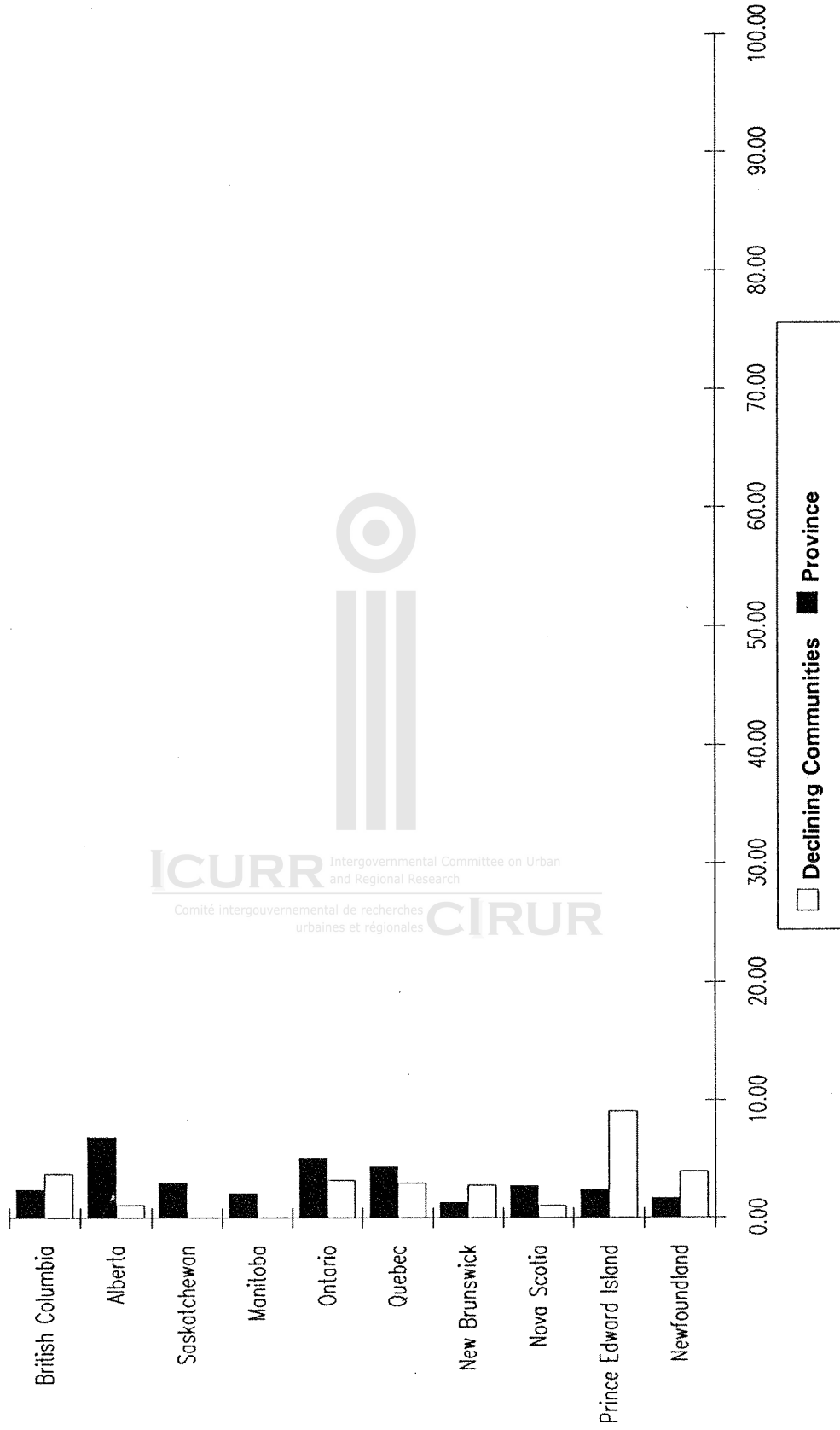


Figure 30. Representation of the manufacturing labour force in the chemical industry. 1981