URBAN ENVIRONMENT

A STUDY UNDERTAKEN BY THE GEOGRAPHY SECTION OF THE POLICY & PLANNING DIRECTORATE, POLICY, PLANNING & RESEARCH SERVICE, DEPARTMENT OF THE ENVIRONMENT; AND FINANCED JOINTLY WITH THE REGIONAL STUDIES SECTION OF THE ECONOMIC ANALYSIS BRANCH, DEPARTMENT OF REGIONAL ECONOMIC EXPANSION.

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CHAPTER III

MANUFACTURING

Introduction:

"Much of the aid to depressed areas and regions has been tied to manufacturing activity. Area Development Agency grants for example, are only available to manufacturing industries." [1]

When viewing manufacturing in the context of its influence on other sectors of the economy, it is fairly easy to recognise why stimulation of manufacturing activity was deemed so important in the past, and why it is likely to remain a major focal point for development programs in the future. Without getting too deeply involved in the development of a rationale for investment in manufacturing versus investment in other activities, it would seem worthwile, before beginning our actual analysis, to emphasize the important role that manufacturing can take in developing not one, but many sectors of the economy. Using a "linkage" analogy used by Watkins, Paquet, and others,[2] one may measure the effect or impact one sector can have on an entire economy by, 1) observing the demand it creates for domestic inputs (called backward linkage), 2) assessing the opportunities that the activity creates for further use of its output (called forward linkage) and, 3) by accounting for the income the activity generates for the immediately affected population, (which in turn stimulates consumer production - called final demand linkage). Increased manufacturing activity can not only help absorb any excess labour force, but will often stimulate other activity through its linkages with other sectors in the local economy. A new establishment (say food processing) may need inputs of raw materials from the surrounding farm communities to produce a finished or semi-finished good. Similarly, new service industries may develop and/or old ones may expand to meet the service demands of the plant, its workers and their families. The repercussions on the local economy can be far reaching.

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1 Urban Centres in the Atlantic Provinces, background Study No. 7 Atlantic Development Board, Ottawa 1969 pg. 31 Cat. No. TD2-1/7

2 See Some Views on the Pattern of Canadian Economic Development G. Paquet in, Growth & the Canadian Economy T. N. Brewis, Carleton Library, No. 39, McLelland & Stewart 1968 pg. 44.

This argument of course, is an old and familiar one. The type and nature of manufacturing activity that ought to be stimulated however, will of course depend on the socio-economic and, (to some degree), climatic environment of the particular region concerned. Some industries, of course, will have more immediate and/or localized effects than others; nevertheless the impact of any one of the many various types of manufacturing activity can result in a high rate of social and economic return per development dollar if it si a knowledgeable investment and it is made within the proper planning framework.

Purpose

In this study considerable time and effort was spent on analysing manufacturing activity for selected centres. This was done in the belief that under the proper conditions, the rationale for development investment is basically a sound one, and that stimulation of manufacturing activity, when dealt with in the context of a comprehensive plan, can be a major factor in reviving economically depressed areas and getting them on the road towards developing a healthy and viable economy.

In a more comprehensive study of this nature it would normally be desirable to answer three questions:

1) Where does manufacturing activity take place?

2) To what degree or magnitudes does manufacturing exist in a given location and how does it change over time?

3) Why is a given location characterized by such activity?

The first two of these questions are, by their very nature, empirical in essence. The third question however, is much more abstract or theoretical and would require much more time and effort to answer than has been given. Furthermore, as was pointed out in the preface, one particular study is not concerned with cause and effect, but rather with the measurement of particular phenomena. In this project framework therefore the question "Why?" would be exogenous to our study.

We are left then, with facing the problem of answering the questions, "Where?" and "To what degree?" does manufacturing activity take place in selected regions of Canada. However, since our emphasis is being placed on analysing the smaller centres, and particularly their relative position with respect to each other and to the region of which they are a part, it was found that some modification of the universe of urban centres analysed in other sections of the report was necessary.

The Selected Centres

Prairies: Basically, those centres examined for their degree and variety of manufacturing are the same as those analysed in other sections of the report, with three exceptions; Winnipeg, Calgary, and Edmonton.[3] These three major centres are not included for three reasons:

a) As very large metropolitan areas they have not in the past, nor are they likely to in the future, experience growth and development problems. Similarly, these metropolitan areas are not the centres of economically depressed areas but rather are centres of growth and development for the Prairie region.

b) The very large centres also represent, in statistical terms, the majority of manufacturing in the Prairie region. The inclusion of statistics on these three centres in the Prairies total would result in the overwhelming of the statistics on the smaller centres, thereby reducing their quantities to virtual insignificance. With the exclusion of the larger centres therefore, the relationship of the smaller centres when compared with other smaller centres, becomes the focus of attention and of the statistical presentation.

c) The inclusion of the large centres in the aggregated data would, in the final analysis, mean that one would be comparing the magnitude and variety of manufacturing activity in small centres with that of large

3 No data on manufacturing was available for Thompson, Manitoba before 1968.

metropolises. This, of course, would not be fair to the smaller centres. Therefore, by leaving out the Metropolitan Areas, one is able to compare towns of approximately the same size, and thereby assess more accurately and reasonably, their relative position with respect to each other and to the over-all economy. In this context, the data then becomes more meaningful.

Quebec: For basically the same reasons as described above, the metropolitan area of Montréal was not included in the analysis of manufacturing activity in Québec. It should be mentioned however, that the Census Metropolitan Area (C.M.A.) of Montréal, "... represents 68% of the manufacturing activity of Québec...".[4]
Therefore, it is most of the remaining 32% of manufacturing activity in Québec that is represented in the statistics.

NOTE: Unlike the Prairies, a number of centres, other than the ones originally selected by the population criterion, were included in the analysis of Québec. These additional centres are listed in Table III.1. The reason for their inclusion in this section of the report was based on the recognition that there is not a constant relationship between population and magnitude of manufacturing.[5] A town of three thousand persons can employ more manufacturing workers than a town of five thousand persons. Because this situation exists, a population criterion for determining the lower threshold of the selected universe becomes wholly inadequate. A more meaningful criterion has to be found, geared to the problem of representing meaningful manufacturing data. It was felt that a lower threshold value based on value added by manufacturing would be more statistically acceptable in dealing with manufacturing activity. The absolute value added figure chosen as the threshold value was calculated in the following manner.

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4 Girard, J. "Geographie de L'Industrie Manufacturière du Québec" Ministère de L'Industrie et du Commerce Quebec, 1970, Resumé.
5 i.e. as we shall examine later, a 1:1 relationship does not exist between population of a centre and its manufacturing labour force.
6 The mean was chosen first but it was too heavily biased in favour of the larger centres. The median was therefore felt to be much more representative of the Value added of a typical Québec centre.

TABLE III.1

Additional Quebec Centres*

Ste. Joseph De Sorel

Valcourt

Actonvale

Brownsburg

Donnacona

Louiseville

Ste. Marie

Waterloo

East Angus

Princeville

Beaupre

Berthierville

Bromptonville

Thurso

Clermont

Masson

Chandler

Knowlton

* All under 5000 population.

1) All centres over 5,000 population in Québec (less Montréal C.M.A) had 1967 value added by manufacturing figures listed in order of magnitude from highest to lowest (Québec City - Aylmer).

2) The median[6] was then chosen which was $6,980,076.00.

3) All centres which had a population of less than 5,000 and with value added by manufacturing activity greater than $6,980,076 were added to the list.

4) A new value-added median was then found which included the centres listed in 3). This new figure was: $7,130,968

5) All those centres originally chosen with the exception of Montréal plus all those centres of less than 5,000 population with over $7,170,918 value added by manufacturing in 1967, were included in our study. The result was the inclusion of the 18 additional centres listed in Table III.1[7]

Method of Analysis;

The definition of manufacturing used in this report is in accordance with that given in the Standard Industrial Classification Code. This code is based on eleven major industry divisions (see Table III.2) with manufacturing in turn sub-classified according to twenty (20) major groups. (see Table III.C)

Statistically, data is of three types. First is the raw or basic data which includes figures on: (a) Number of establishments for each centre; (b) Male, female, and total production workers employed in each of our selected centres; and (c) Value added by manufacturing activity for each of the selected centres(see tables III.5 &III.11 - III.15 in appendix to chapter 3) Second, some associated statistics to the raw data were tabulated which include values relating to: a) the relative change of employment in, and value added by, manufacturing activity for each of the selected centres; and b) Value added per manufacturing employee for each of the selected centres. (See Tables III.4 - III.6 & III.14 - III.16 appendix) All the above data was tabulated for each of the years 1961, 1963, 1965 and 1967, and was obtained from unpublished sources at Statistics Canada[8]

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7 Note: The C.M.A. of Montreal has recently been subject to geographical re-definition for the 1971 Census. The selected centres of Terrebonne, Beloeil, Chambly, and St. Thérèse are now included in the Montreal Metropolitan area. (See footnote next page)

TABLE III.2

S.I.C. DIVISIONS

Division 1	-	Agriculture
Division 2	-	Forestry
Division 3	-	Fishing and Trapping
Division 4	-	Mines, Quarries and Oil Wells
Division 5	-	Manufacturing Industries
Division 6	-	Construction Industry
Division 7	-	Transportation, Communication and Other Utilities
Division 8	-	Trade
Division 9	-	Finance, Insurance and Real Estate
Division 10	-	Community, Business and Personal Service Industries
Division 11	-	Public Administration and Defence

TABLE III.3

STANDARD INDUSTRIAL CLASSIFICATION

Major Groups - Manufacturing

Wood Industries

Furniture and Fixture Industries

Primary Metal Industries

Machinery Industries

Transport Equipment Industries

Electrical Products Industries

Non-Metallic Mineral Products Industries

Food and Beverage Industries

Tobacco Products Industries

Rubber Industries

Leather Industries

Textile Industries

Knitting Mills

Clothing Industries

Paper and Allied Industries

Printing, Publishing and Allied Industries

Petroleum and Coal Products Industries

Chemical and Chemical Products Industries

Miscellaneous Manufacturing Industries

"The Dominion Bureau of Statistics is prohibited by law from publishing any statistics which would divulge information relating to an individual company without the previous consent in writing of that company. In practice, that means that no data except for number, type and location of establishments are shown for industrial or geographic aggregations composed of fewer than three establishments, or of three or more if these are dominated by one or two establishment or companies."[9]

It is for the above reason that certain raw data has not been given on manufacturing activity for some individual centres. However, this data was available for purposes of calculating regional aggregates. (see Table III.4 for listing of those centres classified as confidential).

The third series of statistics gathered ia a more indirect representation of the raw data gathered elsewhere. This particular series is vital to the analysis for three reasons. First, indirect statistics facilitate intra-regional comparisons of one centre with another and with the region as a whole. Second they present much more meaningful values for purposes of regional analysis than does the sole presentation of raw data. Third, where problems of confidentiality come to the fore, these indirect statistics allow one to compare confidential centres with non-confidential ones without in any way violating the secrecy regulations surrounding the classified centres listed above.

The indices and quotients used include:

(a) Magnitude of Manufacturing Index

(b) Index of Specialization

(c) Refined Index of Manufacturing Diversity

(c) Location Quotient of Manufacturing

Footnote 7 Concluded: Because these centres were originally chosen on 1966 critereon they were included in the study. However, while statistics on these centres are given in the tables and included in the aggregate totals and maps, no attempt to include these centres in our verbal analysis is made since these centres are now a part of the Montreal Census Metropolitan area.

8 Formery Dominion Bureau of Statistics, (DBS.)

9 Cat. No. 31-209 "Manufacturing Industries of Canada" D.B.S. 1966, pg. vi - vii.

TABLE III.4

Confidential Centres 1961, 1963, 1965, 1967

QUEBEC	PRAIRIES
Arvida	Selkirt (1961)
Gatineau	Hinton
Baie-Comeau	Flin Flon
Alma	Portage la Prairie
Tracy (1961)	Lloydminster
Magog (1961, 63, 65)	Taber
St Joseph de Sorel	Fort MacLeod
La Tuque	Wetaskiwin (1961)
Kénogami	Fort Saskatchewan
Valcourt	Winkler (1961)
Brownsburg	Whitecourt (1963, 65)
Windsor (1961, 63)	Weyburn (1961)
Port Alfred	Canora
Donnacona	Kamsack
Noranda	Barrhead (1961, 63)
Dolbeau	Westlock (1961, 63)
Beaupré	Melfort
Bromptonville	Humboldt (1961, 63)
Thurso (1963, 65, 67)	Rosetown (1961, 63)
Clermont	Vegreville
Masson	Kindersley (1965)
Chandler	Esterhazy
Asbestos	Leduc
Buckingham	Rocky Mountain House
Knowlton	Biggar (1961, 63)
Roberval	Cardston (1967)
St Georges O. (1967)	Lynn Lake
Pointe Gatineau (1963, 65, 67)	Drayton Valley (1967)
Bagotville (1965)	Fort McMurray
Aylmer	

Total confidential / Total no. of centres $\frac{30}{89} = 33\%$ of all selected centres in Quebec

Total confidential / Total no. of centres $\frac{29}{76} = 40\%$ of all selected centres in Prairies

a) Magnitude of Manufacturing Index

The magnitude of manufacturing index is designed to illustrate the relative size or magnitude of manufacturing activity in a given unit with respect to the average of all units. This index is based on the following formula:

$$\frac{M_1 + M_2 + M_3}{3} = \text{magnitude}$$

where;

M_1 = Manufacturing employment in a given centre / average manufacturing employment for all centres

M_2 = Value added by manufacturing for a given centre / average value added for all centres

M_3 = Salaries for a given centre / average salary for all centres

Where the magnitude of manufacturing index equals one,(1),the sum of the number of employees, the value added, and the salaries of the manufacturing workers in a given urban centre is equal to the sum of the averages of the same figures calculated for the region. Where the value of the magnitude of manufacturing index is greater than one,(1), the sum of the three values for the centre is greater than the sum of the averages, i.e. the degree of manufacturing activity for that particular centre is above the average for the region. For example, a figure of 2.00 represents twice the average size or magnitude of manufacturing of centres within the region.[10]

Note: The tabulation of data on manufacturing is given in order of magnitude of manufacturing, beginning with the largest centre (Québec City, 11.745) and ending with the smallest centre (Aylmer, 0.000). This allows for ready recognition of other statistical trends that may be associated with relative size of manufacturing activity, while at the same time visually presenting to the reader a form of ranking that facilitates comparison among centres of the same size.

10 Source, Dr. W. Dean, Dep't. of Geography, University of Toronto.

(b) Index of Specialization:

The index of specialization represents in statistical terms, a given centre's degree of diversity or specialization relative to the region as a whole. It is based on Webb's Formula;

$$S.I. = \sum_{i=1}^{20} \frac{P_i}{M_p} \cdot P_i \div 100$$

Where;

S. I. = specialization index

P_i = percentage employed in major industry group i, for a given centre

M_p = percentage employed in major industry group i, for the region

$\sum_{i=1}^{20}$ sum of $\frac{P_i}{M_p} \cdot P_i$ for each of the twenty major industry groups

The closer the specialization index approaches one (1) the more diversified the centre becomes. For example, if in a given centre the percentage of the total manufacturing labour force employed in the food and beverages industry equals 3.5% whereas the percentage employed for the region equals 7.0% then our partial S.I. value would equal:

$$\frac{3.5}{7} \times 3.5 \div 100 \qquad \frac{12.25}{7} \div 100 = .0175$$

However, if the percentage employed in the food and beverage industry in that town equalled 70%, the new partial value would be;

$$\frac{70}{7} \times 70 \div 100 = \frac{\frac{4900}{7}}{100} = 7.00$$

Clearly, the larger value in the above example reflects the greater degree of specialization in the given activity.

c) Refined Index of Manufacturing Diversity:

Basically, the refined index of manufacturing diversity measures the degree to which an areal unit has, (or conversely, lacks,) a variety

of manufacturing groups. In other words, it measures the difference in manufacturing labour force employment from one given areal unit to another, and thereby determines whether the centre's labour force is concentrated in a few, or spread out over many activities. It is calculated in the following manner:

$$\frac{\text{crude index for centre} - \text{crude index for all centres}}{\text{index of least diversity} - \text{crude index for all centres}} \times 1000 = \text{Refined Index of Manufacturing Diversification}$$

Procedure:

For calculation of crude index for a given centre.

(a) Percentage of total manufacturing labour force employed in each of the twenty major groups is calculated for the centre.

(b) These percentages are then listed in order of magnitude from highest to lowest.

(c) The cumulative percentages are added to give the crude index for the centre.

The following page includes an example illustrating the procedure for calculating the magnitude of manufacturing.

d) Index of Specialization vs. Refined Index of Manufacturing Diversity

Though both the index of specialization and the refined index of manufacturing diversity are measuring the same basic characteristic, i.e. degree of manufacturing diversity and/or specialization within a centre, their index values do not represent the same form of diversity and specialization. It is for this reason that, on the one hand one may have a relatively low index of specialization indicating relative conformity with the province, while on the other hand a centre may have a high manufacturing diversity index value indicating high degree of specialization relative to the province. (Table 3.5 lists some centres

EXAMPLE:

Say, for a given centre the percentages employed in each of the twenty major groups were calculated and ranked in column A. The cumulative percentages are calculated and totalled in column B to give the crude index of diversity for the given centre.

A	B	
26.2	26.2	If the crude index for all centres
25.5	51.7	1,350.5 then our Refined Index would
15.1	66.8	equal;
13.7	80.5	
8.5	89.0	$\frac{1805.6 - 1350.5}{2000 - 1350.5} \times 1000 \quad 700.6$
5.4	94.4	Note: once the crude index for all
2.9	97.3	centres is calculated, the denominator
2.5	99.8	remains constant, with only the numerator
0.1	99.9	changing values. Should the crude index
0.1	100.0	for the individual centre be less
0.0	100.0	than the index for all centres (say 1300)
0.0	100.0	one would obtain a negative value. This
0.0	100.0	signifies that the degree of diversity
0.0	100.0	for the centre is greater than the
0.0	100.0	region as a whole.
0.0	100.0	
0.0	100.0	
0.0	100.0	
0.0	100.0	
0.0	100.0	
	1805.6	= crude index for centre

where this situation exists). The reason for this difference, of course, lies within the nature of the calculations of the two indices. The two differentiating features of these two indices lies in the fact that

a) the denominator of one is constant whereas with the other it is not.

b) one accounts for major groups where no manufacturing labour force exists in a given centre whereas the other does not. For example, suppose the following employment breakdown is given for a particular centre.

City X

	% employed in centre	% employed in region
Wood Industries	4.9	3.3
Non-metallic Minerals	12.5	1.8
Food & Beverage Industry	30.8	7.5
Paper and Allied Industries	51.8	24.0
Total	100.0%	56.6%

The remaining 43.4% of the total employed in the region is divided among the other sixteen major manufacturing groups. Now, a calculation of both the index of specialization and the refined index of manufacturing diversity would illustrate clearly the differences between what these two indexes show, and what their index values reflect in terms of the manufacturing characteristics of a given town or centre.

Index of Specialization		Refined Index of Diversity	
Where P = 4.9 & M_p = 3.3	$\frac{4.9}{3.3} \times 4.9 \div 100 = .072$	1. 51.8	51.8
Where P = 12.5; M_p = 1.8	$\frac{12.5}{1.8} \times 12.5 \div 100 = .868$	2. 30.8	82.6
Where P = 30.8; M_p = 7.5	$\frac{30.8}{7.5} \times 30.8 \div 100 = 1.264$	3. 12.5	95.1
Where P = 51.8; M_p = 24.0	$\frac{51.8}{24.0} \times 51.8 \div 100 = 1.118$	4. 4.9	100.0
Where P = 0; $M_p = x$	$\frac{0}{x} \times 0 \div 100 = 0.000$	5. 0.0	100.0
Index of Specialization	$\sum_{i=1}^{20}$ 3.322	6. 0.0	100.0
		.	.
		.	.
		.	.
		20. 0.0	100.0
		CRUDE INDEX	1,929.5

.32 is an index value which suggests that the centre is only moderately specialized. (see Maps III.6 & III.15

Normally the crude index for all centres lies between the values 1,300 and 1,450.

Suppose it equals 1,350

Refined Index $\frac{1929.5 - 1350}{2000.0 - 1350} \times 1000$

891.5

891.5 suggests that the centre is highly specialized (see Maps III.7 & III.16)

Now, suppose in the calculation of the index of specialization that P = 51.8, M_p 24.0, not $M_p = 2.40$. The result would be quite different, for the new value would be equal to .072 + .868 + 1.264 + 11.18 = 13.384, which like the refined index of manufacturing diversity calculated earlier, is a value that suggests that the centre is highly specialized. (see Maps III.6 & III.15) What does this mean? First of all, one recognizes that the denominator (M_p) in 16 index of specialization does not remain constant i.e. it changes according to the particular industry group that is being evaluated. This means that the index value of the index of specialization is a reflection of a centre's specialization with respect to a particular industry group. Or to put it another way, a centre will be less specialized in terms of the index value if it concentrates on an activity that the whole region specializes in. Now, if one recalls the index of manufacturing diversity, one can see a very interesting relationship between these two specialization indexes develop. The refined index of diversity takes into account those areas of manufacturing activity not considered by the index of specialization i.e. it consi ers all twenty industry groups regardless of per cent share of employment. In other words, whereas the index of specialization is an <u>internal</u> index that only considers those sectors of manufacturing activity that exist in a given centre, the refined index of manufacturing diversity acts as an <u>external</u> indicator, considering all manufacturing sectors, and not just some, that exist in a given centre. For maximum efficiency, however, both indexes should be considered together.

If one examines Table III.5 for example, one sees four very different situations. First, Val D'Or has a high manufacturing diversity index indicating a high degree of specialization, yet a low index of specialization indicating that the centre is at the same time moderately unspecialized. This relationship, rather than being contradictory, actually tells us something of the nature of the

TABLE III.5

COMPARATIVE DIVERSITY INDEX VALUES

CENTRE[1]	INDEX OF SPECIALIZATION		REFINED INDEX OF DIVERSITY	
Val D'or	2.78	Moderately Unspecialized	848.1	Highly Specialized
Iberville	4.594	Specialized	398.5	Diversified
Québec City	1.895	Moderately Unspecialized	67.2	Highly Diversified
Brownsburg	31.619	Highly Specialized	999.5	Highly Specialized

1 All centres are in Québec.

manufacturing activity in the centre. First of all, it is known from the raw tabulated data and from the magnitude of manufacturing index that the scale of manufacturing activity is not relatively large in Val D'or. The refined index of diversity however, by its high value, does show that concentration of activity within a few major groups (Table III.3) does exist. The index of specialization at the same time however, by its low value, indicates that the concentration which does exist, must be in activities that the region as a whole is engaged in on a fairly significant scale i.e. Where M_p is significant in all the manufacturing activities the centre is involved in. Similarly, for Val D'or to retain such a low specialization index value, it must be involved in more than one activity, or even two, with no one sector overwhelming all others in terms of employment. If one sector did dominate, even if a major sector, it is likely, but the nature of the specialization index, that the final index value would be much higher. Similarly, if one takes the index values for Iberville, they indicate exactly the opposite relationship from Val D'Or. A look at the raw data, and magnitude of manufacturing index shows that the scale of manufacturing activity in Iberville is more than twice that of Val D'or, though on a regional scale it remains fairly small. The nature of activity in Iberville however is quite different from that of Val D'or. The refined index of diversity tells us by its low value that employment in manufacturing is distributed among several major groups. The fairly high index of specialization on the other hand confirms that a good portion of the total distribution of manufacturing employees is among regionally smaller sectors. (It could be that something like 12% of the centres manufacturing labour force is employed in a sector that accounts for less than 1% of the regional manufacturing employment, or two or three sectors accounting for some 30% of the centre's manufacturing employment regionally account for a total 3% only). Though it is difficult to be specific, nevertheless the trend is clear, Iberville is involved in various manufacturing activities, but is a regional specialist in some.

The indexes of Québec City and Brownsburg in Table III.5 differ from those of Val D'or and Iberville in that they do not contradict each other,

but rather reinforce each other's findings. The refined index of manufacturing diversity for Québec City is so low that one may expect to find activity in almost every major sector of manufacturing. Similarly, it would likely be in a percentage distribution similar or relatively close to, that of the region itself.

The index of specialization reaffirms the findings of the manufacturing diversity index by statistically re-stating the diverse nature of manufacturing activity in the city of Quebec.

In the case of Brownsburg also, the indexes reinforce each other. The manufacturing diversity index by its extremely high value, suggests manufacturing activity is dominated solely by one type of activity, and that if other activities exist in this centre, they are of slight importance. The index of specialization on the other hand also tells us that this particular centre specializes in an activity that is, on a regional basis, a very small sector. This also likely means that this particular centre accounts for a good percentage of the regional total employed in that particular activity.

To obtain the most from the data then, all statistical data, absolute and relative, should be considered together. Only in this manner can one gain a true appreciation of the characteristics of manufacturing activity in our selected centres.

d) Location Quotient:

The location quotient measures the degree to which a specific areal unit has more or less of its share of manufacturing activity. Basically it is a ratio of ratios which has been modified to the following formula;

$$\frac{\frac{X_i}{\sum Y_i}}{\frac{X_i}{\sum Y_i}} = \frac{X_i}{Y_i} \times \frac{\sum Y_i}{\sum X_i} = \frac{X_i \times \sum Y_i}{Y_i \times \sum X_i} = \text{location quotient}$$

Where;

X_i = manufacturing labour force for each centre

ΣY_i = total population for all centres

Y_i = population for each centre

ΣX_i = total manufacturing labour force for all centres

A location quotient of 1.0 means that a centre has neither more nor less of the total manufacturing employment than its population would indicate. A quotient over 1.0 is indicative of concentration in a particular centre relative to the over-all manufacturing employment. A quotient of less than 1.0 indicates that manufacturing employment is less in a particular centre than the population would lead one to expect. For example, if;

X_i	(manufacturing labour force for a given centre)	1000
X_i	(total manufacturing labour force for all centres)	131,000
Y_i	(population of same centre)	11,000
Y_i	(population of all centres)	1,120,000

$$\text{Substituting, } = \frac{1000 \quad x \; 1{,}120{,}000}{11{,}000 \; x \quad 131{,}000} = \frac{1{,}120{,}000{,}000}{1{,}441{,}000{,}000} = .777$$

.777 is a figure indicative of a centre whose manufacturing employment is less than its population (based on the selected centres of the region) would suggest (approximately $\frac{3}{4}$ of expected employment).

e) Indexes of Relative Change;

The relative change index used to estimate change of value added and total employment, is somewhat different from the similar index used to calculate the relative change for the indexes of magnitude, specialization and the location quotient. The former calculation of relative change for instance, involves the use of a time series based on data for each of the years 1961, 1963, 1965 and 1967. Simply, this calculation of relative change was done in the following manner;

$$\frac{b - a}{a} \times 100 = x$$

$$\frac{c - b}{b} \times 100 = y$$

$$\frac{d - c}{c} \times 100 = z$$

where:

a = 1961 datum

b = 1963 datum

c = 1965 datum

d = 1967 datum

$$\frac{x + y + z}{3} = \text{Index of relative change.}$$

Note: In the calculation of this index there is a slight bias in favour of positive change. For example, suppose employment in a given centre in 1961 = 20, in 1963 = 10 and in 1965 = 20. Now, if one were to calculate the relative change, the ensuing results would be:

$$1961 - 1963 = \frac{10 - 20}{20} \times 100 = -50$$

$$1963 - 1965 = \frac{20 - 10}{10} \times 100 = \underline{100}$$

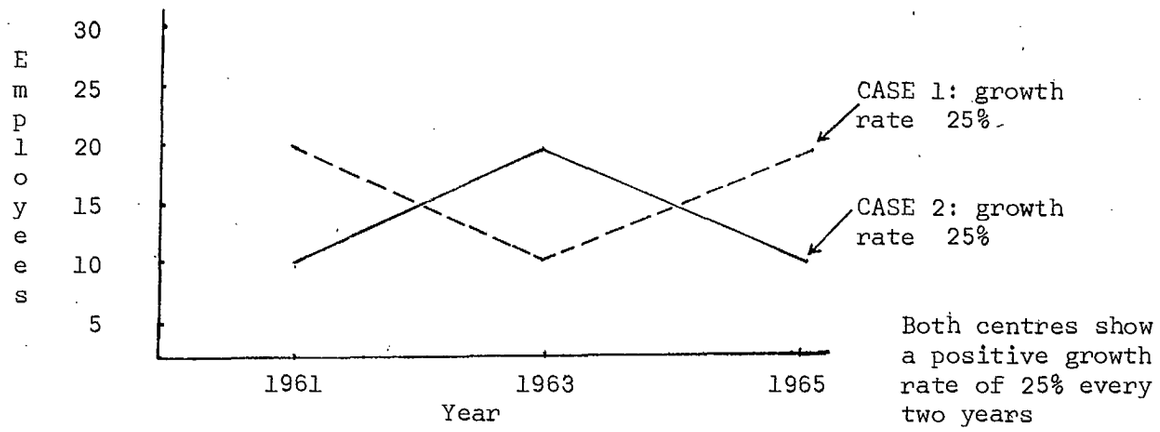
summing and dividing by 2 = $\frac{50}{2}$ 25%

i. e. positive growth of 25% every 2 years.

This figure of 25% growth is partially misleading of course. When comparing only the 1961 and 1965 employment figures, the growth is zero (o), with the 1963 figure depressed relative to both the 1961 and the 1965 figures. To put it another way, two situations exactly the opposite in nature, have the same growth rates as calculated above. Say, for example, employment figures for 1961 = 10, 1963 = 20, and 1965 = 10. The same growth rate results, 25%. (see Fig. III.1) To eliminate this positive bias, those centres which show positive growth, yet are typical of the situation described in Case 1 - Fig. 1.A have been marked with an asterisk (*) (Table 3:4 - 3.5 Appendix)

Fig. III.1

Relative Change Index Bias - Example



The other index used to calculate the relative change of the indices is the same in essence as the relative change index described above, the essential difference being that only two data years are used for purposes of calculation. The data years calculated for change are 1961 and 1967 for the magnitude of manufacturing index and index of specialization, and 1961 and 1966 for the relative change of the location quotient (Tables III.7 - III.9, III.17, III.19 addendum) The formula is familiar:

$$\text{Relative Change} = \frac{b - a}{a} \times 100$$

where 'b' represents 1967 or 1966 index values and 'a' represents 1961 index values.

Note: The figures given on relative change of these quotients represent the per cent change of the quotients themselves. If the relative change of the location quotient of a given centre is 26.762, this indicates that a positive gain has taken place in the particular centres share of manufacturing employment relative to the region, of greater than 25% (accounting for population change). Similarly a figure of -16.969 for relative change of the index of specialization indicates that the index has decreased in magnitude by some 16.90%. A decrease in magnitude of the specialization index implies a relative increase in the centre's manufacturing diversity with respect to the province.

Findings and Analysis

It should be re-emphasized the the Prairies and Québec Regions are considered as two distinct geographical areas within the context of the final analysis, i.e., no attempt will be made to assess the conditions of their respective manufacturing industries in terms of one region with the other. Each region is considered separately and distinctly in the final analysis. The approach to analysis, however, will be the same for both regions, and will essentially involve two stages. First, the study will take a generalized or "macro" view of the relationships of manufacturing activity with over-all city size, as well as a brief examination of manufacturing activities' spatial distributions. Second, the study will focus upon individual centres and groups of centres in an attempt to examine those centres with similar population, manufacturing, and geographic characteristics.

PRAIRIES

The Manufacturing Economy - A Macro Analysis

If the magnitude or variety of manufacturing activity of a centre of a region is indicative of the general degree of maturity of a local or regional economy, one would have to conclude, on the basis of this criterion that the areas in the Prairies outside the larger centres of Winnipeg, Edmonton, Calgary, Regina, and Saskatoon are the most "embryonic" in their present stage of development. "Embryonic" perhaps is an unfortunate choice of words, for it suggests future growth and development will take place. If the period 1961-1967 is any indication of what the future holds in store for the development and diversification of many of the towns of the Prairie region, it might actually be better to begin writing epitaphs for many, many small towns in the region. However, before beginning a discussion of those particular centres which have or lack a significant manufacturing base, it would be well worth the time and effort to examine the over-all structure of the manufacturing economy of the Prairie region, for it tells one much of the present state and over-all maturity of secondary industry in the Prairies.

(A) Dominant Manufacturing Sectors: [1]

Table III.6 lists in order of importance, (1967), the percentage employed in each of the twenty industry groups of our selected Prairie centres. It is no surprise that the leading manufacturing industry in the region should find itself linked directly to the agricultural sector. Indeed, the food and beverage industry employed over 35 per cent of the manufacturing labour force of the region in 1967. What is somewhat more interesting, however, is the nature of the other two leading sectors of the region, the metal fabricating and printing and publishing industries. (In 1967, these three sectors alone, employed well over 50 per cent of the entire manufacturing labour force of the region). An industrialized region or even a semi-industrialized region does not have, as its third largest manufacturing employer, industries related to the printing and publishing group of industries. Indeed, these three manufacturing sectors, food and beverage, metal fabricating, and printing and publishing, represent the most basic and ubiquitous of all manufacturing industries, activities which even the most economically immature municipalities will be involved. The fact that these three sectors are the most important in the defined Prairie region is indicative not only of an economy which specializes in the primary sector,i.e., agriculture, but of an economy which is extremely deficient in terms of sophisticated secondary manufacturing.[2] However, important structural changes have taken place in the 1960's and it would seem worthwhile to examine the degree, nature, and pattern of these changes.

---

1 Manufacturing sectors or manufacturing groups refers to the twenty S.I.C. groups outlined in Table III.1.

2 By sophisticated manufacturing activity, the study means such industries as clothing, machinery and those industries which dominate in more highly industrialized areas of Canada.

TABLE 111: 6

PRAIRIES

PERCENTAGE EMPLOYED: 20 MANUFACTURING GROUPS 1961, 1963, 1965 AND 1967

Industries	1961			1963			1965			1967		
	Rank	%	Cum. %	Rank	%	Cum. %	Rank	%	Cum. %	Rank	%	Cum. %
Food and Beverages	1	45.56	45.56	1	41.12	41.12	1	37.77	37.77	1	36.62	36.62
Metal Fabricating	5	5.98	76.67	4	7.10	65.74	4	8.83	64.48	2	9.21	45.83
Printing and Publishing	3	8.89	64.45	2	9.04	50.16	3	8.87	55.65	3	8.63	54.46
Primary Metal	2	9.00	55.56	3.	8.48	58.64	2	9.01	46.78	4	7.95	62.41
Wood	6	5.38	82.05	5	6.39	72.13	5	6.55	71.03	5	7.22	69.63
Non-Metallic Mineral Pdt.	4	6.24	70.69	6	5.32	77.45	6	5.87	76.90	6	6.74	76.37
Petroleum & Coal Products	7	4.82	86.87	7	5.16	82.61	8	4.10	85.15	7	3.98	80.35
Clothing	8	3.26	90.13	8	4.13	86.74	7	4.15	81.05	8	3.97	84.32
Transport Equipment	14	.87	98.05	14	.86	97.83	12	1.66	94.41	9	3.28	87.60
Paper & Allied	12	1.19	96.12	9	3.80	90.54	9	3.57	88.72	10	3.09	90.69
Chemical & Chemical Prdt.	9	1.73	91.86	10	1.94	92.48	10	2.02	90.74	11	1.91	92.60
Machinery	11	1.41	94.93	12	1.55	95.71	11	2.01	92.75	12	1.90	94.50
Miscellaneous Manufact.	10	1.66	93.52	11	1.68	94.16	13	1.65	96.06	13	1.76	92.26
Electrical Products	13	1.06	97.18	13	1.26	96.97	14	1.48	97.54	14	1.60	97.86
Rubber Industries	15	.65	98.70	15	.84	98.67	16	.81	99.29	15	.82	98.68
Textile	16	.59	99.29	16	.68	99.35	17	.62	99.91	16	.68	99.36
Furniture & Fixtures	17	.59	99.88	17	.65	100.00	15	.94	98.48	17	.60	99.96
Knitting Mills	18	.08	99.96	18	-	100.00	18	.09	100.00	18	.04	100.00
Leather	19	.04	100.00	19	-	100.00	19	-	100.00	19	-	100.00
Tobacco	20	-	100.00	20	-	100.00	20	-	100.00	20	-	100.00
		100.00			100.00			100.00			100.00	

(i) Growth and Sectoral Change;

Between 1961 and 1967 the most striking change was the relatively rapid decrease of the share of the manufacturing labour force employed in the food and beverage industry. This rapid drop, (25 per cent), represents not only a relative decrease, but an absolute decrease as well.[3] However, over the whole period, manufacturing employment has increased in absolute terms, with the decline in the major industry of food and beverages being made up by growth in the metal fabricating, wood, transport, equipment, and to a lesser extent, paper, clothing and electrical products industries.[4]

On the other hand, many other sectors have retained a fairly constant share of the manufacturing labour force, generally fluctuating, yet showing no signs of either increasing or decreasing its average per cent share over the long run. Such manufacturing sectors include: Printing and Publishing,

Non-Metallic Minerals,

Chemical and Chemical Products,

Rubber, and

Textile Industries.

Knitting mills, tobacco and leather industries show virtually no signs of activity at all in the Prairie region.

(ii) Concentration - Deconcentration 1961-1967;

In spite of the tremendous decrease in the share of employment in the food and beverages sector, the degree of concentration of the Prairie manufacturing labour force in only a few manufacturing groups has changed very little over-all in the period 1961-1967. As Table III:7 indicates, where only six sectors accounted for just over 80 per cent of the manufacturing employment in the region in 1961, by 1967 this high concentration had modified only to the point where only seven sectors employed 80 per cent of the manufacturing labour force. The trend towards regional diversification was slow in this period and was, no doubt, largely facilitated through the relative and absolute decline of the food and beverage sector.

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3 Actual figures are not available, but the absolute decrease was substantial.

4 1961-1963 saw little growth in total manufacturing employment in the Prairie region. The main drop in the food and beverage sector came between 1961 and 1963 with slow recovery of this industry in absolute terms, 1963-1967.

Table III.7

PRAIRIES

NO. OF MANUFACTURING GROUPS ACCOUNTING FOR
% MANUFACTURING EMPLOYMENT

Percent	1961	1963	1965	1967
10	1	1	1	1
20	1	1	1	1
30	1	1	1	1
40	1	1	2	2
50	2	2	3	3
60	3	4	4	4
70	4	5	5	6
80	6	7	7	7
90	8	9	10	10
100	19	17	18	18

Of particular interest however, is the growth of the transport equipment, (from the 14th to the 9th largest sector, 1961-1967) and the wood and metal fabricating sectors,which all showed considerable expansion in this period.

(B) Dominant Regions:

Because of the fairly uniform nature of the distribution of our selected centres over the Prairie region, it is difficult to isolate distinct geographic groups of centres. For this reason, any discussion of sub-regions within the whole of the Prairie study area will be focused on provincial grounds: i.e., the sub-regions will in fact be represented by the three Prairie provinces, Manitoba, Saskatchewan and Alberta.

Manitoba of course possesses the fourth largest manufacturing centre in Canada. Winnipeg, dominates almost the entire economy of the province and, literally dwarfs the other urban centres.

Saskatoon and Regina represent the fourth and fifth largest manufacturing centres in the Prairie region. However, in this province smaller centres such as Prince Albert and Moose Jaw, do show up as being much more significant manufacturing centres provincially, simply because metropolitan dominance is not as overwhelming as in the other two provinces.

Alberta, with the two centres of Edmonton and Calgary is the second largest province in terms of the total magnitude of its manufacturing and, as in the case of Manitoba, these two centres almost completely dominate the entire province.

Generally then, it is recognized that for the most part, the Prairie region is economically geared and dominated by the five large centres of Winnipeg, Edmonton, Calgary, Saskatoon and Regina. It remains now to assess the degree of importance and characteristics of the oft-forgotten smaller centres of the Prairie region. The study shall begin this more detailed look by examining the manufacturing characteristics of centres of various similar population size.

PRAIRIES

Manufacturing Characteristics: Selected Centres and Groups of Centres - A Macro Analysis

(A) Manufacturing Activity and Centre Size[6]

Tables III:8(a) and III:8(b) list by population category selected statistics on centres of different population size. For example, for the first group, (and by far the largest), the five highest and five lowest selected statistical values or figures of 5,000 or less persons are documented. This Table III:8(a) allows comparison of the largest and smallest manufacturing centres, (represented by the magnitude of manufacturing index values), with centres of the greatest and least population. Similarly, this table also facilitates the comparison of the most specialized centres in all population categories, (both in index of specialization and index of manufacturing diversity terms), with the least specialized, (most diversified), centre in the same population category. Table III:8(b) on the other hand, focuses on growth rate data for value added, employment and magnitude for the same groups of centres specified in Table III:8(a).

As was mentioned just above, only the five highest and five lowest statistical values were listed for Group I. For Group 2, however, the second largest category, the three highest and three lowest values are given while for Groups 3, 4, and 5, all centres are listed, since only a few towns are involved in each classification.

The first group of centres, those of less than 5,000 population, represent in absolute terms, almost two-thirds of all the selected centres chosen for this study, (48 of 72 selected centres). For this reason alone, this particular group of centres should command the most attention, but there are two other important reasons as well. First of all, as the farm or agricultural economy of the Prairie region becomes more and more characterized by larger farm units, many of these centres will find their future in serious jeopardy. Many of these towns exist as small trade or market centres for the surrounding hinterlands, (see Chapter V, on Hinterlands). As the Prairie region becomes increasingly urban-oriented, (which population shift trends indicated was happening[7]), many of these small centres may decline or even disappear as the population of their hinterlands declines.

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6 For details on population groupings see Chapter II.

7 See Chapter II.

TABLE III:8(A)

SELECTED STATISTICS: POPULATION GROUPS

		Population 1966		Magnitude of Manufacturing(1967)		Index of Specialization		Man. Diversity Index	
Group 1									
Less than 5,000	Greatest								
	1.	Steinbach	4,684	Hinton	2.229	Neepawa	1.867	Lacombe	533.4
	2.	Taber	4,584	Taber	1.110	Kindersley	2.059	Innisfail	577.4
	3.	Ponoka	4,421	Steinbach	.889	Coaldale	2.112	Hanna	918.8
	4.	Melfort	4,386	Fort McLeod	.875	Ponoka	2.131	Peace River	651.7
	5.	Hinton	4,307	Morden	.484	Brooks	2.143	Estevan	672.3
Total No. of Centres = 48	Least								
	44.	Claresholm	2,569	Lynn Lake	.025	Fort Saskatchewan	9.331	Taber	983.0
	45.	Coaldale	2,541	Coaldale	.024	Fort McLeod	9.845	Whitecourt	996.3
	46.	Innisfail	2,531	Pincher Creek	.024	Whitecourt	13.352	Hinton	998.0
	47.	Rocky Mtn. House	2,446	Drayton Valley	.021	Kamsack	17,526	Cardston	1000.0
	48.	Whitecourt	2,279	Fort McMurray	.002	Hinton	31.996	Lynn Lake	1000.0
Group 2									
5,001 - 10,000	Greatest								
	1.	Flin Flon	9,674	Selkirk	3.549	Weyburn	1.915	Lloydminster	566.7
	2.	Selkirk	9,157	Flin Flon	1.686	Melville	2.064	Estevan	672.3
	3.	Estevan	9,062	Lloydminster	1.175	Dauphin	2.175	Camrose	800.2
Total No. of Centres[1] = 12	Least								
	8.	Wetaskiwin	9,674	Dauphin	.231	Selkirk	9.061	Selkirk	935.0
	9.	Melville	5,690	Weyburn	.173	Wetaskiwin	10.925	Dauphin	944.7
	10.	The Pas	5,031	The Pas	.037	Flin Flon	10.986	Flin Flon	978.1
Group 3									
10,001 to 25,000	1.	Swift Current	14,485	Grande Prairie	1.779	Swift Current	1.707	Swift Current	443.2
	2.	Portage la Prairie	13,012	Portage la Prairie	1.308	North Battleford	2.031	North Battleford	812.6

TABLE III.8 (A) (Cont'd)

Group 3(Cont'd	Population 1966		Magnitude of Manufacturing (1967)		Index of Specialization		Man. Diversity Index	
Total No. of Centres = 5	3. Yorkton	12,645	Yorkton	1.203	Portage la Prairie	2.309	Portage la Prairie	816.3
	4. North Battleford	12,262	Swift Current	.615	Yorkton	4.624	Yorkton	819.2
	5. Grande Prairie	11,471	North Battleford	.401	Grande Prairie	8.867	Grande Prairie	886.0
Group 4								
25,001 to 100,000 Total No. of centres = 6	Lethbridge	37,186	Lethbridge	7.069	Lethbridge	1.666	Brandon	325.0
	Moose Jaw	33,417	Medicine Hat	4.947	Brandon	1.669	Moose Jaw	371.9
	Brandon	29,981	Moose Jaw	3.085	Prince Albert	2.012	Medicine Hat	426.4
	Prince Albert	26,269	Prince Albert	2.633	Red Deer	2.497	Lethbridge	476.0
	Red Deer	26,171	Brandon	2.431	Moose Jaw	2.942	Red Deer	609.2
	Medicine Hat	25,574	Red Deer	2.022	Medicine Hat	4.619	Prince Albert	879.7
Group 5								
over 100,000 No. of centres = 2	Regina	131,127	Saskatoon	13.888	Saskatoon	1.271	Regina	202.6
	Saskatoon	115,892	Regina	12.763	Regina	1.463	Saskatoon	340.2

1 Thompson, Manitoba and St. Albert, Alberta not included in selected statistics in this group.

TABLE III:8 (B)

RELATIVE CHANGE: POPULATION GROUPS

Group 1		Employment[1]	RELATIVE CHANGE	Value Added[1]	RELATIVE CHANGE	Magnitude[2]	RELATIVE CHANGE
		Greatest					
less than 5,000	1.	Cardston	17.252	Meadow Lake	7.587	Fort McLeod	414.7
	2.	Meadow Lake	12.783	Fort McMurray	6.251	Esterhazy	261.5
Total No. of	3.	Claresholm	6.475	Lynn Lake	3.681	Rosetown	223.8
Centres = 48	4.	Lynn Lake	5.750	Claresholm	3.290	Claresholm	158.8
	5.	Assiniboia	4.852	Lacombe	2.727	Meadow Lake	75.7
		Least					
	43.	Morden	-.952	Kamsack	.355	Leduc	-39.1
	44.	Swan River	-1.206	Canora	.155	Swan River	-93.3
	45.	Neepawa	-1.768	Morden	-.205	Nipawin	-47.6
	46.	Edson	-3.051	Swan River	-.356	Edson	-59.5
	47.	Rocky Mtn. House	N.A.[2]	Rocky Mtn. House	N.A.	Rocky Mtn. House	-74.1
Group 2							
		Greatest					
5,001 to 10,000	1.	Camrose	4.115	Camrose	4.882	Wetaskiwin	165.2
	2.	Estevan	3.766	Estevan	2.528	Lloydminster	440.2
Total No. of	3.	Flin Flon	.774	Flin Flon	.712	Estevan	65.0
centres = 12							
		Least					
	8.	Melville	.413	Dauphin	.013	Dauphin	-21.6
	9.	The Pas	.205	Melville	-.205	Melville	-23.7
	10.	Dauphin	.167	The Pas	-.240	The Pas	-32.7

TABLE III.8 (B) (Cont'd)

RELATIVE CHANGE

Group 3		Employment		Value Added		Magnitude	
10,001 to 25,000							
	1.	Grande Prairie	3.29	Grande Prairie	7.571	Grande Prairie	73.3
Total No. of	2.	N. Battleford	2.27	Yorkton	1.701	North Battleford	24.1
Centres = 5	3.	Portage la Prairie	1.99	North Battleford	1.336	Yorkton	21.5
	4.	Yorkton	1.81	Swift Current	.419	Portage la Prairie	-3.8
	5.	Swift Current	.38	Portage la Prairie	.100	Swift Current	-15.8
Group 4							
25,001 to 100,000	1.	Brandon	2.570	Brandon	2.860	Red Deer	33.641
	2.	Red Deer	2.020	Red Deer	1.644	Brandon	32.768
	3.	Lethbridge	1.839	Lethbridge	1.491	Lethbridge	21.252
Total No. of	4.	Medicine Hat	.333	Prince Albert	.262	Medicine Hat	-4.626
Centres = 6	5.	Prince Albert	-.643	Medicine Hat	.242	Prince Albert	-28.741
	6.	Moose Jaw	-.747	Moose Jaw	-.349	Moose Jaw	-38.324
Group 5							
over 100,001	1.	Saskatoon	.003	Saskatoon	1.337	Saskatoon	5.716
Total No. of	2.	Regina	.487	Regina	.539	Regina	-12.671
Centres = 2							

1. Figures not available for: Group 1: Hinton, Fort McLeod, Winkler, Whitecourt, Weyburn, Barrhead, Westlock, Humbolt, Rosetown, Kindersley, Esterhazy
Group 2: Selkirk, Lloydminster, Wetaskiwin Drayton Valley, Cardston, Hanna, Rocky Mountain House, Biggar.

2. Figures not available for: Group 1: Hinton, Whitecourt

This situation, of course, will only happen in centres which are not in any way self-sustaining, i.e., whose economies are not internalized to ensure some measure of continued economic growth and development. Secondly, not all these centres as mentioned, can hope to survive the population migration to the larger centres. It remains essential however, that each sub-region possess at least one dynamic centre to prevent future regional disparity and ensure a more suitable and more equitable standard of living for all people of the Prairie region no matter what area they should live in. A viable manufacturing base is essential for continued over-all economic development of the sub-regions of Canada. This is why the study deems the examination of the manufacturing activity of this type and size of centre so important, for the future will affect these centres more than any other single group, and it is therefore essential to know which are the potentially viable communities and which are not.

In terms of the degree of manufacturing activity, centres of 5,000 population or less vary quite widely. The largest centre in terms of magnitude of manufacturing is of course Hinton, (magnitude, 2.229), with the smallest being Fort McMurray, (magnitude, .002). The over-all distribution of magnitude of centres of this size category however, is highly skewed in favour of the smaller centres. To illustrate, a total of 40 of the 48 centres in this group have a magnitude of manufacturing less than .200.[8] The median magnitude value of these 40 small manufacturing centres is .071 which in absolute terms, represents approximately 15 to 25 manufacturing employees, and 80- 120 thousand dollars in value added by manufacturing activity.[9] This is, to say the least, not very large in absolute terms.

Like magnitude, the degree of specialization of many of these centres varies widely but no centre in this group is considered diversified by either the index of specialization nor the refined index of diversity. With the exception of Kamsack, (magnitude .132), Cardston, (magnitude .026), and Lynn Lake, (magnitude .025), those centres greatest in magnitude are also greatest in terms of their specialization.

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8 Those centres of 5,000 population or less of greater magnitude than .200 and not listed in Table III.8(a) include: Fort Saskatchewan, (magnitude .426), Winkler, (magnitude .414), and Whitecourt, (magnitude .373).

9 This is an estimation designed to give the reader an idea of exactly how small the majority of the selected centres is.

This of course, is an expected result when one considers the nature of the regional economy based on agriculture, the degree of dominance by a few manufacturing sectors, and the average size and magnitude of manufacturing in most centres of this category. The large manufacturing centre is an exception in this region, therefore, its chances of being highly specialized are great. (In a later section, the study will examine the specific groups of industries active in these centres in an attempt to clarify the relationship between a centre's specialization indices and its magnitude).

For many of the centres of this size, (26 of 40), it will be noticed that the values of the index of specialization (Table III.8 addendum) range between 1.50 and 2.99. These values reflect the dominance of the food and beverage sector in these centres. For example, it is noticed from the same Table III.8 that the refined index of diversity for Lynn Lake and Cardston equalled 1,000.0. This means of course that fully 100 per cent of the manufacturing employees of these towns are employed in one sector, (in both these cases, the dominant employer is the food and beverage industry). What will also be noticed in Table III.8 however is that the index of specialization for both these centres is only 2.731, i.e., according to this index, the centres are only moderately specialized.[10] To restate briefly then, centres of the 1.5 to 2.9 range, (index specialization), are indicative of the typical small centre, i.e., dominated by the food and beverage sector, but, likely having some employment in other fairly ubiquitous sectors of manufacturing like metal fabricating, printing and publishing, or non-metallic mineral industries. (The refined index of diversity, of course, is an indicator of the number and percent distribution of such manufacturing activities in these centres).

What of growth, absolute and relative, in these small centres? The purpose of Table III.8(b) was to facilitate ready recognition of those centres, of all size categories, which have experienced the greatest or least, relative, as well as absolute, growth or decline in the period 1961-1967.

In relative terms the centre which has grown the greatest is Fort McLeod. From a magnitude of manufacturing of .170 in 1961, rapid development in this centre of the wood products and transport equipment industry, (both incidentally, high growth sectors, 1961-1967), saw Fort McLeod develop into the nineteenth largest manufacturing centre in the Prairie region by 1967, (magnitude .875).

---

10 One recalls at this stage the influence of a large denominator on the index of specialization value. (See Map III.15).

Though the centres of Esterhazy, Rosetown, Claresholm, and Meadow Lake all register large increases in their magnitude of manufacturing in the same time period, the absolute change cannot be considered as significant as that of Fort McLeod. In the case of Meadow Lake, (the largest manufacturing town in 1967 of these other four centres mentioned), the absolute increase meant, over the whole period, an increased employment in manufacturing of some seventeen persons. (Because the degree of manufacturing activity is so small in so many of these centres, relative change figures are often not representative of really significant increases). It is interesting to note however, that of the 8 centres in this first population category of magnitude of manufacturing greater than .200, only three centres, Fort McLeod, Fort Saskatchewan and Winkler, have experienced relative growth in their magnitude of manufacturing.[11] Of the other forty centres of less than .200 magnitude of manufacturing not already listed in Table III.8(b) those experiencing the greatest relative increase in magnitude include; Westlock, (52.17%), Peace River, (50.00%), and Winkler, (55.05%). In absolute terms, Winkler represents the greatest increase in employment and value added of these four centres.

One statistic not examined in either Tables III.8(a) or III.8(b) is the location quotient. As will be recalled from the Introductory section to this chapter, the location quotient indicates whether a centre has more or less manufacturing employees than its population would lead one to expect. As an average of averages, this quotient is designed to indicate relative concentrations of manufacturing activity of centres of all sizes.[12]

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11 Only one of these eight centres however, Winkler, experienced an absolute decline in employment and value added during this period.

12 The notion of relative concentration is all important when viewed in the context of the universe studied.

Those centres of 5,000 population and less with location quotients greater than one, i.e., showing relative concentration, include;

Hinton	N.A.	Kamsack	N.A.	Taber	N.A.
Steinbach	7.997	Nipawin	1.473	Fort McLeod	N.A.
Meadow Lake	1.494	Innisfail	1.469	Edson	1.016
Morden	8.444	Tisdale	2.056	Brooks	1.029
Fort Saskatchewan	N.A.	Winkler	7.696	Neepawa	1.357
Whitecourt	5.126	Drumheller	1.151	Canora	N.A.
Westlock	1.285	Lacombe	2.055	Virden	1.177
Barrhead	1.079				
Total 22					

(N.A., Information not available)

A quotient of 1.00 means that a centre of the size of Rosetown, (population 2,658) would be expected to have a manufacturing labour force of approximately 23 persons, and a centre of 10,000 persons would be expected to have a manufacturing labour force of approximately 90 persons. It is plain to see from the above example that a very low expected degree of manufacturing labour force is associated with the population centres in the Prairie region. If taken on a national basis or taken in relation to more heavily industrialized regions of Canada, there is little doubt that many more centres in the Prairie region would show up as being "deficient" in their manufacturing employment relative to their population.

The second group of centres, those of 5,001 to 10,000 population include the centres of Selkirk, Flin Flon, Lloydminster, Camrose, Wetaskiwin, Melville, Estevan, Dauphin, Weyburn, The Pas, Thompson, and St. Albert.[13]

The largest manufacturing centres of the population size, Selkirk, Flin Flon, and Camrose are all above average magnitude in terms of their manufacturing activity. What is more, the three are similar in the nature of their manufacturing activity, being highly specialized, (see Table III.7 addendum), and very much resource oriented. (Selkirk and Flin Flon are geared to the primary metal industries and Camrose is the centre of oil and gas production).

One other centre in this group, Wetaskiwin, is of fairly significant magnitude in its manufacturing activity and shows, like the larger manufacturing centres in this group, a high degree of specialization. This particular centre however, concentrates its activities in the transportation equipment sector (house trailers).*

---

13 Thompson and St. Albert are not included in Table III.6(a & b) because of insufficient data, or municipal boundary changes incorporating a selected centre into a larger metropolitan area, as is in the case of St. Albert.

* Source for all information re: leading manufacturing industries of these towns came from Provincial Government, Municipal Data Sheets.

Of the remaining five centres of this category 5,001-10,000 population, four, Melville, Estevan, Dauphin, and Weyburn are remarkably the same in either their magnitude and/or specialization. Estevan shows perhaps the greatest individuality of this small group, being specialized in petroleum production and non-metallic mineral production (as well as numerous other activities) while the remaining three find their leading sectors largely in the food and beverage industry (Tables III.10 and III.8 addendum).

By far the smallest manufacturing centre of the group is The Pas, (magnitude .037 in 1967), employing only nine persons in its secondary industry in 1967. This centre's location quotient, (.211), is one of the lowest in the Prairie region.

With regard to growth and development of these centres, most notable are; Wetaskiwin, Lloydminster and Estevan, the former two experiencing some of the highest absolute growth rates in the region, (1961-1967). Unlike the larger centres in this group the smaller manufacturing concerns appear to be the municipalities experiencing the most growth problems. The four centres of Dauphin, Melville, Weyburn, and The Pas have continued to lose ground, not so much in absolute terms, (though The Pas and Melville did experience absolute declines in the value added by their manufacturing activity), as much as in relative terms. (A point to re-emphasize however, is that this second group of centres did contain some of the fastest growing manufacturing urban areas in the Prairie region, particularly Lloydminster and Wetaskiwin).

Only five municipalities make up the third category of centres. They include: Grande Prairie, Yorkton, North Battleford, Swift Current and Portage la Prairie, three of which, (Grande Prairie, Yorkton and Portage la Prairie), can be considered as fairly significant manufacturing centres (magnitude of manufacturing is greater than one). Swift Current and North Battleford do contain, on a comparative basis, a fairly high degree of manufacturing activity; their location quotient indicates that both these centres are only average in the total manufacturing employment given their total population (see Table III.9 addendum).

Swift Current is the most diversified of these centres, both in terms of its number of activities and in terms of its structural variance with the manufacturing economy of the region.[14] The remaining centres are highly specialized in terms of the number of different manufacturing activities performed. However, as their respective indices of specialization indicate, the centres of Yorkton and Grande Prairie find a considerable proportion of their manufacturing labour force employed in less regionally important sectors, (transport equipment industries in the case of Grande Prairie).

None of the centres of this category experienced absolute decline in either value added or employment in 1961-1967. However, two centres, Portage la Prairie and Swift Current have ecperienced relative declines in their magnitude, thereby showing a growth rate less than that of the region as a whole. On the other hand, the centres of Grande Prairie, Yorkton and North Battleford all experienced healthy and rapid growth rates in their manufacturing sectors in this period with well above the average relative increases. With regard to the specialization of these centres, Grande Prairie experienced further diversifications of its activities relative to the region over this same period, while the towns of North Battleford and, particularly Yorkton, showed trends towards greater specialization. (see Table III.8(a) - Relative Change, addendum).

The location quotient for these centres indicates that all towns of the population category 10,001 to 25,000 showed relative concentration of manufacturing activity relative to that of the region. (Table III.9 addendum).

Group 4, Tables III.8a and III.8b, those centres of 25,001 to 100,000 popultaion represent the largest manufacturing centres outside the metropolitan areas of Saskatoon and Regina. All six are among the ten largest manufacturing centres in the Prairie region. In terms of the variety of manufacturing activities, Brandon, Moose Jaw, Medicine Hat, and Lethbridge represent some of the most diversified centres in the entire area. Of greater specialization are the towns of Red Deer, (transportation equipment industries), and Prince Albert, (wood, food and beverage and paper and allied industries). In terms of the index of specialization, Lethbridge and Brandon share the most similar manufacturing employment structure to that of the region, while Medicine Hat concentrates on activities of less significance regionally than do the other communities, (thus the relatively high specialization index value for Medicine Hat).

---

14 See Refined Index of Diversity and Index of Specialization Table III.9 addendum.

Not surprisingly, the location quotient for all these centres is well above unity.

In spite of their relatively large magnitude of manufacturing the three centres of Red Deer, Brandon, and Lethbridge have continued to grow at above average rates. Indeed, Brandon over the period 1961-1967 actually showed an increase in the degree of concentration of manufacturing activity, (i.e., statistically, Brandon showed an increased location quotient in 1967over 1961).

Medicine Hat, Prince Albert and Moose Jaw have not experienced the same rate of growth and development as the other three mentioned, for they all have experienced relative decline in the magnitude of their manufacturing activity, while both Prince Albert and Moose Jaw have also been witnesses to an absolute decline in employment. Moose Jaw also experienced an absolute decline in value added. (see Tables III.4 and III.5 addendum). Medicine Hat, unlike Prince Albert and Moose Jaw, has grown in absolute terms, but at a slower rate than the region as a whole.

Regina and Saskatoon are by far the largest manufacturing centres of the selected centres studied in the Prairie region. Little really needs to be said about these two centres other than: first, Saskatoon experienced healthy growth both in absolute and relative terms in the period 1961-1967. A moderately diversified centre, Saskatoon's degree of specialization, (according to index of specialization), did increase somewhat during this period. Nevertheless, the significant absolute growth of such a large centre during this period no doubt had an impact on the entire Prairie region. Regina too, also grew in absolute terms in its manufacturing sector, however, as can be seen, the rapid growth of Saskatoon has displaced Regina as the largest manufacturing centre in the Prairie region of those centres studied. (Table III.7 addendum).

Centre Size and Manufacturing Characteristics: A Summary

To this point the study has examined the relationship between centre size, (population), degree and characteristics of manufacturing activity. It would seem worthwhile to review some of the findings briefly. First, the general scale or magnitude for by far the majority of centres is on the whole, quite small.

Second, those centres of under 25,000 population with magnitude of manufacturing greater than 1, are almost without exception, highly specialized in terms of their variety of manufacturing industries. Included in this group are the communities of Hinton, Taber, Selkirk, Flin Flon, Camrose, Portage la Prairie, Grande Prairie, and Yorkton.[15] Third, there is, on the whole, a direct relationship between size, (population), of a centre and magnitude of manufacturing. Exceptions do exist of course, but in the general scheme of things, centres of small population are characterized by lower magnitudes of manufacturing. Fourth, the majority of centres of all sizes, much more often then not, has its major industry directly related to the food and beverage sector. This fact is partially indicated by the number of centres in the region with indexes of specialization between 1.0 and 2.9 (38 of 72 centres). Fifth, it is obvious from the scale of manufacturing activity that takes place in many of the centres in the prairie region that manufacturing is not an important part of the economy of the majority of, in particular, the smaller centres. Indeed, manufacturing on a regional level is, in the total scheme of things, very much secondary to the main agricultural sector. This is why, based on the total manufacturing labour force in the region, a centre of 10,000 persons has an expected manufacturing employment of approximately 90 persons.

(B) Manufacturing Activity; Centres of Similar Manufacturing Characteristics

Table III.10 (in the appendix) groups centres according to, (a) their relative magnitude,[16] and, (b) according to their degree of specialization.[17] Besides this fairly broad breakdown, the leading manufacturing industry of each centre is stated to aid further in identifying centres of similar manufacturing characteristics.[18]

---

15 Lloydminster is the only centre of under 25,000 population of significant manufacturing size that is at all diversified in its variety of manufacturing.

16 Two major classifications are involved here, those of class A, above average in magnitude of manufacturing and class B, below average in magnitude of manufacturing.

17 Three sub-categories are designated according to specialization for each major Group A & B; 1, represents diversified centres - of which there are none in Group B-;2, represents intermediate centres; 3, represents specialized centres.

18 The major source of information on employment in various manufacturing sectors of the selected centres was Municipal Data Sheets of the provinces of Alberta, Saskatchewan and Manitoba.

Not too much that hasn't already been discussed can be said about the centres grouped in this fashion, for the tabulated statistics, both direct and indirect, addended at the end of this section, remain the same. Some of the observations made in the previous sections however, become a little clearer when the centres are assessed within the context in which they have been presented in Table III.10 (addendum). For example, the absolute number of centres of very small size and of very limited variety and sophistication in terms of their manufacturing activity becomes very obvious. The number of towns of below average magnitude and characterized by employment in such basic activities as the local bakery, local dairy and local newspaper is considerable. (32 of 72 centres - almost half of all centres studied).[19] Another fact that becomes more obvious from Table III.10 is the all-importance of the food and beverage industry. Besides the 32 centres referred to above, at least 13 others, (nine of below average magnitude, and four of above average magnitude), for a total of 45 centres, (62 per cent of all centres studied), find the food and beverage industry to be, if not the dominant, certainly leading manufacturing sector in the community.[20] One other interesting point brought out in the previous section is clarified by Table III.10. It will be noticed for example, that those centres which specialized in the growth sectors of the Prairie manufacturing economy were at the same time among some of the fastest growing centres in the region. Among the best examples of this are the municipalities of Wetaskiwin and Fort McLeod, (specializing in transport equipment industries), both of which are two centres which grew very rapidly 1961-1967.[21]

A point to note; though this has been mentioned before, it is worth re-emphasizing at this stage, that it is fairly obvious many of these centres survive without the need for a manufacturing base, though lack of such activity no doubt inhibits their growth.

---

19 See Table III.10 - Group B,3, Food and Beverage and Other Industries Sector.

20 This does not include the centres of Regina, Brandon and Moose Jaw which all have significant employment in this sector as well.

21 One obvious exception to this general situation is the centre of Rocky Mountain House. Though this town specializes in wood and wood products, a leading growth sector, it has suffered relative and absolute decline every year since 1961.

Table III.9

Selected Non-Manufacturing Centres

Centre	Non-Manufacturing Specialization
Melville)	Railroad Terminus
Cardston)	Administrative Centre
Hanna) Assiniboia)	Service centres for local farm community
Drumheller) Claresholm)	Institutional Towns
Stettler) Virden) Wainwright) Leduc)	Service centres for local oil field operations

Table III.9 for example, lists some of those towns in the Prairie region which find their "raison d'être" if you prefer, on an economic basis other than manufacturing. As can be seen from the table, the main function of these centres can be of many diverse types but the essential fact remains that these centres are still dependent on one sector of the social economy of the region. This, of course, can be as economically beneficial or disastrous as a town which depends upon one manufacturing plant for its employment. There is no doubt though, that development of the manufacturing sector in any of these towns would help overcome the problems associated with even this kind of overspecialization.

Manufacturing Activity: The Provinces

The study to this point has examined the over-all nature and pattern of manufacturing activity in the Prairie region with particular emphasis being placed on examination and assessment of centres of similar population and manufacturing characteristics. It now remains to assess these same centres within the context of the three individual provinces.

The study shall begin with an examination of the nature of the manufacturing economy of each province relative to the others, and will then proceed to examine specific centres in more detail, with the context of the province within which it is situated.

Manitoba:

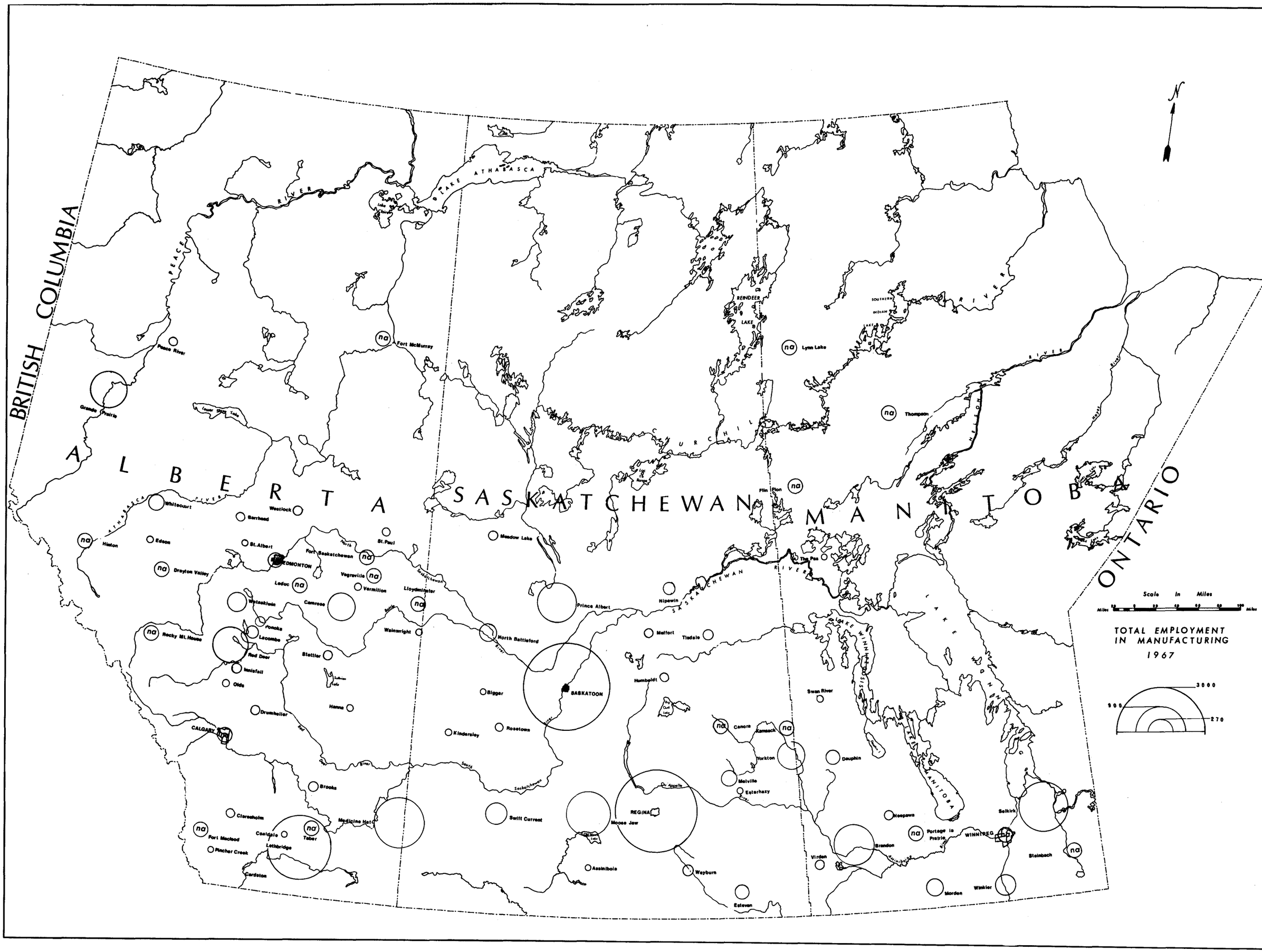
Maps III.1 to III. 6, plot employment, value added, and magnitude of manufacturing data for each centre in the Prairie region. Map III. 6, indicating the magnitude of manufacturing, is particularly valuable in this case for all centres in the province are represented statistically. Manitoba more than any other province, has only a minority of its selected centres below median magnitude. These small centres include; Lynn Lake, Swan River, Neepawa, The Pas, and Virden, of which one, Lynn Lake, finds its activities related to metallic mineral extraction. The other three are typical of the many centres examined in the Prairie region, i.e., small institutional, administrative and market towns not as dependent upon manufacturing activity as such, as the manufacturing activity which does take place in these centres is dependent upon the town.[22]

The remaining centres in the Manitoba area not mentioned so far, with the exception possibly of Dauphin, have to be regarded as significant manufacturing centres for various reasons. Flin Flon and Selkirk represent the largest centres of their kind, (primary metal production), not only in Manitoba but in the whole Prairie region.[23] (see Maps III.6 and III.8). Similarly, though Morden, Winkler, and Steinbach are not very large manufacturing centres, they are the only three municipalities in the Prairies outside the large metropolitan areas of Winnipeg, Edmonton and Calgary which have a sizeable proportion of their manufacturing labour force employed in the clothing industries. Indeed, in these three centres, clothing and its related industries is a major employer. What is even more significant, most of the production of the clothing industry sector in the entire Prairie region is represented by these three centres.

---

22 This statement perhaps needs some explanation - what is meant is that what manufacturing employment there is in these towns depends upon the town and its associated (small) hinterland, as is the case with bakeries and so on, rather than the town economy depending upon, to any significant degree, its manufacturing sector.

23 No statistics were available for Thompson, Manitoba but it would be ranked to-day on a par with Flin Flon and Selkirk. It is known however, that growth in this centre has been rapid and positive every year since it began operation. Only the last few months of 1971 have registered no growth in employment in this centre (nor decline).


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
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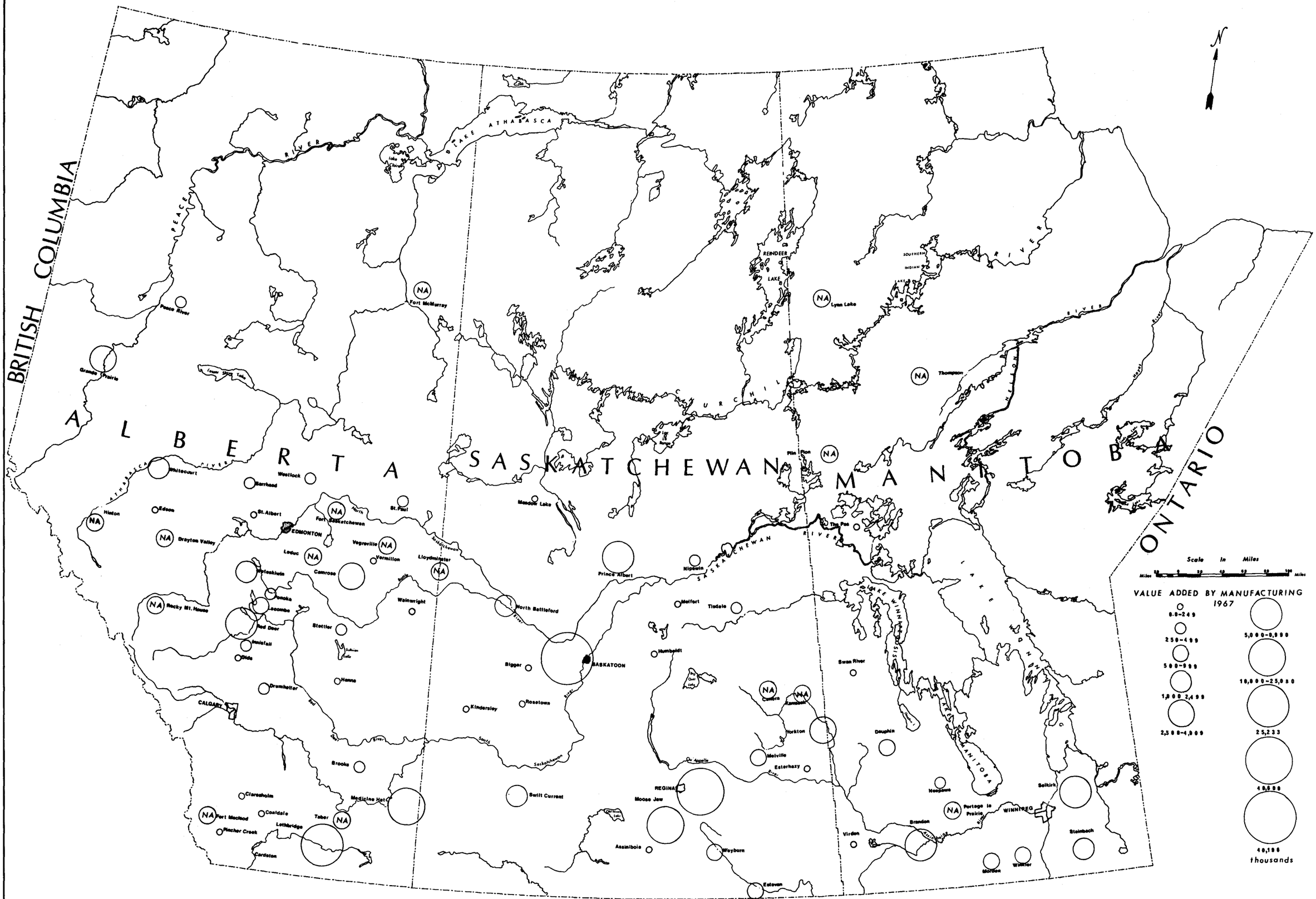
Peace River
Fort McMurray
Lynn Lake
Thompson
Whitecourt
Westlock
Barrhead
Edson
St. Albert
St. Paul
Meadow Lake
Flin Flon
The Pas
Hinton
Drayton Valley
Fort Saskatchewan
EDMONTON
Vegreville
Vermilion
Leduc
Lloydminster
Wetaskiwin
Camrose
Prince Albert
Nipawin
Rocky Mt. House
Ponoka
Lacombe
Red Deer
Innisfail
Olds
Stettler
Wainwright
North Battleford
Melfort
Tisdale
Humboldt
Bigger
SASKATOON
Hanna
Drumheller
CALGARY
Kindersley
Rosetown
Swan River
Canora
Kamsack
Yorkton
Melville
Esterhazy
Dauphin
Brooks
Swift Current
REGINA
Moose Jaw
Claresholm
Coaldale
Lethbridge
Taber
Medicine Hat
Port Macleod
Pincher Creek
Cardston
Assiniboia
Weyburn
Estevan
Neepawa
Portage la Prairie
Brandon
Virden
Selkirk
WINNIPEG
Steinbach
Morden
Winkler
Scale in Miles
TOTAL EMPLOYMENT
IN MANUFACTURING
1967
3000
900
270


BRITISH COLUMBIA
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SASKATCHEWAN RIVER
ASSINIBOINE RIVER
RED RIVER
WINNIPEG RIVER
LAKE WINNIPEGOSIS
LAKE MANITOBA
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Meadow Lake
Drayton Valley
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Camrose
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Ponoka
Lacombe
Red Deer
Innisfail
Olds
Rocky Mt. House
Stettler
Wainwright
North Battleford
Prince Albert
Nipawin
The Pas
Flin Flon
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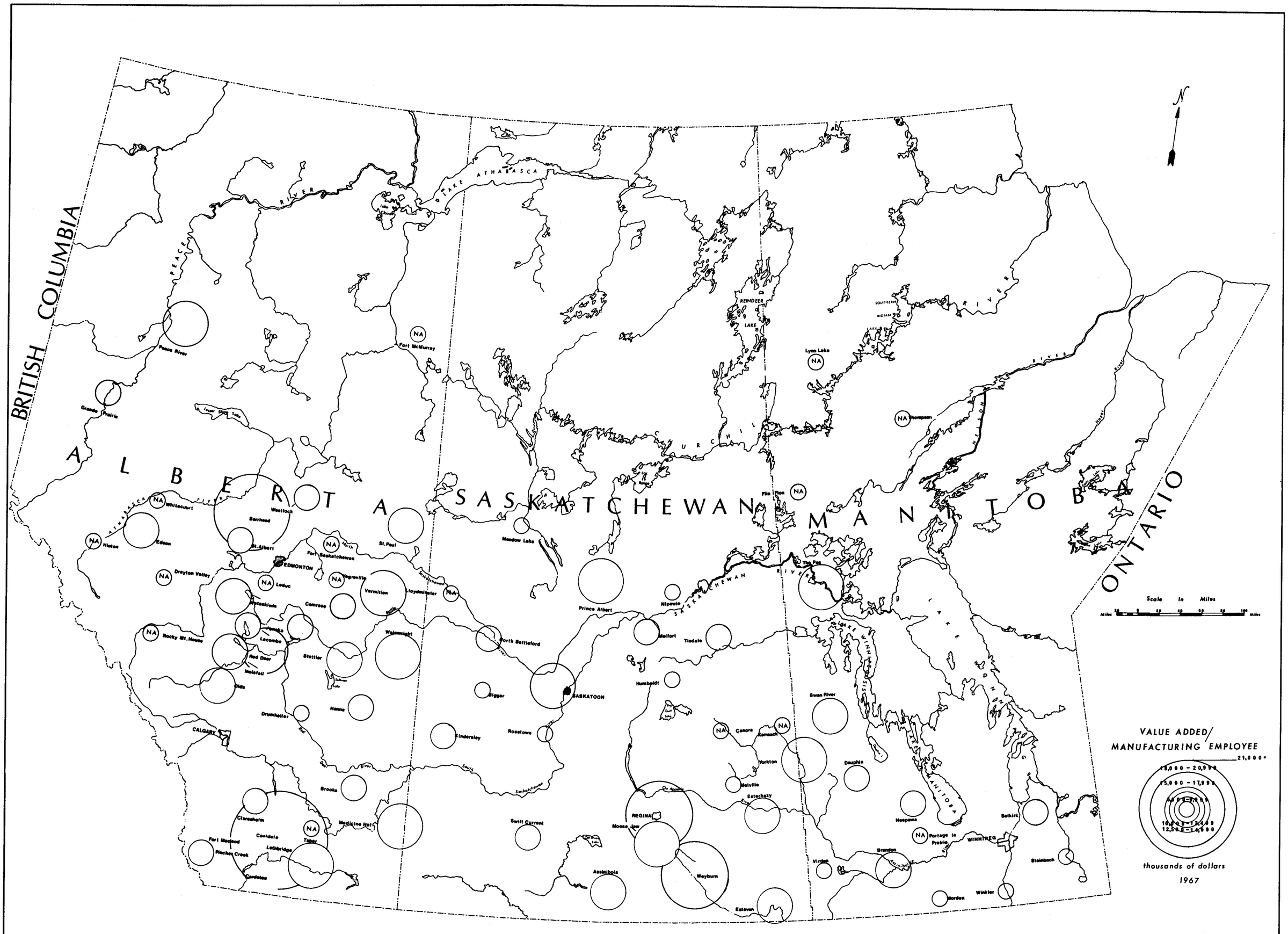
Tisdale
Humboldt
SASKATOON
Bigger
Hanna
Drumheller
CALGARY
Kindersley
Rosetown
Swift Current
Brooks
Medicine Hat
Claresholm
Coaldale
Fort Macleod
Pincher Creek
Lethbridge
Cardston
Taber
REGINA
Moose Jaw
Assiniboia
Weyburn
Estevan
Canora
Kamsack
Yorkton
Melville
Esterhazy
Swan River
Dauphin
Neepawa
Portage la Prairie
Brandon
Virden
Minnedosa
Morden
Winkler
WINNIPEG
Selkirk
Steinbach
Scale in Miles
VALUE ADDED BY MANUFACTURING
1967
0.0-249
250-499
500-999
1,000-2,499
2,500-4,999
5,000-9,999
10,000-25,000
25,233
40,000
40,186
thousands


BRITISH COLUMBIA
ALBERTA
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ASSINIBOINE RIVER
Peace River
Grande Prairie
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Fort Saskatchewan
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Meadow Lake
Flin Flon
The Pas
Nipawin
Prince Albert
Drayton Valley
Leduc
Vegreville
Vermilion
Lloydminster
Wetaskiwin
Camrose
Rocky Mt. House
Lacombe
Ponoka
Red Deer
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Rosetown
Swan River
Canora
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Yorkton
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Esterhazy
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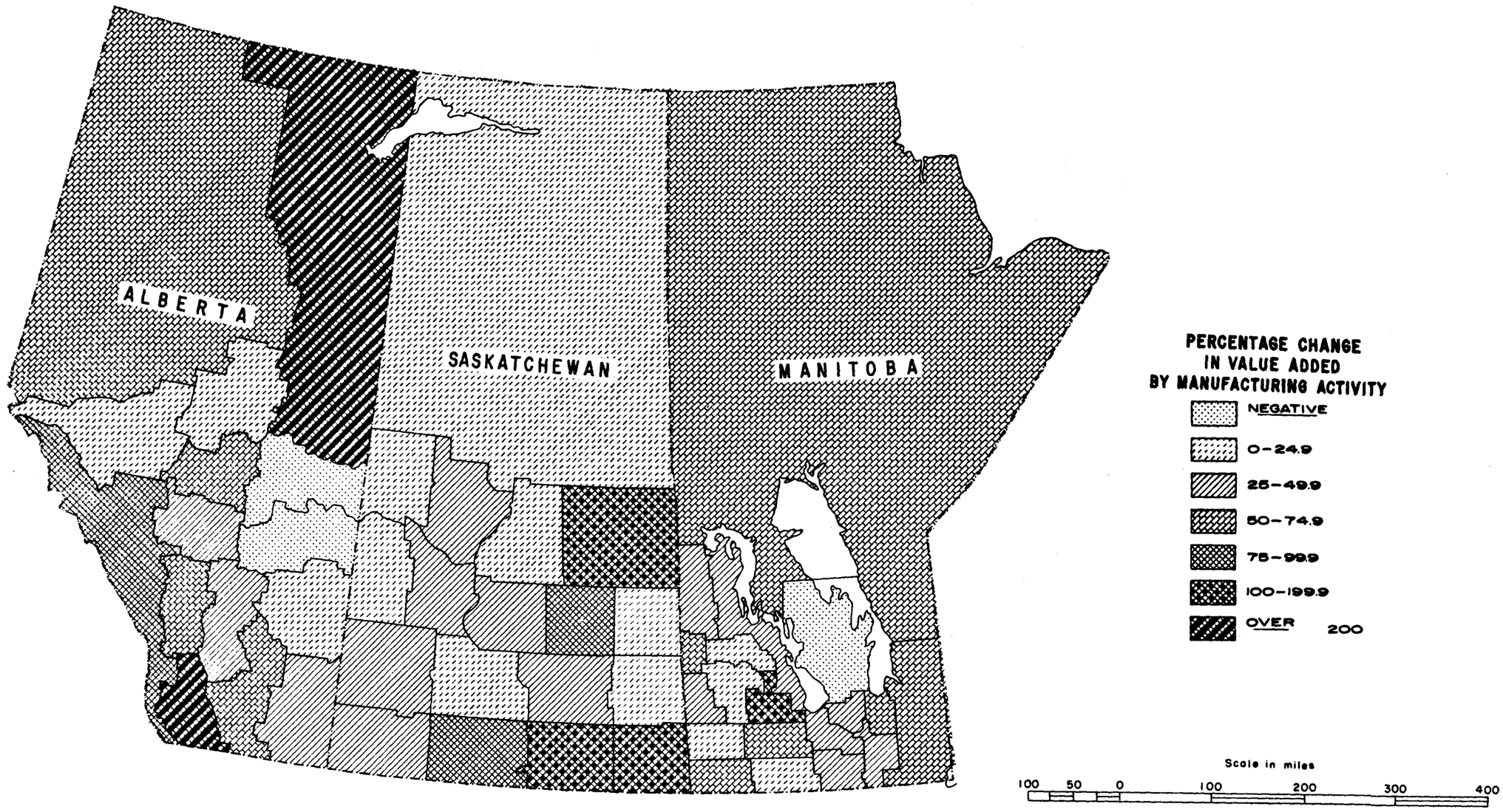
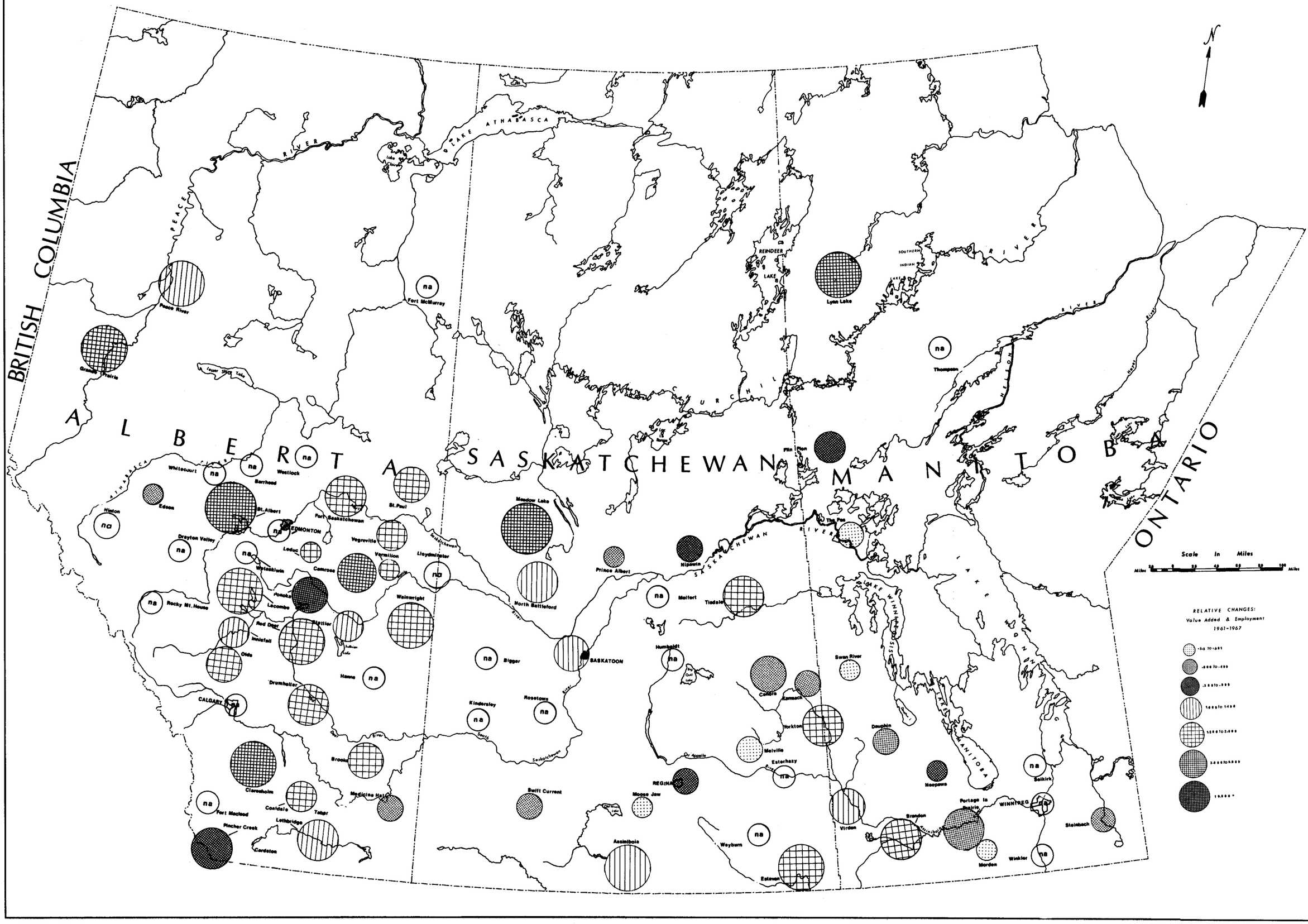
Cardston
Fort Macleod
Pincher Creek
Lethbridge
Taber
Medicine Hat
Swift Current
REGINA
Moose Jaw
Assiniboia
Weyburn
Estevan
Neepawa
Portage la Prairie
WINNIPEG
Selkirk
Steinbach
Virden
Brandon
Gordon
Winkler
Scale In Miles
Miles 50 0 10 20 30 40 100 Miles
VALUE ADDED/
MANUFACTURING EMPLOYEE
21,000+
18,000 - 20,999
15,000 - 17,999
12,500 - 14,999
10,000 - 12,499
thousands of dollars
1967

CHANGE IN MANUFACTURING ACTIVITY BY COUNTY OR CENSUS DIVISION

1961–1966

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LAKE MANITOBA
LAKE WINNIPEG
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Wainwright
Rocky Mt. House
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Innisfail
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Prince Albert
Nipawin
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SASKATOON
Bigger
Hanna
Drumheller
CALGARY
Kindersley
Rosetown
Swift Current
Brooks
Claresholm
Coaldale
Taber
Medicine Hat
Fort Macleod
Lethbridge
Pincher Creek
Cardston
REGINA
Moose Jaw
Assiniboia
Weyburn
Estevan
Canora
Kamsack
Yorkton
Melville
Esterhazy
Swan River
Dauphin
Neepawa
Virden
Brandon
Portage la Prairie
WINNIPEG
Selkirk
Steinbach
Morden
Winkler
Scale in Miles
RELATIVE CHANGES:
Value Added & Employment
1961-1967

BRITISH COLUMBIA

ALBERTA

SASKATCHEWAN

MANITOBA

ONTARIO

N

Peace River

Grande Prairie

Fort McMurray

Lynn Lake

Thompson

Whitecourt

Westlock

Barrhead

Hinton

Edson

St. Albert

EDMONTON

Fort Saskatchewan

St. Paul

Meadow Lake

Flin Flon

The Pas

Nipawin

Prince Albert

Drayton Valley

Leduc

Vegreville

Vermilion

Lloydminster

Wetaskiwin

Camrose

Rocky Mt. House

Ponoka

Lacombe

Red Deer

Stettler

Wainwright

North Battleford

Meliort

Tisdale

Humboldt

Swan River

Innisfail

Olds

Bigger

SASKATOON

Hanna

Drumheller

CALGARY

Kindersley

Rosetown

Canora

Kamsack

Yorkton

Dauphin

Melville

Esterhazy

Brooks

Claresholm

Fort Macleod

Coaldale

Lethbridge

Taber

Medicine Hat

Pincher Creek

Cardston

Swift Current

REGINA

Moose Jaw

Assiniboia

Weyburn

Estevan

Virden

Brandon

Neepawa

Portage la Prairie

WINNIPEG

Selkirk

Steinbach

Morden

Winkler

Scale in Miles

Miles 10 0 20 40 60 80 100 Miles

MAGNITUDE OF MANUFACTURING 1967

Index Value	Index Value	
13,888		
	12,763	
	7,969	
2500-4999	.300-.999	mean (1080-1499)
1500-2499		
100-299	.080-.699	

PER CENT CHANGE IN MAGNITUDE OF MANUFACTURING 1961-1967

-0 to -19	0 to 10 (no change)
-20 to -49	20 to 49
-50 to -100	50 to 99
> -199	> 100

(Relative Decrease) (Relative Increase)

Portage la Prairie and Brandon of course are relatively large manufacturing centres in their own right, with Brandon being the only one of the selected centres in the Province of Manitoba classified as diversified in terms of its number of different manufacturing activities, i.e., by the refined index of diversity.

Those centres in Manitoba which have grown in absolute terms include Brandon, Dauphin, Lynn Lake, Thompson, Flin Flon, Steinbach, and Portage la Prairie. The remaining centres have seen an absolute drop in either their manufacturing labour force or value added by their manufacturing activity. Included in this latter group are the communities of Neepawa, The Pas, Morden and Swan River.[24] It is interesting to note that only two centres, Brandon and Virden have experienced a faster growth rate in magnitude of manufacturing than the region as a whole.[25]

Saskatchewan:

Maps III.1 through III.6 confirm a general statement one may make about manufacturing activity centres in Saskatchewan, i.e., there are only two types of centres in Saskatchewan, those with manufacturing activity, and those without. Those municipalities in Saskatchewan which could be considered as significant manufacturing communities include: Saskatoon, Regina, Prince Albert, Moose Jaw, Lloydminster, Yorkton, and to a much lesser extent, Swift Current, North Battleford and Melville.[26] The remaining fourteen centres studied must be considered as being insignificant manufacturing centres based on the volume of their contribution to the manufacturing economy of the region. Their function is rather, like so many other centres in the Prairie region, service oriented, (Kindersley, M lfort, Canora, Estevan, Kamsack, are examples), or administrative oriented such as Meadow Lake.

The importance of the food and beverage industry to the manufacturing economy of the larger centres in Saskatchewan is, to say the least, significant as their indexes of specialization suggest.[27]

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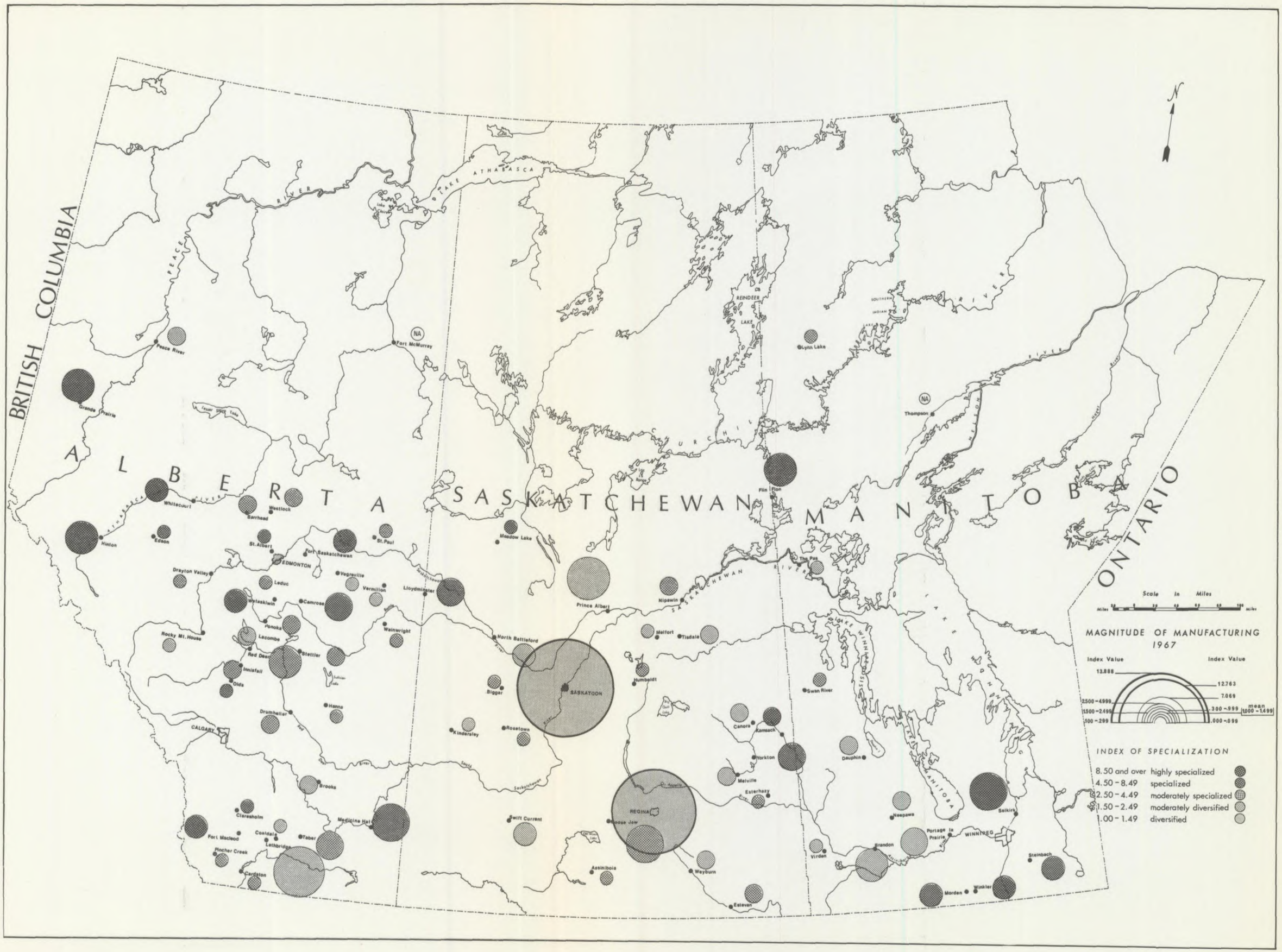
24 No relative change figures on employment or value added for Selkirk or Winkler were available.

25 Thompson of course, was not considered.

26 One would now have to include Esterhazy with the development of the potash industry, post 1967.

27 Though Yorkton has a fairly high specialization index value a major employment sector is still the food and beverages sector.


BRITISH COLUMBIA
ALBERTA
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SOUTHERN INDIAN LAKE
CHURCHILL RIVER
NELSON RIVER
LAKE WINNIPEGOSIS
LAKE MANITOBA
SASKATCHEWAN RIVER
Peace River
Grande Prairie
Fort McMurray
Lynn Lake
Thompson
Flin Flon
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Westlock
Barrhead
Hinton
Edson
St. Albert
EDMONTON
Fort Saskatchewan
St. Paul
Drayton Valley
Leduc
Vegreville
Vermilion
Lloydminster
Wetaskiwin
Camrose
Ponoka
Lacombe
Red Deer
Stettler
Wainwright
Rocky Mt. House
Innisfail
Olds
Hanna
Drumheller
CALGARY
Brooks
Claresholm
Fort Macleod
Coaldale
Lethbridge
Taber
Medicine Hat
Pincher Creek
Cardston
Meadow Lake
Prince Albert
Nipawin
North Battleford
SASKATOON
Bigger
Kindersley
Rosetown
Swift Current
REGINA
Moose Jaw
Assiniboia
Weyburn
Estevan
Melfort
Tisdale
Humboldt
Canora
Kamsack
Yorkton
Melville
Esterhazy
The Pas
Swan River
Dauphin
Virden
Brandon
Portage la Prairie
WINNIPEG
Keeapawa
Selkirk
Steinbach
Morden
Winkler
Scale In Miles
MAGNITUDE OF MANUFACTURING
1967
Index Value
Index Value
13.888
12.763
7.069
2500 - 4999
1500 - 2499
100 - 299
300 - 999
1000 - 1499
000 - 099
mean
INDEX OF SPECIALIZATION
8.50 and over highly specialized
4.50 - 8.49 specialized
2.50 - 4.49 moderately specialized
1.50 - 2.49 moderately diversified
1.00 - 1.49 diversified

Perhaps the one centre in Saskatchewan not centering its manufacturing activity around the food and beverages sector is Lloydminster, which is in the heart of an oil producing area.

It was noted earlier about the absolute and relative decline in the importance of the food and beverage sector in the Prairie region. The centres of Regina, Moose Jaw, Prince Albert, Swift Current and Melville have all experienced relative declines in their magnitude of manufacturing (see Map III.6). On the other hand, Yorkton's relative growth can be accounted for by development of manufacturing sectors other than that of the food and beverage industry, (as a substantial increase in Yorkton's index of specialization indicates - see Table III.8 addendum). Similarly, the growth of Lloydminster is not related to the food and beverage sector, though its specialization has decreased considerable 1961-1967. According to the Community Data Sheet[29] for Lloydminster, by far the largest employer was the petroleum and related group of industries). Actually, only the centre of Saskatoon of the significant manufacturing centres in the province, grew in absolute and relative terms in spite of its major employer being in food and beverage and related industries. (Note: North Battleford's growth sector was related to wood and wood products industries).

Alberta:

Alberta in some ways is similar to the province of Saskatchewan. Most obvious, is the fact that both regions have many small service and administrative centres with virtually no manufacturing activity of any consequence. However, those centres which are significant manufacturing centres in the region are not unlike Manitoba in their specialization. To expand somewhat, those centres which the study deems as significant manufacturing communities in Alberta, i.e., Grande Prairie, Hinton, Whitecourt, Fort Saskatchewan, Camrose, Red Deer, Wetaskiwin, Fort McLeod, Taber and Medicine Hat and Lethbridge, (11 in all), are not only important contributors to specific manufacturing sectors within the province of Alberta but are also major contributors within the context of the whole Prairie region. For example, Grande Prairie, Red Deer and Wetaskiwin are the only centres in the Prairie region specializing in the transport equipment industry.

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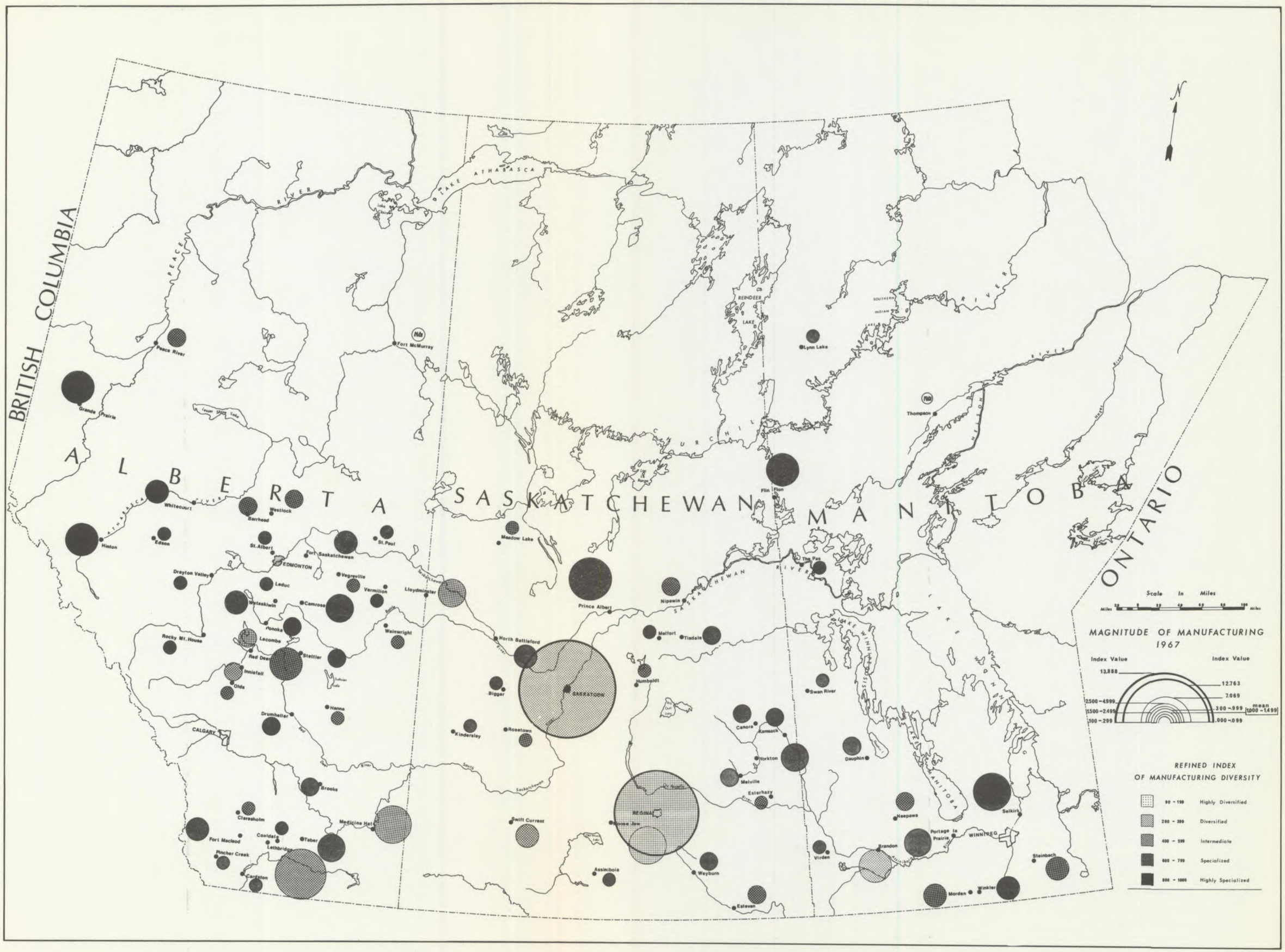
29 August 1969, Source: Government of Saskatchewan Industry Department, Area and Trade Development Branch, Regina.


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
N
PEACE RIVER
ATHABASCA RIVER
LAKE ATHABASCA
REINDEER LAKE
SOUTHERN INDIAN LAKE
CHURCHILL RIVER
NELSON RIVER
Peace River
Fort McMurray
Lynn Lake
Thompson
Grande Prairie
Whitecourt
Barrhead
Westlock
Hinton
Edson
St. Albert
Fort Saskatchewan
St. Paul
EDMONTON
Drayton Valley
Leduc
Vegreville
Vermilion
Wetaskiwin
Camrose
Lloydminster
Meadow Lake
Prince Albert
Nipawin
The Pas
Flin Flon
Rocky Mt. House
Lacombe
Ponoka
Wainwright
North Battleford
Melfort
Tisdale
Red Deer
Stettler
Innisfail
Olds
Drumheller
Hanna
Bigger
SASKATOON
Humboldt
Swan River
CALGARY
Kindersley
Rosetown
Canora
Kamsack
Yorkton
Melville
Esterhazy
Dauphin
Brooks
Claresholm
Fort Macleod
Coaldale
Lethbridge
Taber
Medicine Hat
Pincher Creek
Cardston
Swift Current
REGINA
Moose Jaw
Assiniboia
Weyburn
Estevan
Neepawa
Portage la Prairie
WINNIPEG
Brandon
Virden
Seikirk
Steinbach
Morden
Winkler
Scale In Miles
MAGNITUDE OF MANUFACTURING
1967
Index Value
13.888
12.763
7.069
2500 - 4999
1500 - 2499
300 - 999
100 - 299
000 - 099
mean (1000 - 1499)
REFINED INDEX
OF MANUFACTURING DIVERSITY
90 - 199 Highly Diversified
200 - 399 Diversified
400 - 599 Intermediate
600 - 799 Specialized
800 - 1000 Highly Specialized

Alberta generally, has to be considered as being more manufacturing oriented than Saskatchewan, but the number of centres of very small size makes it, on the whole, less so than Manitoba.[30]

With regard to the degree of specialization of the manufacturing centres of Alberta, there are the relatively large centres of Lethbridge and Medicine Hat in the south and south-east, which are quite diversified in terms of their variety of manufacturing activities. In the same southern region as well as the northwest and central part of Alberta you have just the opposite situation of the quite highly specialized centres of Fort McLeod, Taber, Hinton, Grande Prairie, Red Deer, and Whitecourt. (see Maps III.7 and III.8). (Note the type of product associated with the large northwestern centres; Grande Prairie; wood, transport equipment, Hinton; pulp and paper; Whitecourt; wood industries). What is more, within approximately a fifty mile radius of Edmonton there is the same situation of highly specialized manufacturing communities with: Fort Saskatchewan (primary metal industries), Camrose (petroleum products industries), and Wetaskiwin (transport equipment industries). (see Maps III. 1 to III. 7 and Table III.10 addendum). Of some interest as well is the fact that only one relatively large centre, Taber, finds the greates proportion of its manufacturing labour force employed in the food and beverage industry.

As regards growth of centres in Alberta, most notable are the very impressive growth rates, (absolute and relative), of Fort McLeod, Wetaskiwin, Grand Prairie, Red Deer, and to a lesser extent, Lethbridge. It is of some interest that the leading sector in three of these fast growing centres, Fort McLeod, Wetaskiwin, Red Deer is the transport equipment industry, while Grande Prairie has a significant proportion of its manufacturing labour force employed in this same industry. Taber, (food and beverages), has experienced a slight relative decline while Medicine Hat and Camrose have grown steadily. A further point to note, the relatively small centre of Rocky Mountain House experienced an absolute decline in its degree of manufacturing activity with closure of a wood and wood products firm in 1964.[31] (see Maps III.6 and Tables III.4 and III.5 addendum.)

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30 The complete dominance of the highly industrialized metropolitan area of Winnipeg cannot be overlooked completely, when one deals with Manitoba.

31 Source: Municipal Data Sheets, Dec. 63 and Dec. 64, Government of Alberta Publication. Rocky Mountain House.

BRITISH COLUMBIA

ALBERTA

SASKATCHEWAN

MANITOBA

ONTARIO

PEACE RIVER

ATHABASCA RIVER

Lake Athabasca

Peace River

Fort McMurray

Grande Prairie

Lesser Slave Lake

Whitecourt

Westlock

Barrhead

Hinton

Edson

St. Albert

EDMONTON

Fort Saskatchewan

St. Paul

Drayton Valley

Vegreville

Leduc

Vermilion

Lloydminster

Wetaskiwin

Camrose

Ponoka

Lacombe

Rocky Mt. House

Red Deer

Stettler

Innisfail

Olds

Wainwright

Hanna

Drumheller

CALGARY

Bow River

Brooks

Claresholm

Fort Macleod

Coaldale

Lethbridge

Taber

Pincher Creek

Cardston

Medicine Hat

North Battleford

Biggar

Rosetown

Kindersley

Swift Current

South Saskatchewan River

Meadow Lake

Prince Albert

Nipawin

SASKATCHEWAN RIVER

The Pas

Flin Flon

REINDEER LAKE

Lynn Lake

SOUTHERN INDIAN LAKE

NELSON RIVER

Thompson

CHURCHILL RIVER

Melfort

Tisdale

Humboldt

Canora

Kamsack

Yorkton

Melville

Esterhazy

Regina

Moose Jaw

Assiniboia

Weyburn

Estevan

Swan River

Dauphin

Neepawa

Virden

Brandon

Portage la Prairie

WINNIPEG

Selkirk

Steinbach

Morden

Winkler

LAKE WINNIPEGOSIS

LAKE MANITOBA

LAKE WINNIPEG

Scale In Miles

MAGNITUDE OF MANUFACTURING
1967

Index Value	Index Value
13,888	
	12,763
	7,069
2500 ~ 4999	300 ~ 999
1500 ~ 2499	mean 1000 ~ 1499
100 ~ 299	000 ~ 099

(C) confidential

LOCATION QUOTIENT	
.000 to .499	1.500 to 1.999
.500 to .999	2.000 to 2.999
1.000 to 1.499	> 2.999

QUEBEC

The Manufacturing Economy: A Macro Analysis

Québec, on a national basis, is an area of significant manufacturing activity. The industries that dominate the economy, textiles, paper and clothing, are representative of a truly industrialized region. However, one outstanding feature of the province of Québec is the degree of specialization of most of its manufacturing centres. For example, according to the refined index of manufacturing diversity, (Table III.18 addendum), 69 of the 89 selected centres in the region were either classified as "specialized" or "highly specialized" in terms of their degree of manufacturing diversity. Similarly, the index of specialization suggests that 53 of the 89 centres studied are either "specialized" or "highly specialized", with another 21 being classified as "moderately specialized". Only four centres in the entire Québec region, Québec City, Sherbrooke, St.-Thérèse and Joliette, are classified as "moderately diversified" or "diversified" by both the index of specialization and the refined index of diversity. (See also Table III.20 addendum)

(A) Dominant Manufacturing Sectors

(i) Major Groups:

Tables III.10 and III.11 illustrate the degree of concentration of manufacturing labour force that existed in each of the twenty major manufacturing groups in Québec in 1961, 1963, 1965 and 1967 respectively. Table III.10 lists by rank for 1967, the percentage (actual and cumulative), employed in each of the twenty major groups. Table III.11 presents the same information in a form which more clearly illustrates the number of groups accounting for different percentages, (cumulative), of the total manufacturing labour force in the province. As one can readily see, Québec is a fairly specialized region with only five industries: paper, primary metal, clothing and food and beverage industries, accounting for just over 60 per cent of all the manufacturing employment in the region.

TABLE III.10

Industries	1961 Rank	1961 %	1961 Cumulative % (By Rank)	1963 Rank	1963 %	1963 Cumulative % (By Rank)	1965 Rank	1965 %	1965 Cumulative % (By Rank)	1967 Rank	1967 %	1967 Cumulative % (By Rank)
Textiles	1	18.4	18.4	1	18.6	18.6	1	18.8	18.8	1	18.0	18.0
Paper and Allied	2	18.4	36.8	2	17.8	36.4	2	17.6	36.4	2	17.6	35.6
Primary Metal	3	8.3	45.1	3	8.7	45.1	3	8.7	45.1	3	9.3	44.9
Clothing	4	8.3	53.4	4	7.8	52.9	4	7.8	52.9	4	7.6	52.5
Food and Beverage	5	7.3	60.7	5	7.2	60.1	5	7.3	60.2	5	7.5	60.0
Transport Equipment	11	2.9	82.6	7	4.2	68.8	7	4.4	69.7	6	5.3	65.3
Wood	6	4.2	64.9	6	4.5	64.6	6	5.1	65.3	7	4.0	69.3
Metal Fabricating	12	2.9	85.5	10	3.1	78.8	9	3.2	76.2	8	3.3	72.6
Electrical Products	10	3.1	79.7	11	3.0	81.8	12	2.9	85.2	9	3.3	75.9
Chemical and Chemical Products	8	3.9	73.1	9	3.4	75.7	8	3.3	73.0	10	3.1	79.0
Leather	7	4.3	69.2	8	3.5	72.3	10	3.1	79.3	11	2.9	81.9
Knitting Mills	9	3.5	76.6	12	3.0	84.8	11	3.0	82.3	12	2.8	84.7
Machinery	18	1.3	98.9	18	1.9	98.8	17	2.3	97.6	13	2.8	87.5
Miscellaneous	16	2.2	95.5	16	2.3	94.7	14	2.6	90.6	14	2.7	90.2
Furniture and Fixtures	15	2.5	93.3	15	2.5	92.4	15	2.4	93.0	15	2.6	92.8
Printing and Publishing	14	2.6	90.8	14	2.3	89.9	16	2.3	95.3	16	2.3	95.1
Rubber	13	2.7	88.2	13	2.8	87.6	13	2.8	88.0	17	2.2	97.3
Non-metallic Mineral	17	2.1	97.6	17	2.2	96.9	18	1.4	99.0	18	1.7	99.0
Tobacco	19	1.1	100.0	19	1.2	100.0	19	1.0	100.0	19	.9	99.9
Petroleum and Coal Products	20	.001	100.0	20	.001	100.001	20	.001	100.0	20	.10	100.0
		100.001			100.001			100.001			100.001	

TABLE III.11

Number of Manufacturing Groups
Accounting for Percent Manufacturing Employment

Per-cent Employed	1961 No. of Groups	1963 No.of Groups	1965 No.of Groups	1967 No.of Groups
20	0	0	0	0
30	2	2	2	2
40	3	3	3	3
50	4	4	4	4
60	5	5	5	5
70	8	8	8	8
80	11	11	11	11
90	14	15	14	14
100	20	20	20	20

TABLE III.12

Greatest Percent Change in Share of Manufacturing Employment
20 Industry Groups - 1961-1967

	1961		1967		
	Rank	% of total Employment	Rank	% of total Employment	
Transport Equipment	11	2.9	6	5.3	
Machinery	18	1.3	13	2.8	
Metal Fabricating	12	2.9	8	3.3	Relative
Miscellaneous Manufacturing	16	2.2	14	2.7	Increase
Electrical Products	10	3.1	9	3.3	
Primary Metal	3	8.3	3	9.3	
Food & Beverage	5	7.3	5	7.5	
Paper & Allied	2	18.4	2	17.6	
Clothing	4	8.3	4	7.6	
Non-Metallic Minerals	17	2.1	18	1.7	Relative
Leather	7	4.3	11	2.9	Decrease
Knitting Mills	9	3.5	12	2.8	

(ii) Concentration and Deconcentration

The total percentage distribution of the five leading sectors has remained virtually constant over the 1961-1967 period, fluctuating by only .7 per cent. Within these five sectors, however, some fairly significant fluctuations have taken place, with paper and clothing industries declining in terms of their relative share of employment, but with primary metal and food and beverage industries increasing enough to offset this negative trend.

However, outside of these five major industries, other important and interesting changes have taken place. Most evident, is the sudden increase in the importance of the transport equipment and machinery industries, (75 per cent increase in the share of employment in the case of the former and a 115 per cent increase in the share of employment in the case of the latter), as well as the fairly sharp decrease in the share of employment of the leather, knitting mills, and chemical and chemical products industries, (30%, 20%, and 25%, respectively - see Table III.12 above).

Of greatest significance in these changes is the growth of the transport equipment industry from the eleventh largest employer in 1961 to the sixth largest in 1967. What is more, it is not felt that the growth of this sector is likely to have slowed down since 1967.

(B) Dominant Regions:

The Québec region can be divided quite readily into five sub-regions: 1. Montréal and the Eastern Townships; 2. Québec East; 3. Chicoutimi-Jonquière; 4. Québec West; and, 5. the Noranda-Val-D'Or clustering of centres.

The first of these sub-regions, the Montréal-Québec City-Sherbrooke triangle, is by far the most important. This area alone accounts for approximately 90 per cent of all the manufacturing activity in Québec, (including Montréal).[32] The remaining 10 per cent of the total manufacturing activity in the province is accounted for mainly by two smaller regions, the Chicoutimi-Jonquière area, (including Chibougamau, La Tuque, Port-Alfred, etc.), and the Québec West region, (including Maniwaki, Mont-Laurier, Thurso, etc.).

32 See, Girard, J. "Geographie de L'Industrie Manufacturière du Québec" opcit.

The other two sub-regions are marginal, both in terms of geography and in terms of their manufacturing activity to the three major regions described above. (See Maps III.9 through III.17)

(C) Centre Size and Manufacturing Activity: Some General Trends

In figure III.2, the index of specialization was plotted against the magnitude of manufacturing index for the selected Québec centres. From the nature of the distribution of the points on this graph one can deduce a very simple but fundamental relationship, i.e., generally there is an inverse relationship between the degree of specialization of a centre and its magnitude, (size), of manufacturing. Or, in other words, generally, the larger the centre, (in terms of the magnitude of manufacturing), the more diversified it becomes. Furthermore, if one examines Table III.18 in the appendix, one finds that the 1967 index of specialization for thirteen of the largest twenty centres in Québec had actually decreased in relative value, (thereby showing increased diversity), over the 1961 value. Similarly, twenty-seven of the smallest thirty-nine centres in Québec showed increased specialization indexes. Briefly, then, it appears that over the period 1961-1967, larger centres were becoming more diversified in terms of their manufacturing activity while smaller centres were becoming even more specialized.

It will be recalled that the centres tabled in the appendix are listed in order of magnitude of manufacturing. Keeping this in mind, an examination of Table III.19, relates another interesting relationship that develops between the magnitude of manufacturing and the location quotient. This relationship suggests that the greater the magnitude of manufacturing in a given centre, the greater its expected employment, i.e., large manufacturing centres employ more than their expected share of the manufacturing labour force of the region; small centres employ less than their expected share. What is more, smaller centres appear to be losing ground over time, with fourteen of the twenty smallest centres in Québec showing lower location quotients in 1967, than in 1961.

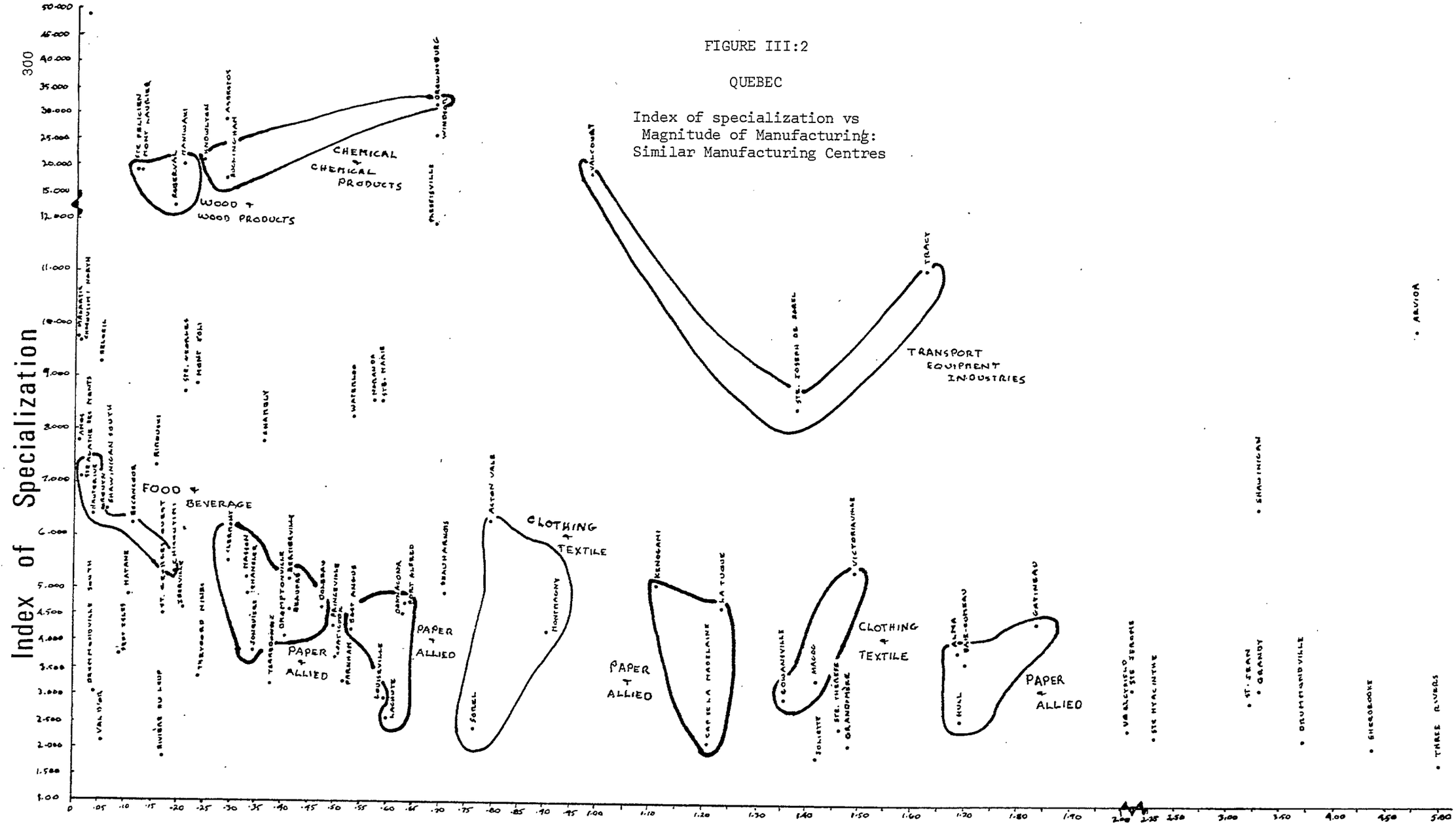
(D) Centre Size and Location: General Trends

Not surprisingly, the Montréal-Québec-Sherbrooke area contains thirty-six of the fifty largest manufacturing centres in Québec, (Montréal included), and over one-half of the centres studied, (52 out of 89 - see inset maps).

FIGURE III:2

QUEBEC

Index of specialization vs
Magnitude of Manufacturing:
Similar Manufacturing Centres



Similarly this region contains nine of the ten largest manufacturing centres in the province, (Montréal excluded). Outside this region, all centres of significant size, (in terms of their magnitude of manufacturing), are either in the Chicoutimi-Jonquière area or the Québec West region, (with the exception of Baie-Comeau), and only one of these larger centres, Hull, may be said to be at all diversified in terms of its variety of manufacturing activity.

Manufacturing Characteristics: Selected Centres and Groups of Centres

A Micro Analysis

(A) Manufacturing Activity and Centre Size:

To this point the study has examined the general nature and distribution of manufacturing activity in the Québec region. It now remains to assess the statistical results more closely in the context of groups of centres of various similar characteristics.

Table III.13 tabulates certain statistics of selected centres according to the five population categories already developed in Chapter II. For centres under 5,000 population and between 2,500 and 100,000 population, the three highest and three lowest values for selected statistics are given. For the two largest groups, centres of 5,001-10,000 and 10,001 to 25,000, the selected statistics are given for the five highest and five lowest values.

The first group of centres, those of 5,000 population and less, were, it will be recalled, selected on the basis of their above-average value added by their manufacturing activity.[33] In spite of the selection of the centres using this criteria however, only one community, St-Joseph-de-Sorel, was found to be above average in its magnitude of manufacturing. In addition, none of the centres of this particular population size could be classified as "diversified" in terms of the number of different activities operating there. However, three centres, Princeville, Berthierville and Waterloo, do possess, according to their manufacturing diversity index a fair variety of activities. (see Tables III.17 and III.18 addendum) On the other hand, the centres of Valcourt, Knowlton, Brownsburg and Clermont show extremely high specialization index values typical of "one resource" towns.

33 See page 243 Chapter III Introduction.

TABLE III.13

QUEBEC: MANUFACTURING CHARACTERISTICS; POPULATION CLASSIFICATION [1]

Population Class	Magnitude of Manufacturing (1967)		Index of Specialization		Refined Index of Diversity		RELATIVE CHANGE Employment [2]		Value Added [2]		Magnitude [3] [4]	
	Greatest Magnitude		Most Diversified				Greatest Growth					
(A) under 5,000	1 St-Joseph-de-Sorel	1.38	Louiseville	2.99	Princeville	641.0	Valcourt	14.74	Valcourt	8.07	Valcourt	482.8
	2 Valcourt	.985	Bromptonville	4.16	Berthierville	686.5	Knowlton	6.72	Chandler	3.53	Knowlton	135.2
Total No.of Centres 18	3 Acton Vale	.790	East Angus	4.24	Waterloo	693.0	St-Joseph-de-Sorel	4.70	Knowlton	2.93	Waterloo	78.07
	Least Magnitude		Most Specialized				Least Growth					
	16 Masson	.330	Valcourt	18.26	Valcourt	995.5	Masson	.294	Beaupré	.292	Clermont	-14.14
	17 Chandler	.328	Knowlton	21.87	Clermont	997.7	East Angus	.137	Louiseville	.138	Bromptonville	-14.37
	18 Knowlton	.240	Brownsburg	31.61	Brownsburg	999.6	Clermont	-.213	Donnacona	.132	Donnacona	-24.12
	Greatest Magnitude		Most Diversified				Greatest Growth					
(B) 5,001 -10,000	1 Tracy	1.62	Drummondville S.	3.08	Iberville	398.5	Drummondville S.	31.16	Drummondville S.	6.76	Chibougamau	650.0
	2 Beauharnois	.703	Farnham	3.31	St-Georges	743.6	Chibougamau	29.33	Malartic	6.11	Drummondville S.	266.65
	3 Windsor	.691	Coaticook	3.73	Drummondville S.	748.9	Mont-Joli	5.19	Iberville	3.39	Tracy	107.69
Total No. of Centres 26	4 Port-Alfred	.630	St-Georges	4.58	Plessisville	764.9	Maniwaki	3.91	Mont-Joli	2.04	Mont-Joli	62.32
	5 Farnham	.514	Iberville	4.59	Coaticook	778.0	Iberville	3.39	St-Georges	1.73	Maniwaki	52.44
	Least Magnitude		Most Specialized				Least Growth					
	22 Ste-Agathe-des-Monts	.023	Dolbeau	19.07	St-Félicien	961.5	Port-Alfred	-.100	Mont-Laurier	.28	Dolbeau	-29.36
	23 Bagotville	.022	St-Félicien	19.07	Port-Alfred	965.3	Mont-Laurier	-.102	Buckingham	.24	Port-Alfred	-30.46
	24 Amos	.019	Mont-Laurier	19.84	Mont-Laurier	965.4	Buckingham	-.623	Amos	.18	Windsor	-30.62
	25 Malartic	.004	Maniwaki	20.84	Maniwaki	967.7	Amos	-2.265	Port-Alfred	-.048	Malartic	-50.00
	26 Aylmer	.000	Windsor	25.50	Malartic	970.7	Malartic	-3.583	Dolbeau	-.254	Amos	-52.5

Population Class	Manufacturing (1967)		Index of Specialization		Refined Index of Diversity		RELATIVE CHANGE Employment		Value Added		Magnitude	
	Greatest Magnitude		Most Diversified				Greatest Growth					
(C) 10,001-25000	1.Arvida	4.55	Joliette	1.79	Joliette	353.9	Alma[6]	N.A.	Alma	N.A.	Alma	4125.0
	2.St-Hyacinthe	2.26	Rivière-du-Loup	1.86	St-Hyacinthe	464.6	Lachute	9.85	Lachute	9.85	Lachute	117.8
Total No. of[5]	3.Gatineau	1.84	Grand-Mére	2.05	Sept-Îles	603.2	Rivière-du-Loup	4.82	Rivière-du-L.	3.71	Pt-Gatineau	106.6
Centres = 31	4.Baie-Comeau	1.70	Val-d'Or	2.17	Thetford Mines	649.7	Hauterive	3.55	Sorel	2.79	Cowansville	51.1
	5.Victoriaville	1.49	St-Hyacinthe	2.34	Rivière-du-Loup	674.4	Cowansville	3.44	Cowansville	2.23	Hauterive	38.4
	Least Magnitude		Most Specialized				Least Growth					
	24.Shawinigan S.	.052	Beloeil	9.36	Noranda	961.8	La Tuque	.503	Kénogami	.66	Gatineau	-12.7
	25.Val-d'Or	.051	Chicoutimi North	9.75	La Tuque	966.9	St-Hyacinthe	.439	Asbestos	.47	Kénogami	-14.1
	26.Hauterive	.036	Arvida	10.41	Pointe-Gatineau	985.6	Rouyn	-.220	Rouyn	.45	Magog	-17.9
	27.Pointe-Gatineau	.031	Asbestos	29.18	Kénogami	985.6	Val-d'Or	-1.145	Gatineau	.22	Rouyn	-27.9
	28.Chicoutimi North	.011	Pointe-Gatineau	48.42	Arvida	994.9	Rimouski	-1.495	Noranda	-1.68	Rimouski	-37.3
(D)25001-100000	1.Trois-Rivières	4.97	Trois-Rivières	1.750	St-Jérôme	320.4	St-Jean	1.702	Jonquière	N.A[7]	St-Jérôme	9.79
	2.Sherbrooke	4.39	Sherbrooke	2.192	Sherbrooke	397.3	Valleyfield	1.242	St-Jean	1.299	St-Jean	7.35
Total No. of	3.Drummondville	3.57	Cap-de-la-Madeleine	2.211	St-Jean	407.5	Drummondville	1.116	Hull	1.262	Valleyfield	4.54
Centres = 13												
	11.Cap-de-la-Madeleine	1.21	Jonquière	3.877	Chicoutimi	725.9	Shawinigan	-.466	Trois-R.	.306	Shawinigan	-28.3
	12.Jonquière	.349	Chicoutimi	5.377	Alma	868.5	Cap-de-la-Madeleine	-.668	Shawinigan	.228	Chicoutimi	-29.3
	13.Chicoutimi	.198	Shawinigan	6.506	Jonquière	943.5	Chicoutimi	-1.499	Cap-de-la Madeleine	-.033	Cap-de-la Madeleine	-29.65

1. For further reference re this classification, see Chapter , Section .
2. Figures not available for: Group A, Thurso; Group B, Aylmer, Bagotville, Bécancour, St-Georges O., Tracy, Windsor; Group C, Alma, Magog.
3. As given by Magnitude of Manufacturing Index (Table 371 Addendum).
4. Figures not available for Group 2: Bécancour, Aylmer.
5. Including Ste-Thérèse, Chambly, Terrebonne, Beloeil - see pg. re: exclusion of metropolitan Montréal centres.
6. Actual figures not available, however, change in Magnitude of Manufacturing reflects degree of change in Employment and V.A.
7. Actual figures not available for publication.

With regard to the rate of growth for this particular group of centres, no definite pattern seems to exist although some trends are indicated. The centres experiencing the most growth difficulty; Masson, Clermont, East Angus, Beaupré, Donnacona, Bromptonville and Louiseville, find, with the exception of Louiseville, almost their entire manufacturing labour force concentrated in paper and allied industries. (See Table III.20 addendum) On the other hand, those centres that have grown most rapidly over the 1961-1967 period find their activities concentrated in such regionally significant sectors such as the transportation equipment industries, (as in the case of Valcourt and to a lesser extent, Waterloo), and in the chemical and chemical products industry, (as in the case of Knowlton).[34]

Of the centres in the second population category listed in Table III.13, (from 5,001-10,000 persons), again only one centre, Tracy, is above average in terms of its magnitude of manufacturing activity in 1967. (In 1961 Tracy was the third largest manufacturing centre in this category behind Port-Alfred and Beauharnois). The rapid growth of this centre between 1961-1967 is no doubt a result of the same economic factors which influenced the rapid growth of the smaller centres of Valcourt and Waterloo, i.e., those forces behind the growth of the transport equipment industry.

With regard to specialization, for centres within this 5,001-10,000 group, the variety of manufacturing activity within them is limited. Noteworthy, however, is the tremendous diversity of activity that exists in Iberville. This centre is not only an exception within this classification, (Table III.13), but within the entire province, (see Map III.16). Though its magnitude is small, .206 magnitude in 1967, the variety of manufacturing activity in this centre must be considered unique, since all other centres of similar population size are normally quite specialized in their manufacturing activity.

The smaller centres in the same group are often dominated by either the wood or wood products industries, (Amos, Malartic, St.-Félicien and Chibougamau for example), or the more ubiquitous activities such as non-metallic mineral production or food and beverage production, (Bagotville and Ste-Agathe-des-Monts are examples). (See Table III.20 in the appendix at the end of the chapter.

34 As was pointed out earlier the chemical and chemical products industry experienced a decline in its percentage share of the manufacturing labour force in Québec, 1961-1967. Buckingham is an example of a centre which experienced the same relative decline as the industry as a whole, (specialization: industrial chemicals), whereas Knowlton did not.

As in the larger centres of this group, specialization ranges from dominance in the clothing and textile industries, for example Farnham, to paper and allied industries, (Windsor, Port-Alfred), to primary metal and furniture and fixture industries, as in Beauharnois.

Growth indexes of centres of this size category, i.e., centres of 10,001-25,000 persons show that the small centres of Drummondville South, Chibougamau and Malartic, have registered the largest relative increases in manufacturing activity. (See Table III.18 and Map III.14). However, of more significance in absolute terms, is the growth of the larger centres of Mont-Joli, Maniwaki and in particular, Tracy. On the opposite end of the scale, as Table III.13 indicates, three of the larger manufacturing centres of this second group, Dolbeau, Port-Alfred and Windsor have experienced significant decline in their magnitude of manufacturing relative to other centres in the region. All three centres specialize in paper and allied products. Together with this relative decline, these centres also have been witness to an even more serious absolute decline over the period 1961-1967. Other centres also, such as Buckingham, Amos and Malartic have experienced significant relative decline as well as some absolute decline in either employment or value added by their manufacturing activity. The aforementioned centres do, however, represent the most serious cases of decline of centres of this size.

The third category of centres classified in Table III.13, contains some of the largest manufacturing agglomerations in Québec, together with some of the smallest. As is so often the case, specialization is again the rule, with some very large manufacturing centres such as Arvida, Gatineau, Baie-Comeau and Victoriaville containing remarkably few varieties of activities. Two centres, St.-Hyacinthe and Joliette, are by far the most diversified in terms of their manufacturing employment of all centres of this group.

As Table III.13 and Map III.16 indicate some of the greatest relative increases in magnitude of manufacturing occurred in the smaller centres such as Pointe-Gatineau and Hauterive. However, the larger centres of Alma, Cowansville, Sorel and Lachute did experience relatively rapid increases in employment, value added and/or magnitude of their manufacturing activity. In absolute terms, of course, the growth of these larger centres is of much more significance. One centre, Rivière-du-Loup, is worthy of mention not only for its high relative growth rate but for its relative diversity as well.

Of the centres that have experienced growth difficulties, Rouyn, Val-D'Or and Rimouski suffered the greatest absolute decline in employment of centres of this size, while the larger centres of Gatineau and Kénogami, (specializing in paper and allied industries), Magog and Rimouski, (textiles and wood products industries, respectively), seem to have suffered the worst relative decline.

The last group of centres, those of the 25,001-100,000 population class, together represent the majority of large manufacturing centres with the exception of Montréal and Québec City. Of the thirteen communities within this group, only two, Jonquière and Chicoutimi, are below average in terms of their magnitude of manufacturing for 1967, (see Table III.16 addendum). Also many of these centres represent some of the most diversified centres in the province. St.-Jérôme, Sherbrooke, St.-Jean and Granby are most notable. Even among this group, however, specialization in one or more manufacturing group occurs, as is suggested by the diversity index values for Hull, Chicoutimi, Alma and Valleyfield, (Table III.18 addendum).

Of the centres that are included in this final group, those which have experienced greatest growth over the period 1961-1967 include, St-Jean, St-Jérôme, Valleyfield, Drummondville and to a lesser extent, Hull. All of which incidentally, except for Hull, have a significant proportion of their labour force employed in the clothing and textile industries. Those large centres which experienced problems of growth and development in their manufacturing sectors, in the 1960's, included, Shawinigan, Cap-de-la-Madeleine, Chicoutimi, and Trois-Rivières, three of which find one of their major employment sectors in the paper and related group of industries. (Chicoutimi excepted).

Summary: Population Groups and Manufacturing Activity

So far the analysis has uncovered several features of the relationship between centre size and manufacturing activity. First, over the broad spectrum of the five population groups, the overriding trend seems to be towards greater magnitude of manufacturing with greater population size. This relationship can be easily determined by estimating the average magnitude of the first group, (under 5,000 persons), and comparing it with the estimated average magnitude of the last group, (25,001-100,000 persons). The ratio is approximately 4:1. However, within each of the five groups, the range of magnitude of the centres is nevertheless quite wide, stretching from centres with well below average magnitude of manufacturing to well above average, in virtually every group.

Clearly, on an individual basis no definite fixed relationship exists between population of a centre and its magnitude of manufacturing, though in the context of the universe of urban centres one would consider it likely that a centre with large population would possess a greater magnitude of manufacturing than a smaller centre.

Similarly, diversification of manufacturing activity does not necessarily increase with city size, though on a percentage and absolute basis more large centres, (25,001-100,000), were classified as diversified or intermediate than small centres. The fact remains, however, generally speaking, that Québec is a region of highly specialized centres, and as such, these centres must cope with all the problems of growth and development that towns which base their manufacturing activity on one or two industries, face.

A third feature of the manufacturing centres of Québec did not seem to be associated with the population groupings as such, but rather seemed to transcend this artificial breakdown. It was noticed for example, that every one of the five major groups had centres specializing in paper and allied industries. What is more, in almost every one of these population groups, it was this particular category of centres, (i.e., those basing their manufacturing economy on the pulp and paper industry), which were often experiencing the most growth difficulty, in either absolute or relative terms. Even size, measured in terms of population or magnitude of manufacturing, had no bearing upon these primary resourced-based centres. Those centres, on the other hand, experiencing rapid growth, such as, St-Joseph-de-Sorel, Tracy, Valcourt, Cowansville, Sorel, Drummondville, etc., were usually associated with major activities in the direction of transportation equipment, machinery and/or clothing and textile industries, (all growth sectors in the Québec economy in the period 1961-1967).

Generally then, one outstanding feature of the growth of centres was indicated by Table III.13, that is; growth does not seem to be concentrated in any particular size of centre. All groups had centres that grew in both absolute and relative terms while others of the same class declined. On the other hand, what seems to exist is a situation where certain types of centres, (i.e., centres performing certain economic functions), have experienced greater relative economic growth, rather than a situation where a certain size, (population) of centre develops relative to centres of greater or lesser size.

The implication of this finding, of course, is quite far reaching, for it suggests a direct relationship between growth of sectors in the provincial economy and growth of particular specialized centres. It would seem worthwhile therefore, to examine the centres of Québec not in terms of their size (population) but rather in terms of their manufacturing magnitude and specialization. Only in this manner can one assess more accurately the relationship between growth centres and sectoral growth in the manufacturing economy of Québec.

(B) Manufacturing Activity: Centres of Similar Manufacturing Characteristics

Table III.20 in the appendix, groups centres of similar manufacturing characteristics according to their degree of manufacturing, (i.e., above or below average magnitude), as well as according to their specialization.[35] The purpose of presenting data in groups of this nature was to facilitate ready recognition of those centres which were greatly affected by sectoral growth in the Québec economy as a whole.

Not surprisingly, the largest employment sectors in Québec are also the economic bases of many of the region's municipalities. Particularly large is the number of centres specializing almost exclusively in paper and allied industries, (fourteen), or those which see the paper industry as being one of its leading sectors, (at least 22).

(i) Specialized Centres: Paper and Allied Industries:

The centres involved in paper and allied industries are among the largest manufacturing communities in the province. Trois Rivières, Shawinigan, Gatineau are examples. However, numerous smaller centres find their sole basis for existence in the production and manufacture of such goods, for example, Masson, Beaupré, Dolbeau. In other words, this group of industries covers the whole spectrum of city sizes, both in terms of population and magnitude of manufacturing. (see Tables III.17 and III.20 in the appendix. Actually, growth or decline of a sector in the region is bound to show up as growth or decline of that sector in some municipalities. It is of interest to discover, however, as a first objective, how few or how many centres are affected by general growth trends of particular industry groups.

35 See Chapter III, footnote 17.

The degree of reliance of many paper centres, even the larger ones, on this one manufacturing group, is, to say the least, considerable. There is little doubt that these towns grow and expand almost directly as the market for pulp and paper expands. Also, it will be noticed that although a few pulp and paper centres have declined absolutely in value added and/or employment between the period 1961-1967, relatively, their position, (magnitude), in the economy of Québec has been suffering even more at the hands of faster growing centres specializing in other activities. Indeed, well over one-third of the centres that showed relative declines in terms of their manufacturing activity in the period 1961-1967 were specialized in paper and related industries, (15 of 40 centres or 37% of all declining centres). Or, to put it another way, 15 of the 22 centres specializing in paper industries, (almost 70%), experienced relative declines in the period 1961-1967. This compares with a regional relative decline rate of centres equal to 43 per cent.

(ii) Specialized centres: Clothing and Textile Industries

The clothing and textile industries represent two of the larger sectors of the manufacturing economy of Québec and as a result many centres in the region are specialized in these activities. (see Table III.20 addendum). On the whole, centres which concentrate on these particular sectors seem to possess a generally wider variety of manufacturing activities than urban agglomerations specializing in other activities. For example, the diversified centres of Granby, Sherbrooke, Joliette and St-Jérôme all have significant proportion of their manufacturing labour force involved in either the textile or clothing industries. Similarly, the large manufacturing centres of Drummondville, Grand-Mère and St-Jean, are fairly diversified in terms of the number of manufacturing groups which are active in these centres, though their dominant industry is clearly of the clothing/textile group.

Like centres which concentrate their activities in pulp and paper industries, those which are dominated by either the clothing or textile industries are of a wide range of sizes. Unlike the pulp and paper centres, however, no growth trend is apparent among these towns. To illustrate, of the 22 centres classified as being variously specialized in the textile and clothing industries, (not including the most diversified centres of Joliette, etc.), eleven have experienced relative decreases in their magnitude of manufacturing whereas the other eleven have experienced relative increases in magnitude. (See Table III.20 in the appendix at the end of the Chapter.

Indicative of the economic health of these centres, however, is the fact that only one centre in this group, Magog, has experienced any sort of absolute decline in either its value added or employment during this same time period. The relative decline in the magnitude of many of these centres reflects on the other hand, a slower growth rate in these centres than in the region as a whole.

Four other smaller groups of specialized centres are worthy of closer examination. The largest of these groups concentrates its activities on the wood and wood products industries. Fully fourteen centres find their activities focused on these, and related industries. Several interesting features of centres in this group are noteworthy.

(iii) Specialized Centres: Wood and Wood Products Industries

All centres with a majority of their manufacturing labour force employed in wood and wood products industries are well below average in their magnitude of manufacturing. The centres of greatest and least magnitude include:

TABLE III.14

Specialized Centres: Wood and Wood Products Industries

Greatest Magnitude 1967		Least Magnitude 1967	
Centre	Magnitude	Centre	Magnitude
Lachute	.599	Chibougamau	.030
Ste-Marie	.572	Amos	.019
Princeville	.495	Malartic	.004

Like most other centres in Québec, these urban municipalities are highly specialized.[36]

All three larger manufacturing centres mentioned above, Ste-Marie, Lachute and Princeville, however, have a significant proportion of their manufacturing labour force employed in other sectors. The size, (magnitude), of these three centres therefore, is actually not indicative of the average size of centres solely dependent on the wood and wood products industries. The smaller centres listed above are more representative of the average size of centres involved in these activities.

36 Because of the nature of the commodity which they produce, these centres can be called strongly resource-base oriented.

Overall growth trends among the fourteen centres specializing in wood and wood products proved on the whole, inconclusive. The wood and wood products industry saw, in 1967, a sharp decrease in percentage employed in the Québec region after impressive growth in the 1961-1965 period, (see Table III.10). If 1967 represented a slow year in the growth of this industry, it no doubt affected the relative growth situations of the particular centres involved in such production. However, the fact remains that of the fourteen centres which specialize to a high degree in wood and wood products industries, only eight experienced relative increases in their magnitude of manufacturing. Of the remaining six centres, some also did witness an absolute as well as a relative decline in employment or value added by their manufacturing over the same time period, (Val-d'Or, Mont-Laurier, Amos, for example).

(iv) Specialized Centres: Food and Beverage Industry

A number of centres, find their major manufacturing employer to be related to the food and beverage industry. For the most part these municipalities are quite small in terms of their magnitude of manufacturing. Indeed, two of the larger centres in the group, Ste-Marie and Thetford Mines, have at least equivalent numbers of their manufacturing workers employed in other sectors, (see Table III.20 addendum).

Outside these two communities the largest centre specializing solely in the food and beverage industry is Berthierville, (magnitude, .416 in 1967), with the next largest centre being Chicoutimi, (magnitude, .198 in 1967). More typical, however, of the size of centres specializing in such production is Rouyn, (.062), Hauterive, (.036) and Ste-Agathe-des-Monts, (.023).

Generally, the centres associated with specialization in food and beverage production also employ some manufacturing labour force in various other manufacturing groups, particularly in the more ubiquitous sectors such as printing and publishing, non-metallic mineral proudction and furniture and fixture industries. This general state of affairs is indicated by the values of the refined index of diversity for some of the relevant municipalities. For example:

Centre	Index Diversities
Chicoutimi	725.9
Hauterive	737.7
Berthierville	686.5

Though these values are high and do suggest specialization, nevertheless they are not indicative of "one-resource" towns.

Generally, growth among centres of this group has been relatively slow. Five of the nine centres have experienced relative decline in their magnitude of manufacturing over the 1961-1967 period in spite of the fact that only two centres, Chicoutimi and Rouyn, have experienced absolute declines in their employment. Both these centres, incidentally, retained gains in value added by their manufacturing activity over the same period. Bécancour and Hauterive experienced the most rapid growth of centres specializing in the production of food and beverage products. It is difficult to say, for these or any other centre, however, whether this growth was due to this particular industrial sector or to the development of other sectors within these municipalities.

Finally, two other categories of centres will be examined; those specializing in primary metal activities, and those more unique centres which have found their "raison d'être" through production in regionally less significant sectors of the manufacturing economy.

(v) Specialized Centres: Primary Metal Industries

For those centres whose activities centre upon primary resources industries, there is a wide range of sizes of centres stretching from the third largest manufacturing centre in the province Arvida has the highest magnitude, 4.55 in 1967, and the smaller manufacturing municipalities of Thetford Mines, (.242), and Mont-Joli, (.237), are at the bottom of the scale, (see Table III.13 addendum).

Some regionally significant activity in this sector also takes place in the more diversified centres of Trois-Rivières, Shawinigan, and Cap-de-la-Madelaine, all of which of course are well above average magnitude in terms of their manufacturing production. But for the most part, centres which are oriented towards large scale primary metal production are very highly specialized. For example, below are listed the major primary metal processing centres in Québec,

with their respective diversity indexes.

Centre	Diversity Index
Arvida	944.9
Alma	868.5
Baie-Comeau	917.8
St.-Joseph-de-Sorel	932.8
Noranda	961.8

The least specialized of the centres in this group is the town of Thetford Mines, (diversity index, - 649.7). This low value is quite exceptional, however, for such centres. Typically, centres of this type are relatively large in terms of their magnitude of manufacturing and are usually very highly specialized.

The internal stimulation of external economies to promote development in other sectors seems to be badly lacking in these towns. The most outstanding feature of centres with this manufacturing orientation of course, is the fact that they typify the legendary "company" town. These centres are almost completely dependent on this one resource for their continued existence. Similarly, growth or decline of these centres is not so much a reflection of any sort of inner dynamism generated within the centre and its economic hinterland, but rather growth or decline of such a centre reflects the economic conditions of, for example, the world nickel market and so on. It is not the growth or decline of a manufacturing centre that is assessed then, so much as the growth or decline of a firm or industry. Besides, the problem for these centres is not one of growth but rather of diversification.

(vi) Specialized Centres: Miscellaneous Industries

There are some rather unique centres in Québec designated in Table III.20 in the appendix which find their manufacturing orientation in the direction of less regionally important activities. Often, as in the case of a larger centre, these special activities represent only one of two or three leading sectors in the economy of a centre (e.g. Shawinigan).

Four communities are quite large in terms of their magnitude of manufacturing, Tracy, Cowansville and St-Joseph-de-Sorel and Shawinigan. However, the remaining 12 centres, Tracy, Valcourt, Waterloo, Princeville, Iberville, Thurso, Rimouski, Beauharnois, St.-Georges Ouest, Montmagny, Drummondville South and Chicoutimi North, are of below average magnitude, (Table III.20 in the appendix).

Without getting into a detailed analysis of each centre, it would be worthwhile to point out some of the trends associated with municipalities of this category. Among this group were some of the faster growing manufacturing centres in the province from 1961 to 1967, notably Valcourt and Tracy, (transport equipment industries), St-Joseph-de-Sorel, (machinery industries), and Knowlton, (chemical and Chemical products industries). None of the centres of this last category are very highly populated. The largest by far is Rimouski with population of 20,330 in 1966 and the second largest is Chicoutimi North with a population of 12,814 in 1966. However, the magnitude of manufacturing of these centres indicates an above average location quotient, i.e. definitely above expected employment in manufacturing relative to their population. This is the situation in a good many of the communities of this size-type (for example, Valcourt, St-Joseph-de-Sorel, Knowlton). Here too, however, specialization in one or two activities is the rule. Should economic conditions change so that growth is no longer favoured in each of their specialities, these centres may have to face a situation of relative decline or stagnation. However, between the period 1961-1967, only three of these specialized centres, Brownsburg, Buckingham, (chemical and chemical product industries), and Bagotville, (non-metallic mineral production), suffered relative decline in terms of their magnitude of manufacturing. Of those three listed above, only one, Buckingham, suffered any absolute decline. To restate, some of the centres of this last category grew at phenomenal rates, most notable are: Valcourt, Knowlton, Tracy, Drummondville South, Point-Gatineau, while many more continued to grow at a pace well above average, for example, Sept-Îsles, Princeville, Iberville, Matane and Waterloo.

(C) Manufacturing Activity: Regions of Québec

Table III.15 and Maps III.9 to .17 were specifically designed to enable the study to assess the geographical pattern of manufacturing activity in the Québec region. Table III.15 presents in tabular form, selected statistics on population, magnitude, and specialization according to the sub-regions first outlined in the previous Section, B.[36]

For the largest region, the Montréal-Québec-Sherbrooke triangle, only the five highest and five lowest values of the selected statistics are given for all centres, since, on the whole, only a few centres are involved in each. The maps have been designed as supplements to the accumulated data given in Tables III.10 - III.19 in the appendix. Though reference will not be made to all these maps directly, they nevertheless, present a visual alternative to the tabulated statistics at the end of this section. (Of course, the one advantage maps have over tabulated data is that they give the reader the spatial distribution of, in this case, manufacturing activity).

(i) Montréal-Québec-Sherbrooke Triangle:

According to Map III.12, between 1961 and 1966, the greatest percentage change in value added occurred in counties immediately surrounding and including the Census Metropolitan Area of Montréal which includes; Deux-Montagnes, L'Assomption, Terrebonne, Chambly, Beauharnois, Rouville, Richelieu and Iberville counties. Selected centres studied that are located in these counties include St-Jérôme, St-Thérèse, Terrebonne, Iberville, Chambly, Beloeil, Sorel, St-Joseph-de-Sorel and Tracy.[37] Another relatively fast growing area was associated with the Eastern Townships, including the counties of; Levis, Dorchester, Beauce, Mégantic, Compton, Frontenac and others. Selected centres which are located in this area include, Ste-Marie, St-Georges and St-Georges Ouest, Thetford Mines, Plessisville, Lac-Mégantic, Victoriaville as well as part of the C.M.A. of Québec City.

36 See Page 302 Chapter III.

37 Chambly, Terrebonne, St-Thérèse, Beloeil are now part of the C.M.A. of Montréal. Sorel, St-Joseph-de-Sorel and Tracy are now part of the C.M.A. of Sorel (1971).

TABLE III.15

QUEBEC GEOGRAPHIC REGIONS

(A) MONTREAL - QUEBEC SHERBROOKE TRIANGLE

		POPULATION		MAGNITUDE		INDEX OF SPECIALIZATION		REFINED INDEX OF DIVERSITY	
		Centre	Value	Centre	Value	Centre	Value	Centre	Value
5 largest values	1.	Québec City	413,397	Québec City	11.42	Trois-Rivières	1.750	Québec City	67.2
	2.	Sherbrooke	75,690	Trois Rivières	4.97	Joliette	1.799	St-Jérôme	320.4
Total No.	3.	Trois-Rivières	57,540	Sherbrooke	4.39	Québec City	1.895	Joliette	353.9
of centres	4.	Granby	34,349	Drummondville	3.57	Grand'Mère	2.050	Sherbrooke	397.3
= 53	5.	Shawinigan	30,777	Granby	3.31	Shawinigan S.	2.178	Iberville	398.5
5 lowest values	49	Princeville	3,589	Bécancour	.109	Valcourt	18.264	Knowlton	959.4
	50	Beaupré	2,926	Beloeil	.054	Knowlton	21.170	St-Georges W.	959.4
	51	Bromptonville	2,826	Shawinigan S.	.052	Windsor	25.502	Beaupré	971.3
	52	Knowlton	1,486	Drummondville S.	.044	Asbestos	29.182	Valcourt	995.5
	53	Valcourt	1,114	Ste-Agathe-des-monts	.023	Brownsburg	31.169	Brownsburg	999.6
(B) QUEBEC WEST									
No. of centres = 9		Hull	60,176	Gatineau	1.84	Hull	2.550	Hull	707.4
		Gatineau	17,727	Hull	1.69	Gatineau	4.429	Thurso	820.7
		Pointe-Gatineau	11,053	Thurso	.386	Masson	8.404	Buckingham	878.6
		Aylmer	7,231	Masson	.330	Thurso	10.804	Gatineau	958.1
		Buckingham	7,227	Buckingham	.228	Buckingham	17.611	Mont-Laurier	965.4
		Maniwaki	6,404	Maniwaki	.218	Mont-Laurier	19.842	Maniwaki	967.7
		Mont-Laurier	6,140	Mont-Laurier	.171	Maniwaki	20.847	Pointe-Gatineau	985.6
		Thurso	3,332	Pointe-Gatineau	.130	Pointe-Gatineau	48.429	Masson	988.1
		Masson	2,249	Aylmer	.000	Aylmer	N.A.	Aylmer	1000.0

(C) CHICOUTIMI - JONQUIÈRE AND AREA

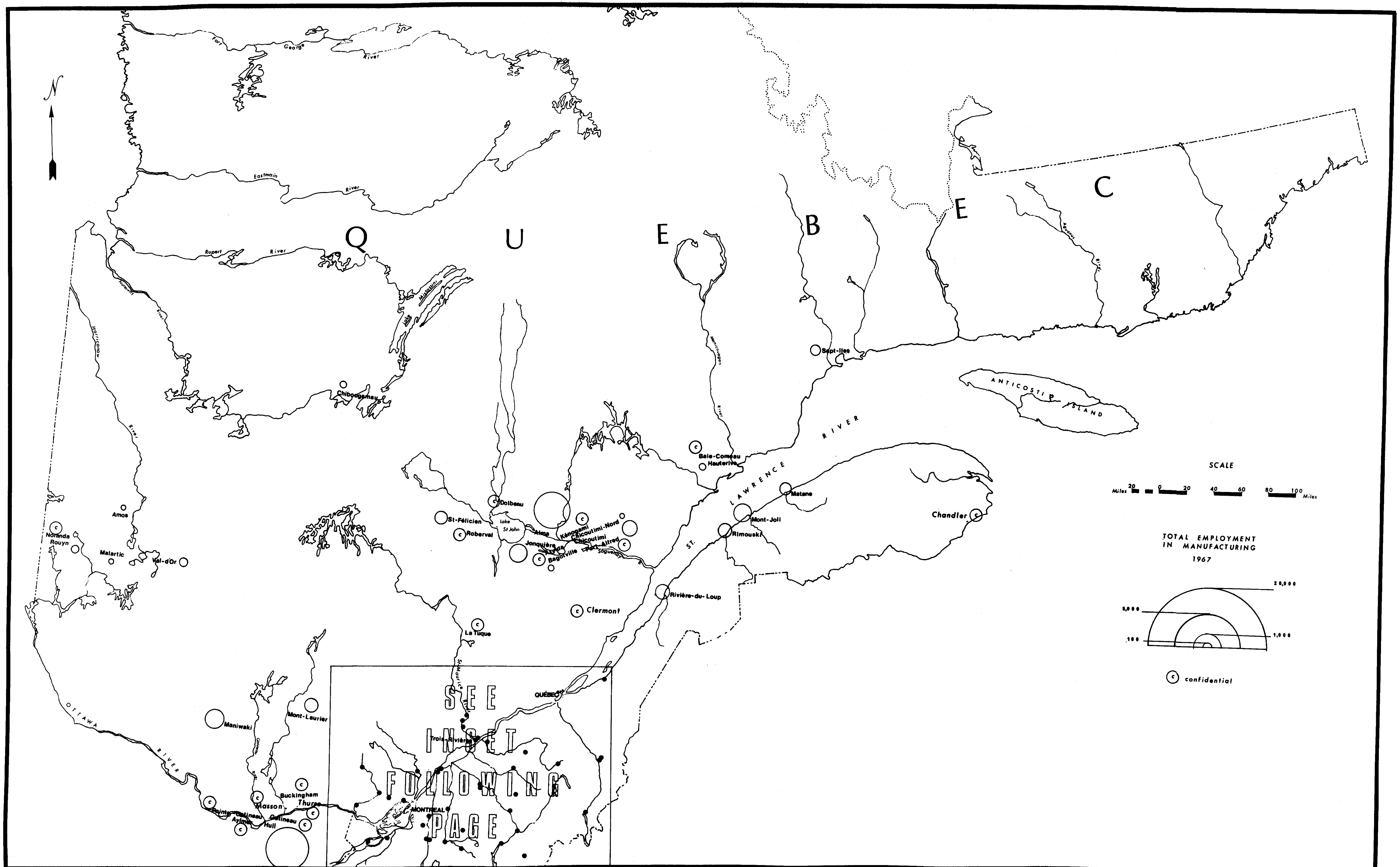
	POPULATION		MAGNITUDE		INDEX OF SPECIALIZATION		REFINED INDEX OF DIVERSITY	
No. of Centres = 13	Chicoutimi	32,526	Arvida	4.55	Alma	3.807	Chicoutimi	725.9
	Jonquière	29,663	Alma	1.69	Jonquière	3.877	Chicoutimi N.	825.8
	Alma	22,195	La Tuque	1.23	Port-Alfred	4.708	Alma	868.5
	Arvida	15,342	Kénogami	1.10	La Tuque	4.768	Roberval	935.2
	La Tuque	13,554	Port-Alfred	.630	Kénogami	5.187	Chibougamau	938.9
	Chicoutimi N.	12,814	Dolbeau	.469	Chicoutimi	5.377	Jonquière	943.5
	Kénogami	11,534	Jonquière	.349	Chicoutimi N.	9.757	Bagotville	959.9
	Port-Alfred	9,551	Roberval	.198	Arvida	10.415	Dolbeau	960.7
	Chibougamau	8,902	Chicoutimi	.198	Roberval	13.933	St-Félicien	961.5
	Roberval	8,552	St-Félicien	.123	Chibougamau	14.546	Port-Alfred	965.3
	Dolbeau	6,610	Chibougamau	.030	Bagotville	17.476	La Tuque	966.9
	Bagotville	5,876	Bagotville	.022	Dolbeau	19.073	Kénogami	985.6
	St-Félicien	5,104	Chicoutimi N.	.011	St-Félicien	19.073	Arvida	994.9

(D) QUEBEC EAST

No. of Centres = 9	Rimouski	20,330	Baie-Comeau	1.871	Rivière-du-Loup	1.862	Sept-Îles	603.2
	Sept-Îles	18,950	Clermont	.346	Baie-Comeau	3.667	Rivière-du-Loup	674.4
	Baie-Comeau	12,236	Chandler	.328	Sept-Îles	3.767	Rimouski	700.2
	Rivière-du-Loup	11,637	Mont-Joli	.237	Matane	4.932	Hauterive	737.7
	Hauterive	11,366	Rivière-du-Loup	.174	Chandler	4.985	Matane	756.6
	Matane	11,109	Rimouski	.151	Clermont	5.566	Mont-Joli	791.4
	Mont-Joli	6,366	Matane	.115	Hauterive	6.498	Baie-Comeau	917.8
	Chandler	3,608	Sept-Îles	.091	Rimouski	7.476	Chandler	980.3
	Clermont	3,175	Hauterive	.036	Mont-Joli	8.893	Clermont	997.7

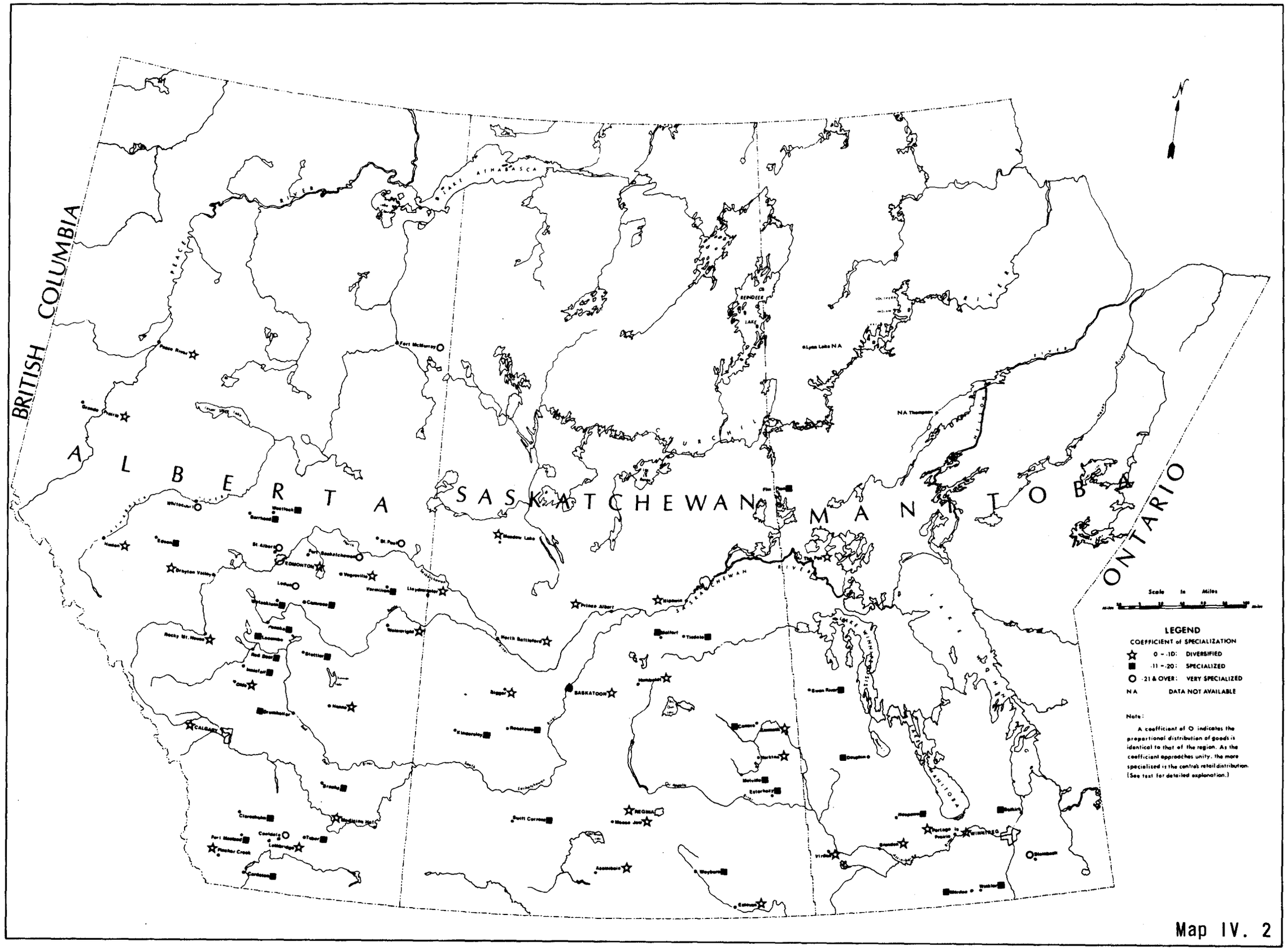
(E) NORANDA - VAL-D'OR AXIS

	POPULATION		MAGNITUDE		INDEX OF SPECIALIZATION		REFINED INDEX OF SPECIALIZATION	
Total No. of Centres = 5	Rouyn	18,581	Noranda	.583	Val-d'Or	2.178	Amos	815.6
	Val-d'Or	12,147	Rouyn	.062	Rouyn	3.640	Rouyn	835.8
	Noranda	11,521	Val-d'Or	.051	Amos	7.917	Val-d'Or	848.1
	Amos	6,838	Amos	.019	Noranda	8.636	Noranda	961.8
	Malartic	6,606	Malartic	.004	Malartic	9.793	Malartic	970.7



Q U E B E C
N
Fort George River
Eastmain River
Rupert River
Lake Mistassini
Chibougamau
Manicouagan River
Sept-Iles
ANTICOSTI ISLAND
Baie-Comeau
Hauterive
ST. LAWRENCE RIVER
Matane
Mont-Joli
Rimouski
Chandler
Rivière-du-Loup
Clermont
Dolbeau
St-Félicien
Roberval
Lake St John
Alma
Kénogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Bagotville
Port-Alfred
Saguenay
La Tuque
St-Maurice
Amos
Noranda
Rouyn
Malartic
Val-d'Or
OTTAWA RIVER
Maniwaki
Mont-Laurier
Buckingham
Masson
Thurso
Gatineau
Hull
Aylmer
QUÉBEC
Trois-Rivières
MONTREAL
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
TOTAL EMPLOYMENT IN MANUFACTURING 1967
20,000
5,000
1,000
100
c confidential

COEFFICIENT of SPECIALIZATION RETAIL TRADE 1966

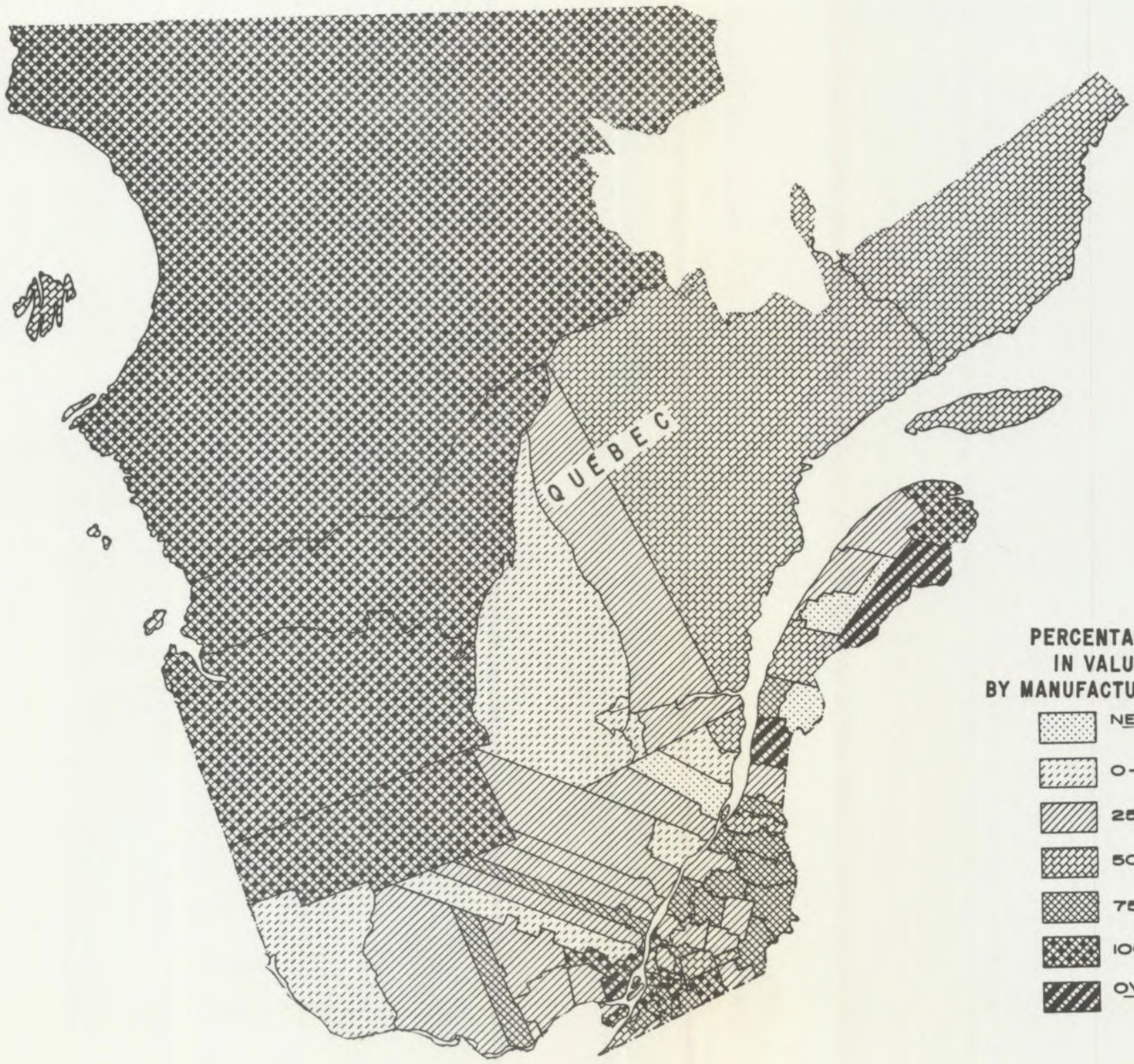


Map IV. 2

JN 780

CHANGE IN
MANUFACTURING ACTIVITY
BY COUNTY
OR
CENSUS DIVISION

1961–1966



VALUE ADDED BY MANUFACTURING 1967

0 - 999,999

1,000,000 - 4,999,999

5,000,000 - 9,999,999

10,000,000 - 14,999,999

15,000,000 - 49,999,999

50,000,000 - 99,999,999

> 100,000,000

In Dollars

VALUE ADDED/ MANUFACTURING WORKER

$ 20,000 +

$ 15,001 - 20,000

$ 12,501 - 15,000

$ 10,000 - 12,500

$ 7,500 - 10,000

$ 5,000 - 7,500

$ 2,500 - 5,000

$ 0 - 2,500

Beaupré

Montmagny

QUÉBEC

Donnacona

Grand 'Mère

Shawinigan

Shawinigan-Sud

Trois-Rivières

Cap-de-la-Madeleine

Bécancour

Ste-Marie

Louiseville

Plessisville

Princeville

St.Georges

St.Georges Ouest

Berthierville

Sorel

Victoriaville

Thetford Mines

Ste-Agathe

Joliette

St-Joseph-de-Sorel

Tracy

Drummondville

St-Jérome

Drummondville-Sud

Brownsburg

Terrebonne

Asbestos

Ste-Thérèse-de-Blainville

Lachute

Acton Vale

St-Hyacinthe

Windsor

Lac Mégantic

MONTREAL

Beloeil

Valcourt

East Angus

Chambly

Granby

Bromptonville

Waterloo

Sherbrooke

Beauharnois

St-Jean

Farnham

Magog

Iberville

Valleyfield

Knowlton

Cowansville

Coaticook

MAGNITUDE OF MANUFACTURING 1967

11.42

mean: 1.000 – 1.499

2.500 – 4.999

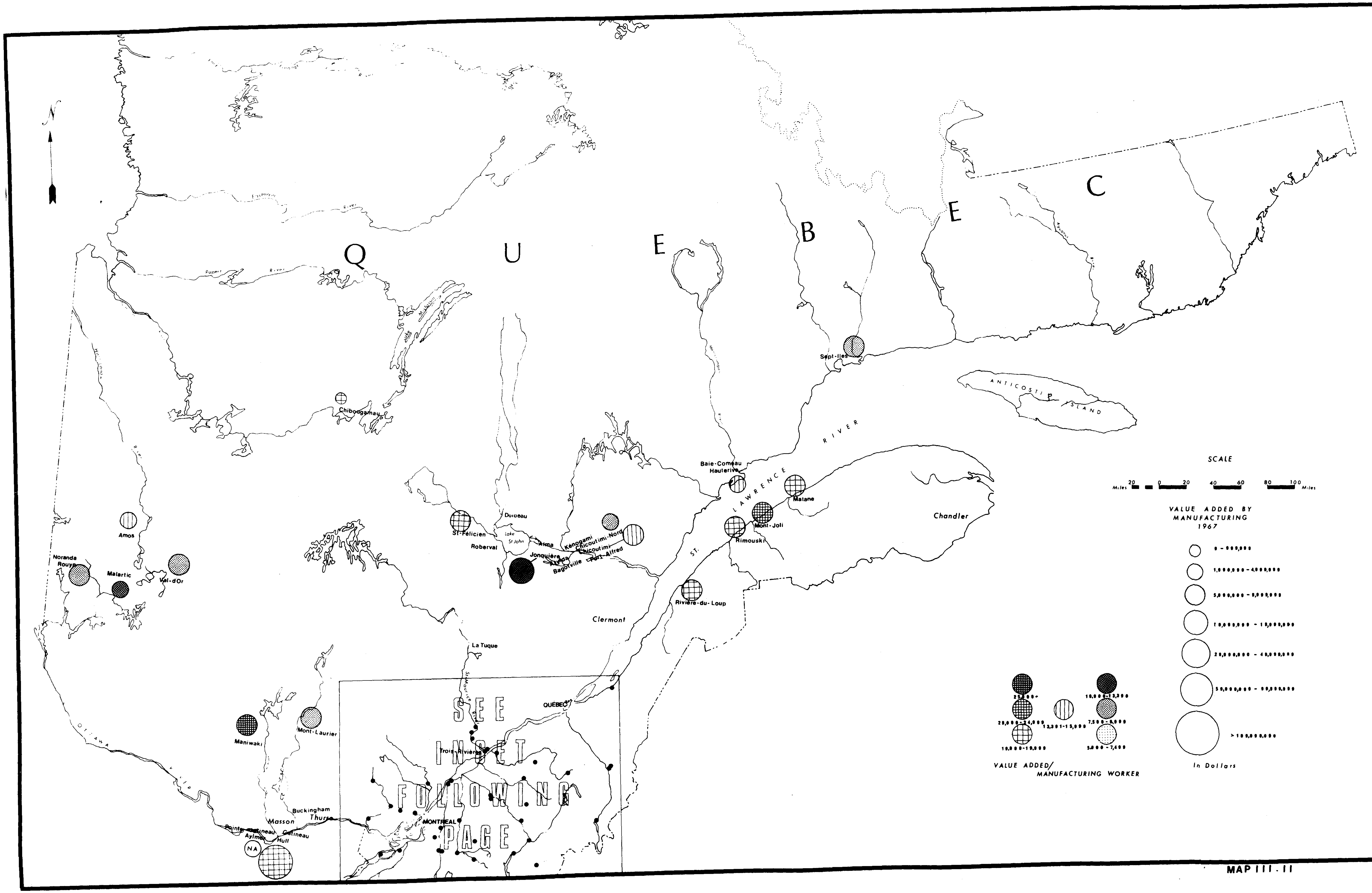
1.500 – 2.499

.100 – .299

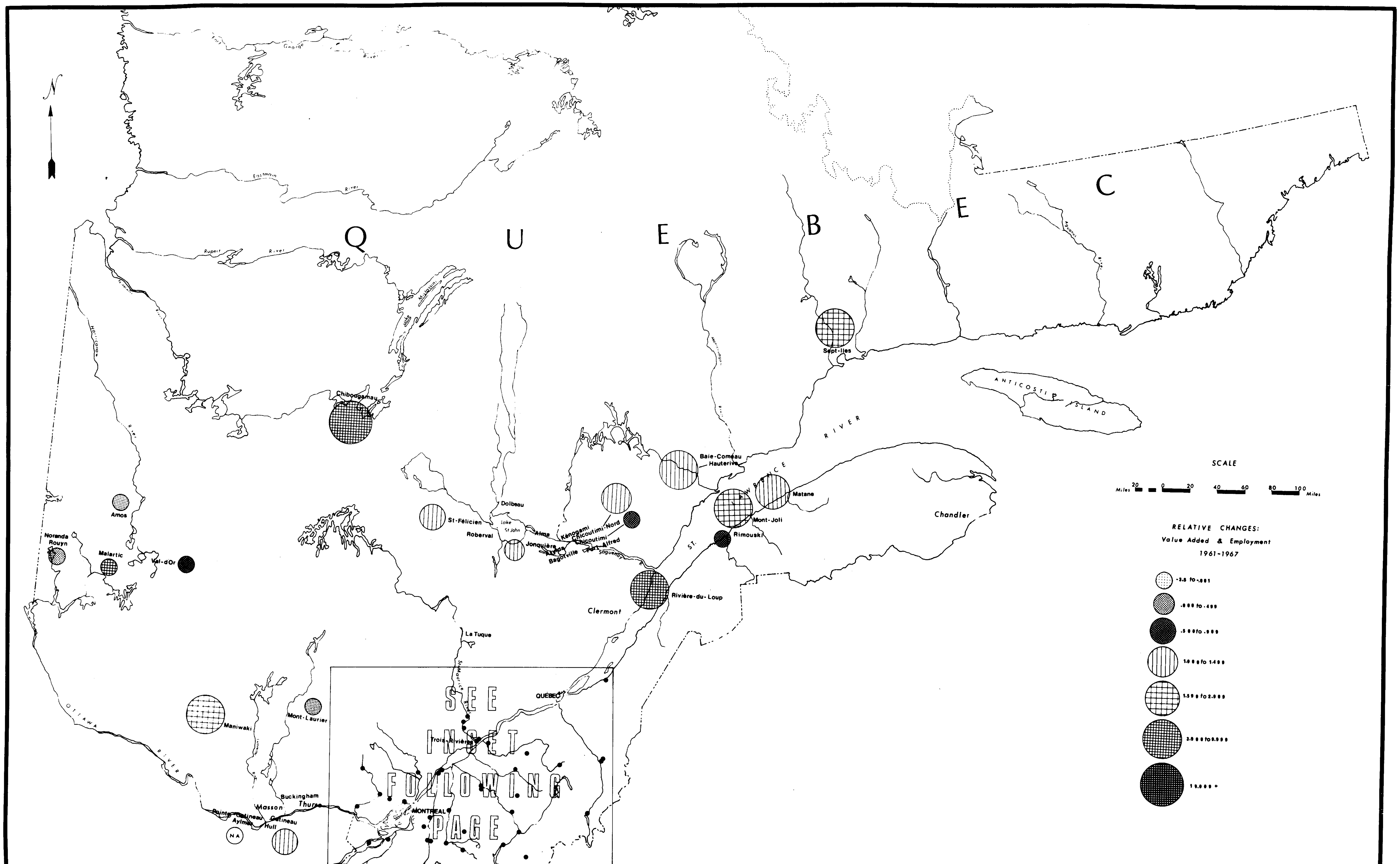
.500 – .999

.001 – .099

.300 – .499

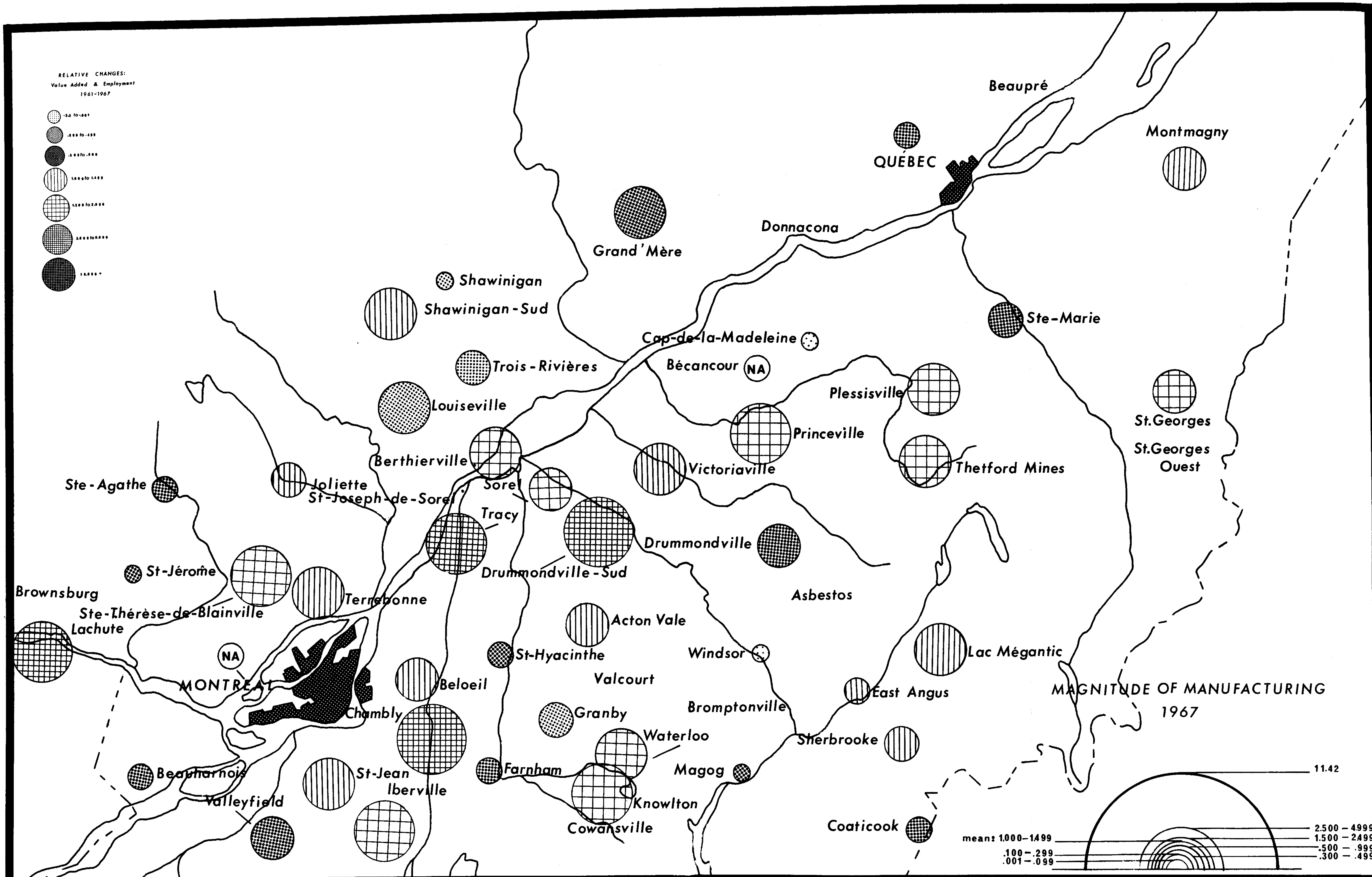

Q U E B E C
N
ANTICOSTI ISLAND
ST. LAWRENCE RIVER
Sept-Iles
Chibougamau
Baie-Comeau
Hauterive
Matane
Mont-Joli
Rimouski
Chandler
Dolbeau
St-Félicien
Roberval
Lake St John
Alma
Kenogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Bagotville
Port-Alfred
Amos
Noranda
Rouyn
Malartic
Val-d'Or
Rivière-du-Loup
Clermont
La Tuque
QUEBEC
Trois-Rivières
MONTREAL
Maniwaki
Mont-Laurier
Buckingham
Masson
Thurso
Pointe-Gatineau
Gatineau
Aylmer
Hull
NA
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
VALUE ADDED BY MANUFACTURING 1967
In Dollars
VALUE ADDED/ MANUFACTURING WORKER

MAP III-11



Q U E B E C
Eastmain River
Rupert River
ANTICOSTI ISLAND
ST. LAWRENCE RIVER
OTTAWA RIVER
Chibougamau
Sept-Iles
Baie-Comeau
Hauterive
Matane
Mont-Joli
Rimouski
Chandler
Rivière-du-Loup
Clermont
Dolbeau
St-Félicien
Roberval
Lake St John
Alma
Kénogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Bagotville
Port Alfred
Saguenay
Amos
Noranda
Rouyn
Malartic
Val-d'Or
La Tuque
QUÉBEC
Trois-Rivières
MONTREAL
Maniwaki
Mont-Laurier
Buckingham
Masson
Thurso
Pointe-Gatineau
Gatineau
Aylmer
Hull
NA
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
RELATIVE CHANGES:
Value Added & Employment
1961-1967
-3.5 to -.001
.000 to .499
.500 to .999
1.000 to 1.499
1.500 to 2.999
3.000 to 9.999
10.000 +

MAP III.13


RELATIVE CHANGES:
Value Added & Employment
1961-1967
Beaupré
Montmagny
QUÉBEC
Grand'Mère
Donnacona
Shawinigan
Shawinigan-Sud
Ste-Marie
Cap-de-la-Madeleine
Bécancour
NA
Trois-Rivières
Plessisville
Louiseville
St.Georges
Princeville
St.Georges
Ouest
Berthierville
Victoriaville
Thetford Mines
Ste-Agathe
Joliette
St-Joseph-de-Sorel
Sorel
Tracy
Drummondville
St-Jérome
Drummondville-Sud
Brownsburg
Terrebonne
Asbestos
Ste-Thérèse-de-Blainville
Lachute
Acton Vale
NA
St-Hyacinthe
Windsor
Lac Mégantic
MONTREAL
Beloeil
Valcourt
East Angus
MAGNITUDE OF MANUFACTURING
1967
Chambly
Granby
Bromptonville
Waterloo
Sherbrooke
Beauharnois
St-Jean
Farnham
Magog
Iberville
Knowlton
Valleyfield
Cowansville
Coaticook
11.42
2.500 - 4.999
means 1.000-1.499
1.500 - 2.499
.500 - .999
.100 - .299
.300 - .499
.001 - .099

Of the remaining counties not examined in the Montréal-Québec-Sherbrooke area, most have grown 25-49.9 per cent over the period 1961-1966. (Map III.12). Counties of this group include, Wolfe, Drummond, Yamaska, Stanstead, St-Hyacinthe. Only one county in this region actually suffered an absolute decrease in value added by its manufacturing activity in the period 1961-1966. This was the county of Montmorency of which the main manufacturing centre is Beaupré.

As Table III.18 and Map III.16 indicate, the Montréal-Québec-Sherbrooke triangle contains the most diversified manufacturing centres in the province. Among them are the communities of Joliette, Québec City (C.M.A.), St-Jérôme, Sherbrooke, and Granby. The region, however, is not without its specialized centres, in fact, in absolute terms, most of the centres are quite highly sspecialized. Most notable are the larger centres of St-Joseph-de-Sorel, Tracy and Valcourt. The dominance of this region in the manufacturing economy of Québec has already been mentioned in an earlier section. The fact that nine of the ten largest manufacturing centres outside Montréal are within this area testifies to this. It would involve another study to go into detail about each centre in this complex region, therefore, it would seem more logical to list briefly the main manufacturing features of this area.

1. Without a doubt the Montréal-Québec-Sherbrooke area represents the most heavily industrialized area in the province.
2. The size of centre, and degree of diversity associated with these centres varies very widely (Maps III.14 - III.16).
3. The leading manufacturing groups in this region include, textile, paper and allied industries, clothing, food and beverage and transport equipment industries. (Table III.20 addendum).
4. The fastest growing centres in this region include:
    a) The C.M.A. of Sorel[38]
    b) Valcourt and Knowlton
    c) St-Jean, St-Jérôme, Québec City, Sherbrooke[39]
    d) Victoriaville and Cowansville[40]

---

38 C.M.A. of Sorel includes the towns of Tracy, St-Joseph-de-Sorel and Sorel

39 Very large and diversified centres whose growth rate in absolute terms have to be considered significant

40 Two significant manufacturing centres specializing in clothing and textiles

PER CENT CHANGE
1961 - 1967

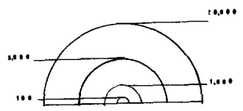
> 100.0	0.0 to −19.9
50.0 to 100.0	−20.0 to −49.9
20.0 to 49.9	−50.0 to −100.0
0.1 to 19.9	> −100.0

Beaupré
Montmagny
Donnacona
Grand'Mère
Shawinigan
Shawinigan-Sud
Ste-Marie
Cap-de-la-Madeleine
Bécancour (NA)
Trois-Rivières
Louiseville
Plessisville
Princeville
St.Georges
St.Georges Ouest
Thetford Mines
Victoriaville
Berthierville
Sorel
Joliette
St-Joseph-de-Sorel
Tracy
Ste-Agathe
Drummondville
St-Jérôme
Drummondville-Sud
Brownsburg
Terrebonne
Asbestos
Ste-Thérèse-de-Blainville
Lachute
Acton Vale
St-Hyacinthe
Windsor
Lac Mégantic
(NA)
MONTREAL
Beloeil
Valcourt
Bromptonville
East Angus
Chambly
Granby
Waterloo
Sherbrooke
Beauharnois
St-Jean
Iberville
Farnham
Magog
Valleyfield
Knowlton
Cowansville
Coaticook

MAGNITUDE OF MANUFACTURING
1967

11.42
mean: 1.000–1.499
2.500 – 4.999
1.500 – 2.499
.500 – .999
.300 – .499
.100 – .299
.001 – .099

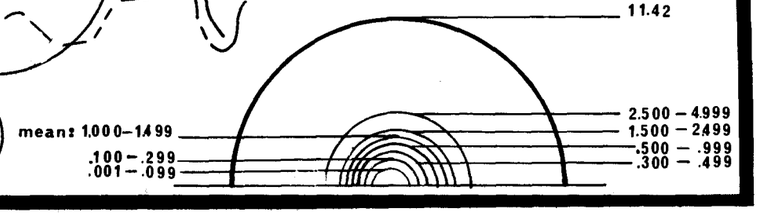
TOTAL EMPLOYMENT
IN MANUFACTURING
1967



(c) confidential

Beauprè e
Montmagny
QUEBEC
Donnacona
Grand Mère
Shawinigan
Shawinigan-Sud
Ste-Marie
Cap-de-la-Madeleine
Bécancour
Trois-Rivières
Plessisville
Louiseville
St.George
St.Georges
Ouest
Princeville
Victoriaville
Thetford Mines
Berthierville
Sorel
Joliette
St-Joseph-de-Sorel
Tracy
Ste-Agathe
Drummondville
St-Jérôme
Drummondville-Sud
Asbestos
Brownsburg
Terrebonne
Ste-Thérèse-de-Blainville
Lachute
Acton Vale
Windsor
Lac Mégantic
St-Hyacinthe
Valcourt
MONTREAL
Beloeil
East Angus
Bromptonville
Granby
Chambly
Waterloo
Sherbrooke
Beauharnois
St-Jean
Iberville
Farnham
Magog
Valleyfield
Knowlton
Coaticook
Cowansville

MAGNITUDE OF MANUFACTURING
1967



e) Plessisville, Waterloo, Princeville, Iberville [41]

f) Thetford Mines

g) Drummondville S., Point-Gatineau, and Chibougamau[42]

5. Those areas or centres experiencing the most growth difficulties are as follows: Trois-Rivières, C.M.A. and Shawinigan[43]

Magog, Windsor, Donnacona, Beaupré, Bromptonville, Beauharnois and Coaticook[44]

6. The problems of growth and development of a centre in this region often go hand in hand with the problems of growth associated with an industry group or firm. This situation arises out of the high degree of specialization of many of the centres in the region. Clearly, diversification is needed, if many of these communities are to continue to grow and prosper in the future.

(ii) Québec West

Québec West is a region of few manufacturing centres, of which only two are large, and in which only one can be considered as possessing even a fair variety of industries. (see Maps III.9 - III.17).

On the one hand, Québec West has seven towns of small magnitude of manufacturing, all of which are specialized or highly specialized.[45] These communities of course represent by far the majority of centres in this region. They include Thurso, Masson, Buckingham, Point-Gatineau, Mont-Laurier and Maniwaki; the first three of which are truly "company towns". Pointe-Gatineau is a very interesting centre, for its relatively high population would suggest greater magnitude of manufacturing than it actually possesses, (table III.19).

---

41 All unique centres in a way; Plessisville and Waterloo have on a regional basis, unusual specializations in machinery and plastics respectively, while Princeville and Iberville are highly diversified for their size.

42 All small centres with small absolute increases showing large relative growth

43 Trois-Rivières C.M.A. include Cap-de-la-Madelaine

44 All medium sized, highly specialized centres, (one industry towns), many of which specialize in paper and allied products - see Table III.20 addendum

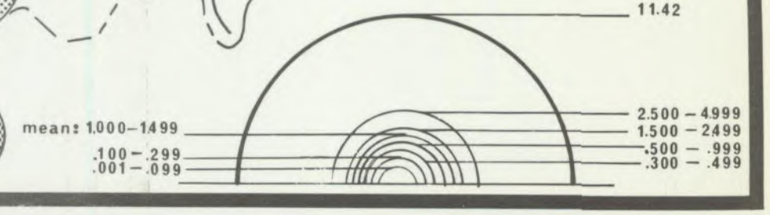
45 In terms of both the index of specialization and the refined indexes of diversity

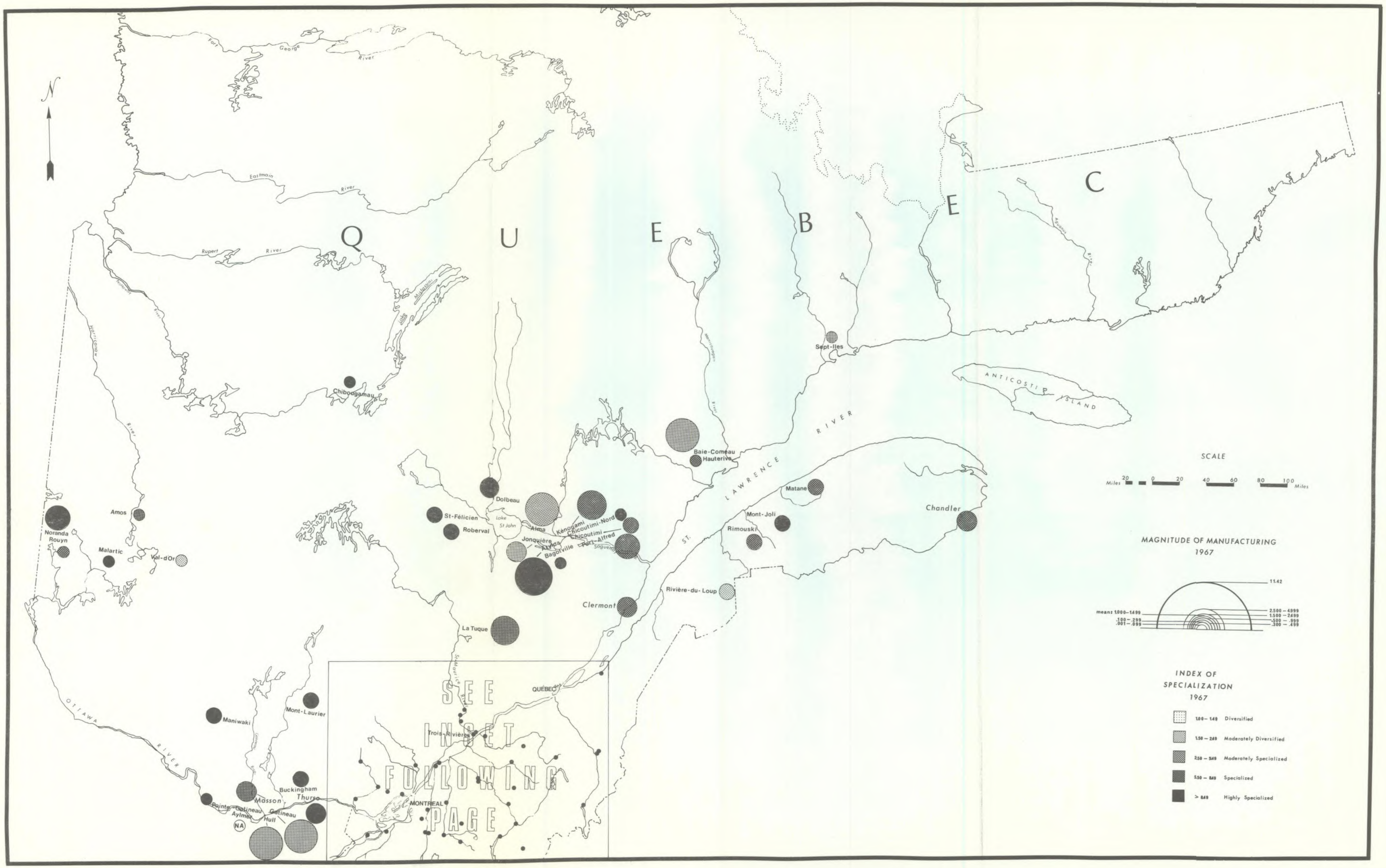
INDEX OF SPECIALIZATION 1967

1.00 – 1.49	Diversified
1.50 – 2.49	Moderately Diversified
2.50 – 4.49	Moderately Specialized
5.50 – 8.49	Specialized
> 8.49	Highly Specialized

Beaupré
Montmagny
QUEBEC
Donnacona
Grand 'Mère
Shawinigan
Shawinigan-Sud
Ste-Marie
Cap-de-la-Madeleine
Trois-Rivières
Bécancour
Plessisville
Louiseville
St.Georges
Princeville
St.Georges Ouest
Berthierville
Victoriaville
Thetford Mines
Ste-Agathe
Joliette
St-Joseph-de-Sorel
Sorel
Tracy
Drummondville
St-Jérôme
Drummondville-Sud
Brownsburg
Terrebonne
Asbestos
Ste-Thérèse-de-Blainville
Lachute
Acton Vale
St-Hyacinthe
Windsor
Lac Mégantic
NA
MONTREAL
Beloeil
Valcourt
East Angus
Chambly
Granby
Bromptonville
Waterloo
Sherbrooke
Beauharnois
St-Jean
Farnham
Magog
Iberville
Valleyfield
Knowlton
Cowansville
Coaticook

MAGNITUDE OF MANUFACTURING 1967




QUEBEC
N
Fort George River
Eastmain River
Rupert River
ANTICOSTI ISLAND
ST. LAWRENCE RIVER
OTTAWA RIVER
Chibougamau
Sept-Iles
Baie-Comeau
Hauterive
Matane
Chandler
Mont-Joli
Rimouski
Rivière-du-Loup
Amos
Noranda
Rouyn
Malartic
Val-d'Or
Dolbeau
St-Félicien
Roberval
Lake St John
Alma
Kénogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Port-Alfred
Bagotville
Clermont
La Tuque
QUÉBEC
Trois-Rivières
MONTREAL
Mont-Laurier
Maniwaki
Buckingham
Thurso
Masson
Pointe-Gatineau
Gatineau
Aylmer
Hull
NA
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
MAGNITUDE OF MANUFACTURING
1967
11.42
meanː 1.000–1.499
.100–.299
.001–.099
2.500 – 4.999
1.500 – 2.499
.500 – .999
.300 – .499
INDEX OF
SPECIALIZATION
1967
1.00 – 1.49 Diversified
1.50 – 2.49 Moderately Diversified
2.50 – 5.49 Moderately Specialized
5.50 – 8.49 Specialized
> 8.49 Highly Specialized

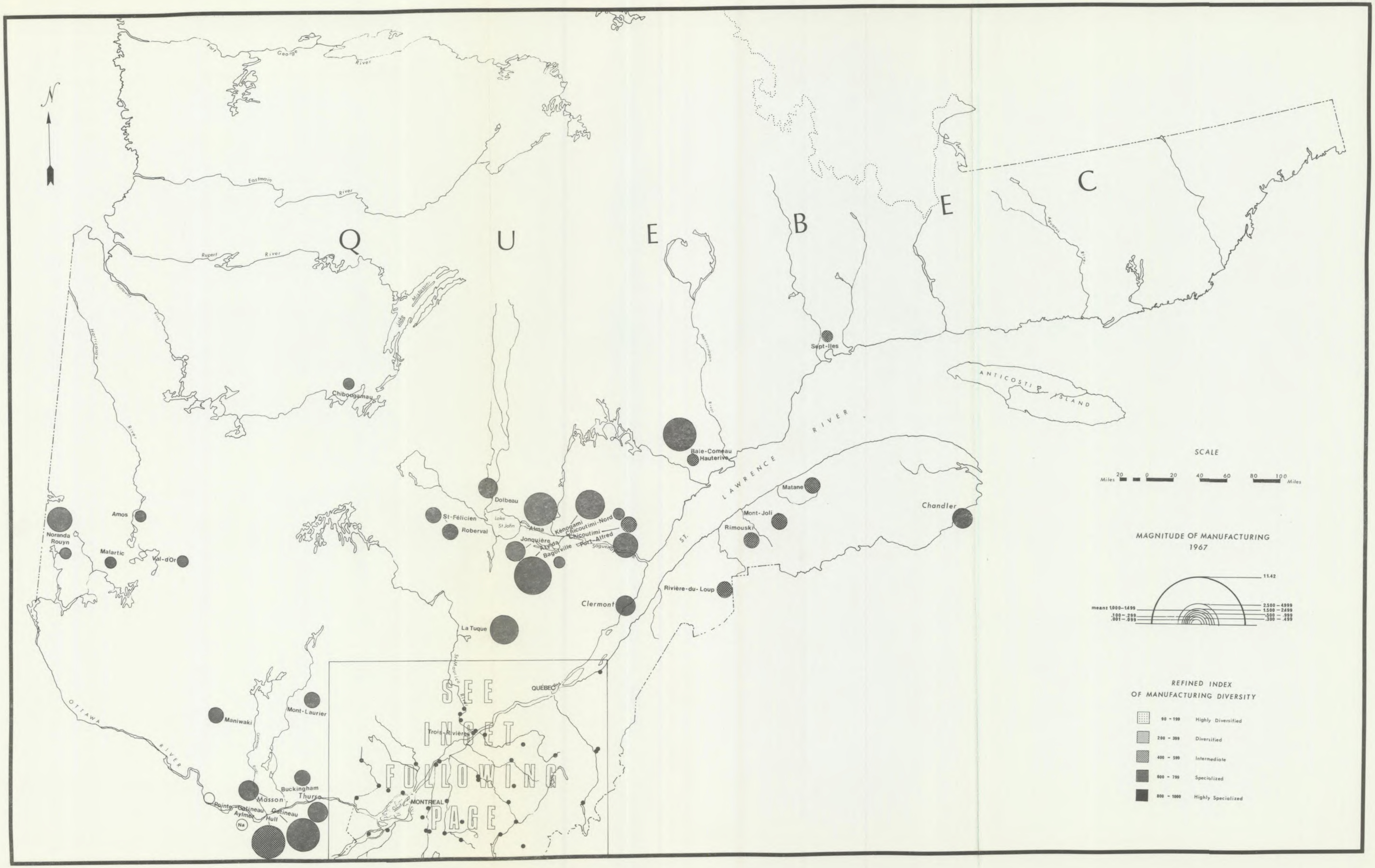
However, its position adjacent to, and between, the large centres of Hull and Gatineau may explain the town's role as being essentially residential, rather than industrial in nature. (See Map III.9)

Maniwaki and Mont-Laurier are of the same magnitudes approximately as Buckingham, though their industrial specialization is very different,-wood and wood products versus chemical and chemical products,-(see Table III.20). Both Mont-Laurier and Maniwaki are highly resource base oriented with both being major local service centres with a large trading area. (See Chapter V, Map V.2). Aylmer has to be considered as a most unique urban centre for its size, for it contains no manufacturing employment of any kind.

Gatineau and Hull are by far the two largest manufacturing communities in this area of Québec. Both have a high percentage of their labour force employed in paper and allied industries, although Gatineau is far more specialized in this respect than is Hull. Indeed, Hull, in terms of the number of different varieties of manufacturing activities operating within its boundaries, is by far the most diversified of all the centres in the region, (see Maps III.14-III.16). There is, however, one more interesting feature about Hull. As its location quotient indicates, (Table III.19 in the appendix), Hull is deficient in terms of its manufacturing employment, given its total population. This is likely a result of the same factors which finds also Aylmer and Pointe-Gatineau with very little in the way of manufacturing activity given their respective populations. The answer can most likely be found in the economic relationship these three centres have with the province of Ontario, and particularly with the metropolitan area of Ottawa.

(iii) Chicoutimi, Jonquière and Area

This area possesses the most interesting example of resource-oriented centres in Québec, for the thirteen communities of the area considered in this study, only one centre, Chicoutimi, the largest in terms of population and one of the smallest in terms of magnitude of manufacturing, has a diversity index of less than 800. (See Table III.18 addendum and Map III.16). All centres in this region are very highly specialized in spite of the fact that four centres are above average in their magnitude of manufacturing. (Map III.4). The leading manufacturing sectors of these communities are indicative of the nature of the


N
QUEBEC
Fort George River
Eastmain River
Rupert River
Chibougamau
Sept-Iles
ANTICOSTI ISLAND
Baie-Comeau
Hauterive
ST. LAWRENCE RIVER
Matane
Chandler
Mont-Joli
Rimouski
Rivière-du-Loup
Clermont
Dolbeau
St-Félicien
Roberval
Lake St John
Alma
Kenogami
Chicoutimi-Nord
Chicoutimi
Port-Alfred
Jonquière
Arvida
Bagotville
Saguenay
La Tuque
Noranda
Rouyn
Amos
Malartic
Val-d'Or
Maniwaki
Mont-Laurier
Buckingham
Thurso
Masson
Pointe-Gatineau
Aylmer
Gatineau
Hull
OTTAWA RIVER
SEE INSET FOLLOWING PAGE
QUÉBEC
Trois-Rivières
MONTREAL
SCALE
Miles 20 0 20 40 60 80 100 Miles
MAGNITUDE OF MANUFACTURING
1967
11.42
mean: 1.000–1.499
.100–.299
.001–.099
2.500 – 4.999
1.500 – 2.499
.500 – .999
.300 – .499
REFINED INDEX
OF MANUFACTURING DIVERSITY
90 - 199 Highly Diversified
200 - 399 Diversified
400 - 599 Intermediate
600 - 799 Specialized
800 - 1000 Highly Specialized

REFINED INDEX
OF MANUFACTURING DIVERSITY

90 - 199	Highly Diversified
200 - 399	Diversified
400 - 599	Intermediate
600 - 799	Specialized
800 - 1000	Highly Specialized

Beaupré
Montmagny
QUÉBEC
Donnacona
Grand'Mère
Shawinigan
Shawinigan-Sud
Ste-Marie
Cap-de-la-Madeleine
Bécancour
Trois-Rivières
Louiseville
Plessisville
St.Georges
Princeville
St.Georges Ouest
Berthierville
Victoriaville
Thetford Mines
Ste-Agathe
Joliette
St-Joseph-de-Sorel
Sorel
Tracy
Drummondville
St-Jérome
Drummondville-Sud
Asbestos
Brownsburg
Terrebonne
Ste-Thérèse-de-Blainville
Lachute
Acton Vale
St-Hyacinthe
Windsor
Lac Mégantic
NA
MONTREAL
Beloeil
Valcourt
East Angus
Chambly
Granby
Bromptonville
Waterloo
Sherbrooke
Beauharnois
St-Jean
Iberville
Farnham
Magog
Valleyfield
Knowlton
Cowansville
Coaticook

MAGNITUDE OF MANUFACTURING
1967

11.42
2.500 – 4.999
1.500 – 2.499
.500 – .999
.300 – .499
mean: 1.000–1.499
.100 – .299
.001 – .099

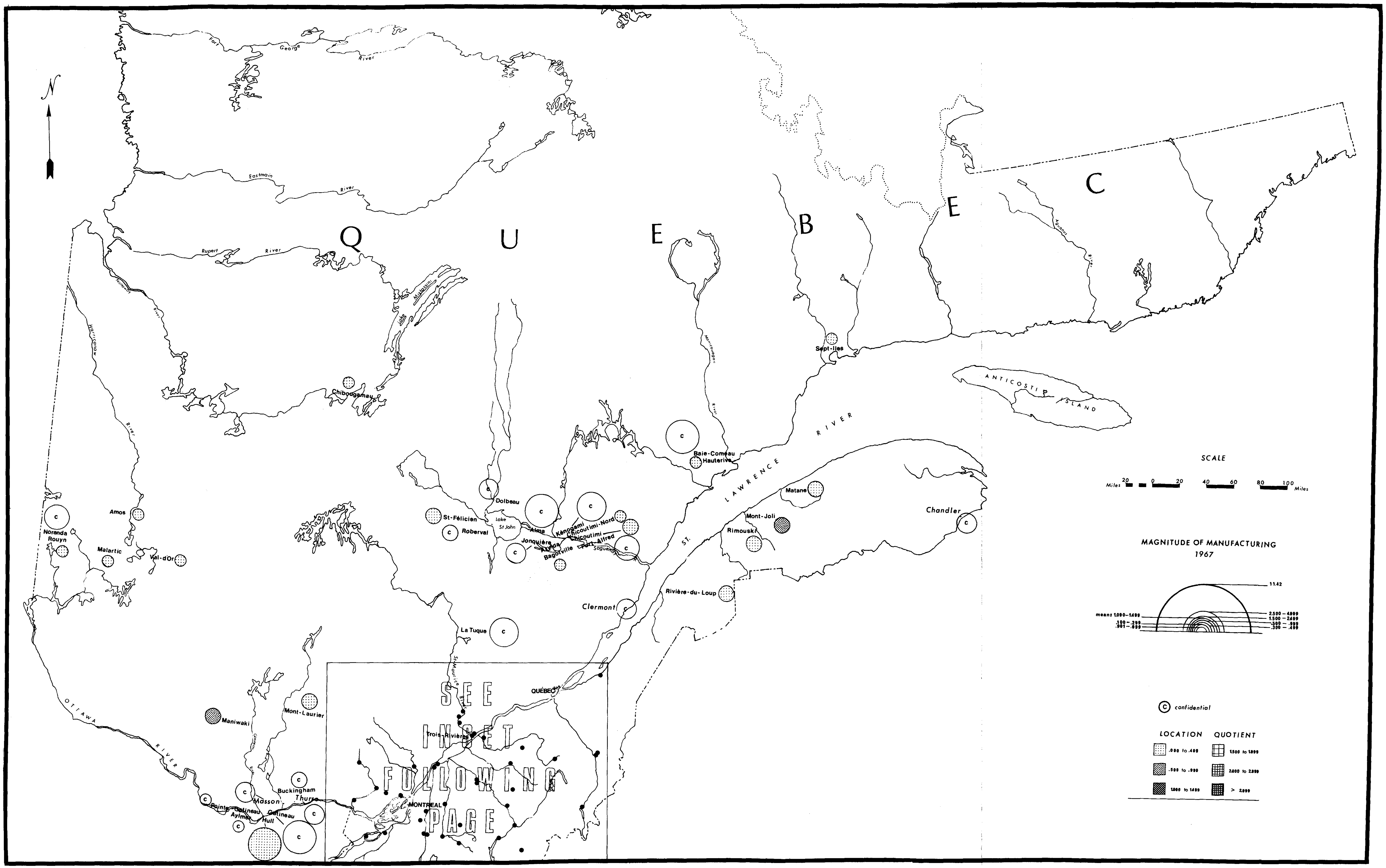
region, for example: Arvida, Alma, Kénogami, La Tuque, Port-Alfred, Dolbeau, and Jonquière, specialize almost exclusively in either primary metal or paper and allied industries. Roberval, St. Félicien, Chibougamau concentrate their activities on wood and wood products industries, while Chicoutimi, Chicoutimi North, Bagotville have food and beverage, furniture and fixture, non-metallic minerals (all of low magnitude of manufacturing), as their leading industries. One would assume on the basis of the degree and variety of manufacturing activity of these three centres that they were perhaps, economically oriented in the direction of one extraction or served as service communities for the others, (see Table III.20 addendum). All the larger centres, (greater than 1:0 magnitude), have grown in absolute terms, however, only one centre, Alma has grown relatively as well. Of the other smaller manufacturing communities, Chibougamau, and Jonquière, represent the only centres which have grown in relative terms, while Port-Alfred and Dolbeau have also experienced some absolute decline in employment and value added resepectively, (Maps III.13 and III.14).

(iv) Québec East

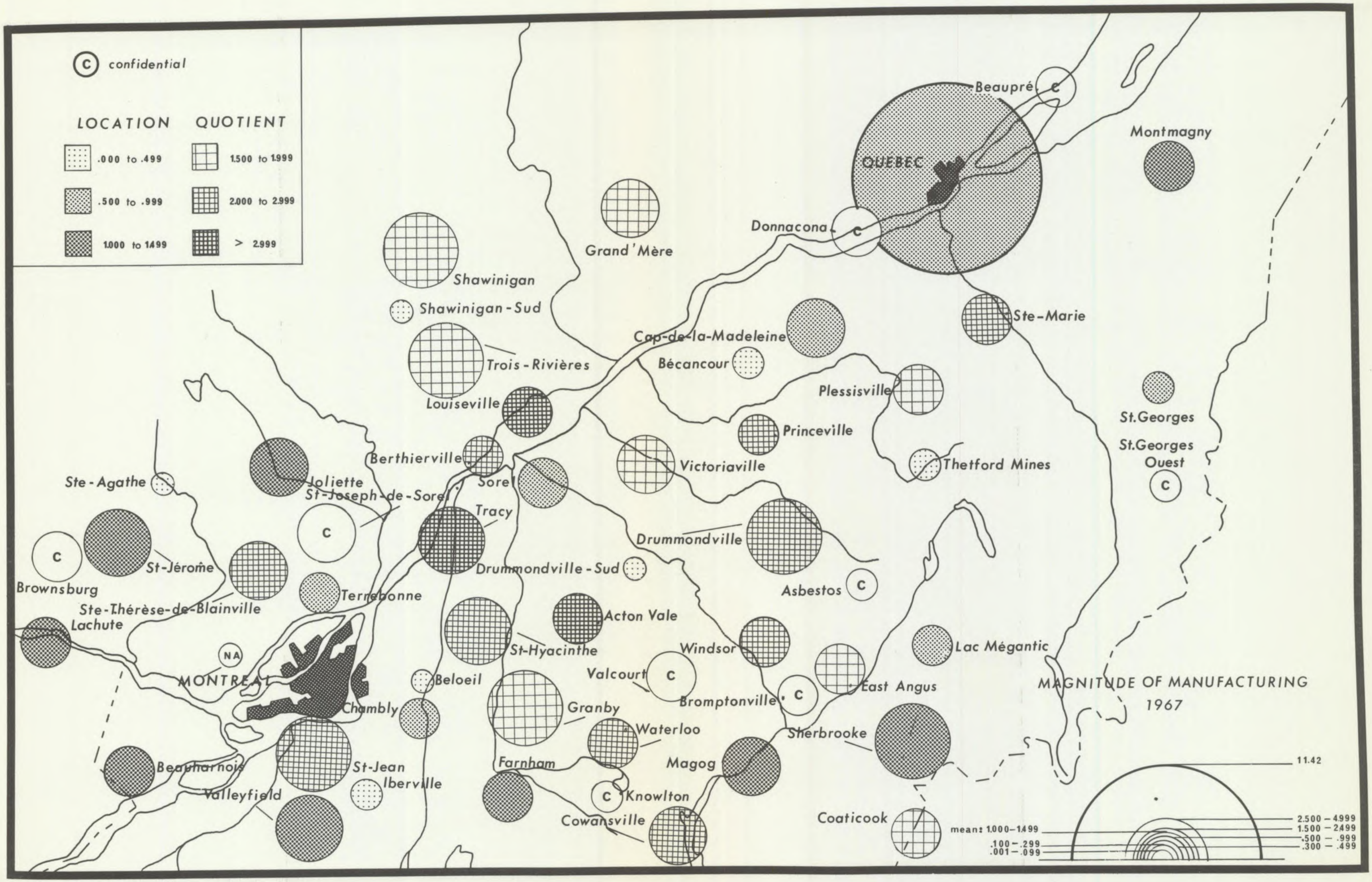
Other than Baie-Comeau the degree of magnitude of manufacturing in centres of this region is quite small, (see Maps III.10 and III.11 and III.13-III.17). What is most interesting about these communities, however, is their relative degree of diversity, given their size. Most notable for their variety of activities are the two centres of Sept-Îsles, a port city, and Rivière-du-Loup, a paper and wood industries centre mainly. (see Maps III.14-III.16).

As mentioned, the magnitude of manufacturing of all the centres in this region other than Baie-Comeau is quite small, Sept-Îsles and Hauterive being of approximately the same magnitude, with another group, Rivière-du-Loup, Rimouski, Mont-Joli, Matane being of approximately the same magnitude (and of the same geographic area). At each end of the Québec East area as defined in this study are situated the communities of Chandler in the east and Clermont in the west, both of which are exclusively dependent upon the paper industry, (Table III.20 addendum, Maps III.9-III.17).

Growth rates among centres of this area have varied widely, with by far the highest rate of growth being experienced by the community of Rivière-du-Loup, and then followed by Mont-Joli and Chandler. Others have grown only slowly, (Hauterive, Sept-Îsles, and Matane,) while still others have experienced relative



QUEBEC
MAGNITUDE OF MANUFACTURING
1967
SCALE
LOCATION QUOTIENT
confidential
SEE INSET FOLLOWING PAGE
ST. LAWRENCE RIVER
OTTAWA RIVER
ANTICOSTI ISLAND
Fort George River
Eastmain River
Rupert River
Montréal
Québec
Trois-Rivières
Hull
Gatineau
Masson
Thurso
Buckingham
Aylmer
Pointe-Gatineau
Maniwaki
Mont-Laurier
La Tuque
Clermont
Rivière-du-Loup
Rimouski
Mont-Joli
Matane
Chandler
Baie-Comeau
Hauterive
Sept-Iles
Chibougamau
Amos
Noranda
Rouyn
Malartic
Val-d'Or
Dolbeau
St-Félicien
Roberval
Alma
Kénogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Arvida
Bagotville
Port-Alfred


C confidential
LOCATION QUOTIENT
.000 to .499
.500 to .999
1.000 to 1.499
1.500 to 1.999
2.000 to 2.999
> 2.999
Beaupré C
Montmagny
QUEBEC
Donnacona C
Grand 'Mère
Shawinigan
Shawinigan-Sud
Ste-Marie
Cap-de-la-Madeleine
Bécancour
Trois-Rivières
Plessisville
Louiseville
St.Georges
Princeville
St.Georges Ouest C
Berthierville
Victoriaville
Thetford Mines
Ste-Agathe
Joliette
St-Joseph-de-Sorel
Sorel
Tracy
Drummondville
C
St-Jérome
Drummondville-Sud
Asbestos C
Brownsburg
Terrebonne
Ste-Thérèse-de-Blainville
Acton Vale
Lachute
Windsor
Lac Mégantic
NA
St-Hyacinthe
MONTREAL
Beloeil
Valcourt C
East Angus
Bromptonville C
Chambly
Granby
Waterloo
Sherbrooke
Beauharnois
St-Jean
Iberville
Farnham
Magog
Valleyfield
C Knowlton
Cowansville
Coaticook
MAGNITUDE OF MANUFACTURING
1967
11.42
2.500 – 4.999
1.500 – 2.499
.500 – .999
.300 – .499
mean: 1.000–1.499
.100 – .299
.001 – .099

decline in their magnitude of manufacturing, Clermont, Baie-Comeau. Rimouski, the largest centre in terms of population in this area, also experienced absolute decline in its employment in manufacturing, 1961-1967.

Many of the towns in this region are not as resource-base oriented as many of the other centres in Québec, nor is manufacturing as vital to their economy as it is for centres say, in the Chicoutimi, Jonquière area. The low location quotients for the centres of Sept-Îsles, Hauterive and Matane through to Rivière-du-Loup (see Map III.17) affirm this fact. It is likely that large trade areas characterize these communities. (See Chapter V).

The economic conditions that exist in this part of Québec and in Gaspé are well known. The fact that the populated centres in this region are so very deficient in terms of its manufacturing activity is indicative of the state of the economy of this area. Indeed, the fact that no centre of 5,000 population and over, exist at all in the area east and south of Matane makes the future development of the Gaspé region somewhat restricted.

Finally, the last area, the Noranda, Val-d'Or area is probably best referred to as Québec's most western "resource frontier". With the exception of Noranda, the magnitude of manufacturing of these centres ranks among the lowest in the province, (see Maps.III.14 and III.17). What manufacturing activity exists is either in the wood product, food and beverage and printing and publishing sectors. Manufacturing is much the secondary activity of all these centres, including Noranda.[45] Outside this region, all centres of significant size, (in terms of their magnitude of manufacturing), are either in the Chicoutimi-Jonquière area or the Québec West region, (with the exception of Baie-Comeau), and only one of these larger centres, Hull, may be said to be at all diversified in terms of its variety of manufacturing activity.

---

45 Noranda is essentially a mining centre, much the same as Chibougamau, Val-d'Or, Schefferville and the like.

TABLE III.1

ESTABLISHMENTS

	PRAIRIES	1961	1963	1965	1967
	Saskatoon	136	142	142	148
	Regina	123	122	127	137
	Lethbridge	65	73	80	82
	Medicine Hat	41	40	42	47
	Selkirk	12	10	13	12
	Moose Jaw	46	48	46	41
	Prince Albert	27	24	26	24
	Brandon	39	41	41	42
	Hinton	NDA	1	3	2
10	Red Deer	31	37	33	35
	Grande Prairie	14	15	14	16
	Flin Flon	8	8	8	7
	Portage la Prairie	18	19	17	16
	Yorkton	22	20	22	25
	Lloydminster	I.D.	12	13	16
	Taber	7	9	12	10
	Camrose	18	10	10	16
	Steinbach	10	10	11	11
	Ft. MacLeod	5	7	6	8
20	Swift Current	20	20	21	24
	Wetaskiwin	10	11	13	13
	Morden	11	4	10	10
	Ft. Saskatchewan	3	5	6	6
	Winkler	5	5	5	5
	Battleford	12	13	14	15
	Whitecourt	NDA	3	3	7
	Melville	11	11	10	11
	Estevan	7	8	11	10
	Dauphin	14	14	12	10
30	Weyburn	9	11	10	10
	Canora	5	5	4	5
	Lacombe	6	6	8	9
	Kamsack	6	4	4	5
	Innisfail	6	7	7	8
	Nipawin	9	8	7	7
	Barrhead	8	7	6	6
	Tisdale	3	4	5	6
	Brooks	6	7	7	7
	Stettler	9	9	8	7
40	Ponoka	11	12	12	11
	Peace River	6	7	6	6
	Neepawa	10	10	9	7
	Drumheller	6	6	6	7
	Westlock	5	5	6	8
	Virden	4	4	9	7
	Meadow Lake	4	6	4	5
	Melfort	6	6	7	7
	Claresholm	4	3	6	6
	Humboldt	3	3	4	5
50	Vermilion	5	5	5	5
	Rosetown	2	2	3	3
	St. Paul	5	5	5	5
	Vegreville	4	5	4	5
	Olds	4	3	4	5
	Kindersley	3	3	3	3
	Wainwright	3	4	3	5

TABLE 111: 1 (cont'd)

	1961	1963	1965	1967
PRAIRIES (continued)				
Edson	5	3	6	4
Swan River	6	5	5	4
Esterhazy	1	1	3	4
60 Hanna	5	4	5	6
Leduc	3	2	2	2
St. Albert	3	4	4	7
Rocky Mountain House	6	6	4	3
The Pas	7	8	5	4
Assiniboia	3	3	5	3
Biggar	3	3	3	3
Cardston	4	4	4	4
Lynn Lake	1	1	1	2
Coaldale	3	4	3	4
70 Pincher Creek	4	4	5	4
Drayton Valley	3	3	4	2
Fort McMurray	0	1	1	1
Winnipeg C.M.A2	995	x	x	1,022
Edmonton C.M.A.	484	x	x	565
Calgary C.M.A.	395	x	x	470

L. No data available

2. C.M.A. census metropolitan area

3. " X" Data not given

TABLE III.2

MALE EMPLOYEES

		1961	1963	1965	1967
	PRAIRIES				
	Saskatoon	2,020	2,001	2,198	2,572
	Regina	2,057	1,954	2,123	2,380
	Lethbridge	832	937	1,185	1,370
	Medicine Hat	817	854	856	888
	Selkirk	-	846	905	839
	Moose Jaw	694	672	673	539
	Prince Albert	572	493	495	495
	Brandon	314	308	343	464
	Hinton	NDA	-	-	-
10	Red Deer	226	313	340	385
	Grande Prairie	213	342	324	399
	Flin Flon	-	-	-	-
	Portage la Prairie	-	-	-	-
	Yorkton	153	157	177	235
	Lloydminster	-	92	110	-
	Taber	-	-	-	-
	Camrose	150	98	206	259
	Steinbach	94	103	152	151
	Ft. MacLeod	47	-	-	-
20	Swift Current	150	125	126	155
	Wetaskiwin	-	78	107	126
	Morden	106	79	99	78
	Ft. Saskatchewan	-	-	-	-
	Winkler	-	57	61	57
	Battleford	59	64	70	90
	Whitecourt	NDA	-	-	84
	Melville	49	47	48	53
	Estevan	28	52	56	60
	Dauphin	54	50	48	61
30	Weyburn	-	37	35	31
	Canora	-	-	-	-
	Lacombe	17	16	30	45
	Kamsack	-	-	-	-
	Innisfail	23	30	29	32
	Nipawin	45	64	49	42
	Barrhead	-	-	20	24
	Tisdale	19	14	20	23
	Brooks	29	50	19	27
	Stettler	24	22	21	23
40	Ponoka	23	28	21	25
	Peace River	11	22	22	21
	Neepawa	33	27	25	22
	Drumheller	18	25	21	29
	Westlock	-	-	20	25
	Virden	18	19	20	24
	Meadow Lake	11	55	53	28
	Melfort	-	-	19	17
	Claresholm	6	8	13	22
	Humboldt	-	-	15	19
50	Vermilion	11	12	12	13
	Rosetown	-	-	17	18
	St. Paul	14	14	13	19
	Vegreville	-	-	-	-
	Olds	10	11	13	15
	Kindersley	9	11	-	10
	Wainwright	6	6	7	12

TABLE 111:2 (cont'd)

	PRAIRIES (continued)	1961	1963	1965	1967
	Edson	28	17	16	9
	Swan River	17	16	13	11
	Esterhazy	-	-	-	10
60	Hanna	-	8	8	11
	Leduc	-	-	-	-
	St. Albert	0	3	3	7
	Rocky Mountain House	33	29	7	-
	The Pas	7	12	6	6
	Assiniboia	4	9	12	8
	Biggar	-	-	7	6
	Cardston	3	1	1	-
	Lynn Lake	-	-	-	-
	Coaldale	5	4	3	5
70	Pincher Creek	4	8	10	7
	Drayton Valley	4	5	9	-
	Fort McMurray	-	-	-	-
	Winnipeg C.M.A.	16,989	x	x	20,504
	Edmonton C.M.A.	9,504	x	x	11,424
	Calgary C.M.A.	6,546	x	x	8,333

4. " - " Confidential

TABLE 111: 3

FEMALE EMPLOYEES

	PRAIRIES	1961	1963	1965	1967
	Saskatoon	414	395	411	483
	Regina	306	281	258	257
	Lethbridge	235	213	225	243
	Medicine Hat	66	55	55	68
	Selkirk	-	56	41	33
	Moose Jaw	144	159	151	148
	Prince Albert	76	64	50	53
	Brandon	47	31	44	129
	Hinton	NDA	-	-	-
10	Red Deer	53	51	49	51
	Grande Prairie	36	51	57	79
	Flin Flon	-	-	-	-
	Portage la Prairie	-	-	-	-
	Yorkton	35	30	26	41
	Lloydminster	-	4	8	-
	Taber	-	-	-	-
	Camrose	7	7	12	15
	Steinbach	162	187	146	141
	Ft. MacLeod	3	-	-	24
20	Swift Current	4	11	8	9
	Wetaskiwin	-	4	7	3
	Morden	119	111	114	93
	Ft. Saskatchewan	-	-	-	-
	Winkler	-	80	97	88
	Battleford	5	8	13	16
	Whitecourt	NDA	-	-	2
	Melville	28	23	27	31
	Estevan	5	8	5	6
	Dauphin	11	8	7	5
30	Weyburn	-	4	4	5
	Canora	-	-	-	-
	Lacombe	3	5	6	6
	Kamsack	-	-	-	-
	Innisfail	3	2	2	0
	Nipawin	5	10	9	6
	Barrhead	-	-	1	1
	Tisdale	1	4	7	12
	Brooks	14	17	5	5
	Stettler	2	1	2	6
40	Ponoka	1	1	3	5
	Peace River	1	2	1	5
	Neepawa	12	16	10	6
	Drumheller	3	1	0	0
	Westlock	-	-	1	3
	Virden	3	5	3	4
	Meadow Lake	1	0	1	1
	Melfort	-	-	4	7
	Claresholm	1	1	0	2
	Humboldt	-	-	5	6
50	Vermilion	6	2	1	3
	Rosetown	-	-	3	5
	St. Paul	2	4	4	3
	Vegreville	-	-	-	-
	Olds	2	2	1	1
	Kindersley	4	3	-	4
	Wainwright	1	1	0	1

TABLE 111: 3 (cont'd)

	PRAIRIES (continued)	1961	1963	1965	1967
	Edson	6	3	5	4
	Swan River	1	2	1	2
	Esterhazy	-	-	-	2
60	Hanna	-	2	3	4
	Leduc	-	-	-	-
	St. Albert	2	1	0	4
	Rocky Mountain House	0	0	1	-
	The Pas	3	3	6	3
	Assiniboia	1	2	2	1
	Biggar	-	-	0	3
	Cardston	2	0	0	-
	Lynn Lake	-	-	-	-
	Coaldale	0	0	0	0
70	Pincher Creek	1	0	1	1
	Drayton Valley	3	0	3	-
	Fort McMurray	-	-	-	-
	Winnipeg C.M.A.	7,007	x	x	8,107
	Edmonton C.M.A.	2,301	x	x	2,949
	Calgary C.M.A.	930	x	x	1,206

TABLE III.4

TOTAL EMPLOYEES [4]

	PRAIRIES	1961	1963	1965	1967	Relative Change
	Saskatoon	2,434	2,396	2,609	3,055	1.003
	Regina	2,363	2,235	2,381	2,637	.487
	Lethbridge	1,067	1,150	1,410	1,613	1.839
	Medicine Hat	883	909	911	956	.333
	Selkirk	-	902	946	872	I.D.
	Moose Jaw	838	831	830	687	-.747
	Prince Albert	648	557	545	548	-.643
	Brandon	361	339	387	598	2.570
	Hinton	N.D.A.	-	-	-	I.D.
10	Red Deer	279	364	389	436	2.020
	Grande Prairie	249	393	381	478	3.295
	Flin Flon	-	-	-	-	.774
	Portage la Prairie	-	-	-	-	1.996
	Yorkton	188	187	203	276	1.807
	Lloydminster	-	95	118	-	-
	Taber	-	-	-	-	846
	Camrose	157	105	218	274	4.115
	Steinbach	256	290	298	292	.576
	Ft. MacLeod	50	-	-	-	-
20	Swift Current	154	136	134	164	.379
	Wetaskiwin	-	82	114	129	-
	Morden	225	190	213	171	.952
	Ft. Saskatchewan	-	-	-	-	1.910
	Winkler	-	137	158	145	-
	Battleford	64	72	83	106	2.279
	Whitecourt	N.D.A.	-	-	86	-
	Melville	77	70	75	84	.413
	Estevan	33	60	61	66	3.766
	Dauphin	65	58	55	66	.167
30	Weyburn	-	41	39	36	-
	Canora	-	-	-	-	1.242
	Lacombe	20	21	36	51	4.851
	Kamsack	-	-	-	-	.195
	Innisfail	26	32	31	32	.952
	Nipawin	50	74	58	48	.375
	Barrhead	-	-	21	25	-
	Tisdale	20	18	27	35	2.860
	Brooks	43	67	24	32	1.206
	Stettler	26	23	23	29	.598
40	Ponoka	24	29	24	30	1.174
	Peace River	12	24	23	26	4.472
	Neepawa	45	43	35	28	-1.768
	Drumheller	21	26	21	29	1.753
	Westlock	-	-	21	28	-
	Virden	21	24	23	28	1.309
	Meadow Lake	12	55	54	29	12.783
	Melfort	-	-	23	23	-
	Claresholm	7	9	13	24	6.475
	Humboldt	-	-	20	25	-
50	Vermilion	17	14	13	16	-.070
	Rosetown	-	-	20	23	-
	St. Paul	16	18	17	22	1.493
	Vegreville	-	-	-	-	.592
	Olds	12	12	14	16	1.271
	Kindersley	13	14	-	14	-
	Wainwright	7	7	7	13	3.521

TABLE III.4 Continued

PRAIRIES (continued)	1961	1963	1965	1967	Relative change
Edson	172	163	229	175	0.268
Swan River	234	176	179	187	-.356
Esterhazy	-	-	-	157	-
Hanna	-	119	136	162	-
Leduc	-	-	-	-	2.061
St. Albert	33	52	83	135	4.252
Rocky Mountain House	299	233	112	-	-
The Pas	175	215	164	149	-.240
Assiniboia	90	128	190	129	1.381
Biggar	-	-	8	63	-
Cardston	34	25	30	-	-
Lynn Lake	-	-	-	-	3.681
Coaldale	58	61	69	116	2.036
Pincher Creek	79	123	130	99	0.902
Drayton Valley	42	65	136	-	-
Fort McMurray	-	-	-	-	6.251
Winnipeg C.M.A.	236,824	x	x	352,108	x
Edmonton C.M.A.	158,673	x	x	261,552	x
Calgary C.M.A.	97,380	x	x	177,982	x

TABLE III.5

VALUE ADDED $,000

PRAIRIES	1961	1963	1965	1967	Relative change %
Saskatoon	29,533	32,866	36,828	49,196	1.337
Regina	39,844	36,055	40,074	48,604	.539
Lethbridge	14,276	16,390	21,641	25,233	1.491
Medicine Hat	13,748	14,239	17,101	14,813	0.242
Selkirk	-	7,460	10,975	9,271	-
Moose Jaw	13,369	14,975	19,682	11,023	-.349
Prince Albert	8,736	8,399	8,605	9,684	.262
Brandon	3,823	6,000	3,979	7,898	2.860
Hinton	N.D.A.	-	-	-	I.D.
Red Deer	4,130	5,621	6,613	7,687	1.644
Grande Prairie	1,508	2,775	3,420	4,951	3.571
Flin Flon	-	-	-	-	0.712
Portage la Prairie	-	-	-	-	0.100
Yorkton	2,573	2,789	3,174	4,768	1.701
Lloydminster	-	1,496	1,543	-	-
Taber	-	-	-	-	1.230
Camrose	4,258	909	3,620	3,192	4.882
Steinbach	1,691	1,765	2,142	2,037	0.490
Ft. MacLeod	166	-	-	-	-
Swift Current	1,538	1,433	1,583	1,805	0.419
Wetaskiwin	-	723	1,507	1,625	-
Morden	1,116	899	852	984	-.215
Ft. Saskatchewan	-	-	-	-	2.635
Winkler	-	724	690	912	-
Battleford	753	899	1,027	1,266	1.336
Whitecourt	N.D.A.	-	-	1,122	I.D.
Melville	740	524	592	636	-.205
Estevan	345	494	746	846	2.528
Dauphin	677	577	600	668	0.013
Weyburn	-	565	637	753	-
Canora	-	-	-	-	0.155
Lacombe	216	275	381	573	2.727
Kamsack	-	-	-	-	0.355
Innisfail	326	438	346	462	1.090
Nipawin	384	675	327	370	0.872
Barrhead	-	-	376	484	-
Tisdale	181	201	253	376	2.004
Brooks	334	696	285	361	1.781
Stettler	243	293	301	393	1.267
Ponoka	259	404	348	347	0.977
Peace River	240	262	307	413	1.434
Neepawa	287	454	387	344	0.756
Drumheller	158	227	241	287	1.627
Westlock	-	-	203	336	-
Virden	143	142	181	224	1.193
Meadow Lake	78	367	211	206	7.587
Melfort	-	-	254	293	-
Claresholm	86	95	170	256	3.290
Humboldt	-	-	171	209	-
Vermilion	125	185	231	245	1.837
Rosetown	-	-	170	135	-
St. Paul	181	219	272	326	1.525
Vegreville	-	-	-	-	2.438
Olds	113	140	132	212	1.832
Kindersley	106	131	-	163	-
Wainwright	109	119	129	203	1.757

TABLE III.5 (Cont'd.)

	PRAIRIES (continued)	1961	1963	1965	1967	Relative Change
	Edson	34	20	21	13	-3.051
	Swan River	18	18	14	13	-1.206
	Esterhazy	-	-	-	12	-
60	Hanna	-	10	11	15	-
	Leduc	-	-	-	-	-2.282
	St. Albert	2	4	3	11	14.582
	Rocky Mountain House	33	29	8	-	-
	The Pas	10	15	12	9	205
	Assiniboia	5	11	14	9	4.582
	Biggar	-	-	7	9	-
	Cardston	5	1	1	-	17.252
	Lynn Lake	-	-	-	-	5.750
	Coaldale	5	4	3	5	.890
70	Pincher Creek	5	8	11	8	2.885
	Drayton Valley	6	5	12	-	-
	Fort McMurray	-	-	-	-	-
	Winnipeg C.M.A.	23,996	x	x	28,611	x
	Edmonton C.M.A.	11,805	x	x	14,373	x
	Calgary C.M.A.	7,476	x	x	9,539	x

4. Total employees i.e. - production and related workers.

TABLE III.6

VALUE ADDED/EMPLOYEE

PRAIRIES	1961	1963	1965	1967
Saskatoon	12,133	13,717	14,115	16,103
Regina	16,861	16,131	16,831	18,431
Lethbridge	13,379	14,252	15,329	15,643
Medicine Hat	15,569	15,664	18,771	15,494
Selkirk	-	8,270	11,601	10,631
Moose Jaw	15,953	18,020	23,713	16,045
Prince Albert	13,481	15,078	15,788	17,671
Brandon	10,590	17,699	10,281	13,207
Hinton	N.D.A.	-	-	-
Red Deer	14,802	15,422	17,000	17,630
Grande Prairie	6,056	7,061	8,976	10,357
Flin Flon	-	-	-	-
Portage la Prairie	-	-	-	-
Yorkton	13,686	14,914	15,635	17,275
Lloydminster	-	15,747	13,076	-
Taber	-	-	-	-
Camrose	27,121	8,657	16,605	11,649
Steinbach	6,605	6,086	7,127	6,976
Ft. MacLeod	3,320	-	-	-
Swift Current	9,987	10,536	11,813	11,006
Wetaskiwin	-	8,817	13,219	12,596
Morden	4,960	4,731	4,000	5,754
Ft. Saskatchewan	-	-	-	-
Winkler	-	5,284	4,367	6,289
Battleford	11,765	12,486	12,373	11,943
Whitecourt	N.D.A.	-	-	13,046
Melville	9,610	7,485	7,893	7.571
Estevan	10,454	8,233	12,229	12,818
Dauphin	10,415	9,948	10,909	10,121
Weyburn	-	13,780	16,333	20,916
Canora	-	-	-	-
Lacombe	10,800	13,095	10,583	11,235
Kamsack	-	-	-	-
Innisfail	12,538	13,687	11,161	14,437
Nipawin	7,680	9,121	5,638	7,708
Barrhead	-	-	17,904	19,360
Tisdale	9,050	11,166	9,370	10,742
Brooks	7,767	10,388	11,875	11,281
Stettler	9,346	12,739	13,087	13,552
Ponoka	10,791	13,931	14,500	11,566
Peace River	20,000	10,916	13,347	15,884
Neepawa	6,377	10,588	13,821	12,285
Drumheller	7,523	8,731	8,310	9,896
Westlock	-	-	9,666	12,000
Virden	6,809	5,916	7,869	8,000
Meadow Lake	6,500	6,672	3,907	7,103
Melfort	-	-	11,043	12,208
Claresholm	12,285	10,555	13,076	10,666
Humboldt	-	-	8,550	8,360
Vermilion	7,352	12,928	17,769	15,312
Rosetown	-	-	8,500	5,869
St. Paul	11,312	12,166	16,000	14,818
Vegreville	-	-	-	-
Olds	9,416	11,666	9,428	13,250
Kindersley	8,153	9,357	-	11,642
Wainwright	15,571	17,000	18,428	15,615

TABLE III.6 (Cont'd.)

PRAIRIES (continued)	1961	1963	1965	1967
Edson	5,058	8,150	10,904	13,461
Swan River	13,000	9,777	12,785	14,384
Esterhazy	-	-	-	13,083
Hanna	-	11,900	13,363	10,800
Leduc	-	-	-	-
St. Albert	16,500	13,000	27,666	12,272
Rocky Mountain House	9,060	8,034	14,000	-
The Pas	17,500	14,333	13,666	16,555
Assiniboia	18,000	11,636	13,571	14,333
Biggar	-	-	9,714	7,000
Cardston	6,800	25,000	30,000	-
Lynn Lake	-	-	-	-
Coaldale	11,600	15,350	23,000	23,200
Pincher Creek	15,800	15,375	11,818	12,375
Drayton Valley	7,000	13,000	11,333	
Fort McMurray	-	-	-	-
Winnipeg C.M.A.	9,869	x	x	12,307
Edmonton C.M.A.	13,441	x	x	18,197
Calgary C.M.A.	13,026	x	x	18,653

TABLE III.7

MAGNITUDE OF MANUFACTURING

	PRAIRIES	1961	1967	Relative change %
	Saskatoon	13.137	13.888	5.716
	Regina	14.615	12.763	-12.671
	Lethbridge	5.830	7.069	21.252
	Medicine Hat	5.187	4.947	-4.626
	Selkirk	4.493	3.549	-21.010
	Moose Jaw	5.002	3.085	-38.324
	Prince Albert	3.695	2.633	-28.741
	Brandon	1.831	2.431	32.768
	Hinton	N.D.A.	2.229	I.D.
10	Red Deer	1.513	2.022	33.641
	Grande Prairie	1.026	1.779	73.391
	Flin Flon	1.819	1.686	-7.311
	Portage la Prairie	1.361	1.308	-3.894
	Yorkton	0.990	1.203	21.515
	Lloydminster	0.489	1.175	140.286
	Taber	1.156	1.110	-3.979
	Camrose	1.148	1.094	-4.703
	Steinbach	0.958	0.889	-7.202
	Ft. MacLeod	0.170	0.875	414.705
20	Swift Current	0.731	0.615	-15.868
	Wetaskiwin	0.190	0.504	165.263
	Morden	0.741	0.484	-34.682
	Ft. Saskatchewan	0.358	0.426	18.994
	Winkler	0.267	0.414	55.056
	Battleford (North)	0.323	0.401	24.148
	Whitecourt	N.D.A.	0.333	I.D.
	Melville	0.350	0.267	-23.714
	Estevan	0.160	0.264	65.000
	Dauphin	0.293	0.231	-21.160
30	Weyburn	0.196	0.173	-11.734
	Canora	0.181	0.168	-7.182
	Lacombe	0.098	0.139	41.836
	Kamsack	0.168	0.132	-21.428
	Innisfail	0.139	0.129	-7.194
	Nipawin	0.220	0.124	-43.636
	Barrhead	0.138	0.118	-14.492
	Tisdale	0.095	0.118	24.210
	Brooks	0.185	0.117	-36.756
	Stettler	0.123	0.112	-8.943
40	Ponoka	0.109	0.111	1.834
	Peace River	0.074	0.111	50.000
	Neepawa	0.170	0.110	-35.294
	Drumheller	0.087	0.110	26.436
	Westlock	0.069	0.105	52.173
	Virden	0.087	0.093	6.896
	Meadow Lake	0.047	0.092	75.744
	Melfort	0.106	0.089	-16.037
	Claresholm	0.034	0.088	158.823
	Humboldt	0.059	0.083	40.677
50	Vermilion	0.071	0.071	0.000
	Rosetown	0.021	0.068	223.809
	St. Paul	0.077	0.066	-14.285
	Vegreville	0.066	0.066	0.000
	Olds	0.052	0.063	21.153
	Kindersley	0.060	0.056	-6.666
	Wainwright	0.037	0.053	43.243

TABLE III.7 (Cont'd.)

	PRAIRIES (continued)	1961	1967	Relative change
	Edson	0.126	0.051	-59.523
	Swan River	0.090	0.051	-43.333
	Esterhazy	0.013	0.047	261.538
60	Hanna	0.058	0.044	-24.137
	Leduc	0.069	0.042	-39.130
	St. Albert	0.010	0.041	310.000
	Rocky Mountain House	0.151	0.039	-74.172
	The Pas	0.055	0.037	-32.727
	Assiniboia	0.028	0.037	32.142
	Biggar	0.029	0.028	-3.448
	Cardston	0.019	0.026	36.842
	Lynn Lake	0.018	0.025	38.888
	Coaldale	0.022	0.024	9.090
70	Pincher Creek	0.027	0.024	-11.111
	Drayton Valley	0.023	0.021	-8.695
	Fort McMurray	0.003	0.002	-33.333
	Winnipeg C.M.A.	139.950	132.227	x
	Edmonton C.M.A.	80.064	68.602	x
	Calgary C.M.A.	34.757	39.714	x

TABLE III.8

(A) INDEX OF SPECIALIZATION and
(B) REFINED INDEX OF MANUFACTURING DIVERSITY

PRAIRIES	A 1961	A 1967	A Relative change %	B 1967
Saskatoon	1.241	1.271	2.417	340.2
Regina	1.442	1.463	1.456	202.6
Lethbridge	1.626	1.666	2.460	476.0
Medicine Hat	5.429	4.619	-14.919	426.4
Selkirk	8.304	9.061	9.116	935.0
Moose Jaw	2.079	2.942	41.510	371.9
Prince Albert	1.802	2.012	11.653	879.7
Brandon	1.652	1.669	1.029	325.0
Hinton	N.D.A.	31.996	I.D. 5	998.2
Red Deer	1.945	2.497	28.380	609.2
Grande Prairie	12.079	8.867	-26.591	886.0
Flin Flon	8.885	10.986	23.646	978.1
Portage la Prairie	1.577	2.309	46.417	816.3
Yorkton	2.302	4.624	100.868	819.2
Lloydminster	23.440	5.901	-74.825	566.7
Taber	1.999	2.557	27.913	983.0
Camrose	4.007	5.533	38.083	800.2
Steinbach	11.396	5.843	-48.727	619.2
Ft. MacLeod	77.381	9.845	-87.277	829.7
Swift Current	1.707	1.616	-5.330	443.2
Wetaskiwin	11.541	10.925	-5.337	843.6
Morden	6.899	6.407	-7.131	767.1
Ft. Saskatchewan	14.515	9.331	-35.714	863.9
Winkler	2.116	9.063	328.308	865.1
Battleford	2.005	2.031	1.296	812.6
Whitecourt	N.D.A.	13.352	I.D.	996.5
Melville	1.868	2.064	10.492	927.7
Estevan	3.483	3.649	4.766	672.3
Dauphin	1.859	2.175	16.998	944.7
Weyburn	1.659	1.915	15.430	879.4
Canora	1.909	2.293	19.489	957.8
Lacombe	2.857	3.263	14.210	533.4
Kamsack	8.844	17.526	98.168	929.8
Innisfail	14.249	4.343	-69.520	577.4
Nipawin	3.459	2.582	-25.354	799.4
Barrhead	7.112	2.849	-59.940	795.4
Tisdale	1.782	2.178	22.222	948.4
Brooks	1.825	2.143	17.424	821.3
Stettler	1.799	2.801	55.697	865.1
Ponoka	1.831	2.131	16.384	819.5
Peace River	2.242	2.151	-4.058	651.7
Neepawa	2.240	1.867	-16.651	708.1
Drumheller	4.803	3.337	-30.522	856.9
Westlock	1.998	3.037	52.002	742.1
Virden	1.998	2.268	13.513	913.6
Meadow Lake	1.940	4.594	136.804	792.5
Melfort	1.827	2.378	30.158	899.1
Claresholm	4.061	6.767	66.633	686.6
Humboldt	2.190	2.511	14.657	795.4
Vermilion	2.027	2.422	19.486	906.0
Rosetown	11.248	4.076	-63.762	792.4
St. Paul	2.099	2.638	25.678	890.6
Vegreville	1.955	2.436	24.603	779.3
Olds	2.098	6.323	201.382	755.5
Kindersley	3.009	2.059	-31.571	827.5
Wainwright	1.784	3.641	104.091	768.5

TABLE III.8 (Cont'd.)

PRAIRIES (continued)	A 1961	A 1967	A Relative change	B 1967
Edson	24.289	4.734	-80.509	860.0
Swan River	1.972	2.757	39.807	884.3
Esterhazy	2.116	2.847	34.546	749.2
Hanna	2.669	4.021	50.655	618.8
Leduc	3.622	4.116	13.638	866.2
St. Albert	2.116	6.607	212.240	808.5
Rocky Mountain House	13.423	2.381	-82.261	909.7
The Pas	12.335	2.224	-81.970	933.1
Assiniboia	4.388	4.116	-6.198	866.3
Biggar	1.784	4.454	149.663	899.7
Cardston	2.098	2.731	30.171	1,000.0
Lynn Lake	2.116	2.731	29.064	1,000.0
Coaldale	7.283	2.112	-71.000	939.8
Pincher Creek	2.562	2.696	5.230	887.2
Drayton Valley	1.769	2.501	41.379	899.7
Fort McMurray	18.587	I.D.	I.D.	I.D.
Winnipeg C.M.A.	x	x	x	x
Edmonton C.M.A.	x	x	x	x
Calgary C.M.A.	x	x	x	x

5. I.D., Insufficient Data.

TABLE III.9

LOCATION QUOTIENT

PRAIRIES	1961	1966	Relative change %
Saskatoon	4.042	3.338	-17.417
Regina	3.342	2.663	-20.317
Lethbridge	4.755	1.666	-64.963
Medicine Hat	5.721	5.035	-11.990
Selkirk	-	14.584	-
Moose Jaw	3.989	3.114	-21.935
Prince Albert	4.252	2.744	-35.465
Brandon	2.033	2.519	23.905
Hinton	N.D.A.	-	I.D.
Red Deer	2.257	1.863	-17.456
Grande Prairie	4.656	4.652	-.085
Flin Flon	-	-	6.802
Portage la Prairie	-	-	6.419
Yorkton	2.983	4.624	55.011
Lloydminster	-	5.013	-
Taber	-	-	-22.093
Camrose	3.561	2.238	-37.152
Steinbach	9.797	7.997	-18.372
Ft. MacLeod	3.186	-	-
Swift Current	2.003	1.429	-28.657
Wetaskiwin	-	2.276	-
Morden	12.779	8.444	33.922
Ft. Saskatchewan	-	-	20.258
Winkler	-	7.696	-
Battleford	0.904	1.017	12.500
Whitecourt	N.D.A.	5.126	I.D.
Melville	2.353	2.099	-10.794
Estevan	0.677	0.967	42.836
Dauphin	1.359	0.890	-34.510
Weyburn	-	0.516	-
Canora	-	-	-17.457
Lacombe	1.047	2.055	96.275
Kamsack	-	-	-22.228
Innisfail	1.817	1.469	-19.152
Nipawin	2.377	1.473	-38.031
Barrhead	-	1.079	-
Tisdale	1.321	2.056	55.639
Brooks	2.637	1.029	-60.978
Stettler	1.337	0.699	-47.718
Ponoka	0.957	0.841	-12.121
Peace River	0.697	0.909	30.416
Neepawa	2.233	1.357	-39.229
Drumheller	1.137	1.151	1.231
Westlock	-	1.285	-
Virden	1.230	1.177	-4.308
Meadow Lake	0.590	1.494	153.220
Melfort	-	0.696	-
Claresholm	0.441	0.672	52.380
Humboldt	-	0.834	-
Vermilion	1.101	0.692	-37.148
Rosetown	-	0.999	-
St. Paul	0.8727	0.674	-22.794
Vegreville	-	-	-32.396
Olds	0.755	0.575	-23.841
Kindersley	-	0.676	-
Wainwright	.310	0.378	21.935

TABLE III.9 (Cont'd.)

PRAIRIES (continued)	1961	1966	Relative change
Edson	1.678	1.016	-39.451
Swan River	0.903	0.497	-44.961
Esterhazy	-	0.583	-
Hanna	-	0.655	-
Leduc	-	-	-39.073
St. Albert	0.078	0.109	39.743
Rocky Mountain House	2.218	-	-
The Pas	0.340	0.211	-37.941
Assiniboia	0.318	0.462	45.283
Biggar	-	0.385	-
Cardston	0.283	-	-
Lynn Lake	I.D.	I.D.	I.D.
Coaldale	0.306	0.157	-48.692
Pincher Creek	0.268	0.368	37.313
Drayton Valley	0.025	0.356	1324.000
Fort McMurray	-	-	-
Winnipeg C.M.A.	7.997	7.372	x
Edmonton C.M.A.	5.547	3.514	x
Calgary C.M.A.	4.251	4.727	x

TABLE III.10

PRAIRIES

SELECTED CENTRES: MANUFACTURING GROUPS

GROUP A: ABOVE-AVERAGE MAGNITUDE

A-1 Diversified

Centre	Leading Sector
Regina	-
Saskatoon	Food and Beverage Ind.
Moose Jaw	-
Brandon	-

A-2 Intermediate

Centre	Leading Sector
Lethbridge	-
Medicine Hat	Petroleum
Lloydminster	Production
Red Deer	Transportation Equipment

A-3 Specialized

Centre	Leading Sector
Selkirk	Primary Metal
Flin Flon	
Hinton	Paper & Allied and/or wood products
Grande Prairie	
Prince Albert	
Taber	Food & Beverage
Portage la Prairie	
Yorkton	N.A.
Camrose	Petroleum Products & Food & Beverages Ind.

GROUP B: BELOW-AVERAGE MAGNITUDE

B-1 Diversified Centres - none

B-2 Intermediate Centres

Centre	Specialization
Swift Current	Food and Beverage
Lacombe	
Innisfail	(Transport & Equipment)
Steinbach	Wood Products
	(Clothing)

Centre	Specialization
Fort McLeod	Transport Equipment Industries
Wetaskiwin	

TABLE III.8(Cont'd)

GROUP B: BELOW-AVERAGE MAGNITUDE (Cont'd)

B-3 Specialized Centres

Melville
Dauphin
Weyburn
Canora
Nipawin
Barrhead
Tisdale
Brooks
Ponoka
Peace River
Neepawa
Drumheller
Melfort
Claresholm
Humboldt
Vermilion
Rosetown
St. Paul
Olds
Kindersley
Swan River
Esterhazy
Hanna
Leduc
The Pas
Assiniboia
Biggar
Cardston
Lynn Lake
Coaldale
Pincher Creek
Drayton Valley

Food and Beverage and/or Printing and Publishing, non-metallic mineral, metal fabricating industries

Fort MacLeod
Wetaskiwin
Meadow Lake
Innisfail
North Battleford
Whitecourt
Rocky Mountain House
— Wood and Wood Products Industries

Morden
Winkler
— Clothing Industries

Virden
Stettler
Kamsack
Estevan
Edson
Fort McMurray
Vegreville
— Petroleum and Gas Production
...(machinery)

Westlock — Metal Fabrication
Fort Saskatchewan — Primary Metal Industries

Transport Equipment Industries

TABLE 111:11

ESTABLISHMENTS

	QUEBEC	1961	1963	1965	1967
	Québec	605	562	551	533
	Trois-Rivières	85	88	80	70
	Arvida	9	8	37	32
	Sherbrooke	119	118	126	126
	Drummondville	69	69	68	73
	Granby	79	82	81	92
	Shawinigan	44	32	31	36
	St-Jean	81	85	92	90
	St-Hyacinthe	86	85	83	82
10	St-Jérôme	68	69	64	59
	Valleyfield	50	48	48	46
	Gatineau	11	11	11	12
	Baie-Comeau	5	8	8	8
	Hull	52	45	45	42
	Alma	14	18	22	20
	Tracy	10	12	15	15
	Victoriaville	55	58	57	61
	Grand'Mère	30	32	33	33
	Ste-Thérèse	32	35	43	45
20	Joliette	58	56	54	59
	Magog	36	32	31	28
	St - Joseph-de-Sorel	7	4	6	7
	Cowansville	17	19	22	25
	La Tuque	15	16	14	14
	Cap-de-la-Madelaine	43	41	44	50
	Kénogami	6	7	7	8
	Valcourt	4	4	3	3
	Acton Vale	12	12	13	14
30	Sorel	38	34	37	31
	Beauharnois	14	12	13	11
	Brownsburg	2	2	2	3
	Plessisville	26	26	26	22
	Windsor	9	11	11	12
	Port Alfred	8	9	9	8
	Donnaconna	7	7	7	6
	Lachute [1]	24	23	25	23
	Louiseville	20	25	25	25
	Noranda	10	10	11	10
40	Ste - Marie	22	20	21	18
	Waterloo	16	18	22	22
	East Angus	9	9	10	10
	Farnham	20	22	21	21
	Coaticook	17	19	19	20
	Princeville	14	18	19	21
	Dolbeau	2	2	3	3
	Beaupré	2	2	3	3
	Berthierville	16	19	20	19
	Bromptonville	4	4	4	5
50	Thurso	8	10	9	6
	Terrebonne [1]	19	20	20	24
	Chambly [1]	7	5	16	18
	Jonquière	17	15	15	14
	Montmagny	40	33	34	41

TABLE 111: 11 Cont'd.

	QUEBEC (continued)	1961	1963	1965	1967
	Clermont	-	-	-	-
	Lac-Mégantic	125	62	79	189
	Masson	-	-	-	-
	Chandler	-	-	-	-
	Asbestos	-	-	-	-
	Buckingham	-	-	-	-
60	Thetford Mines	20	23	17	10
	Knowlton	-	-	-	-
	Mont Joli	48	60	65	142
	St-Georges	147	109	141	150
	Maniwaki	61	88	100	91
	Iberville	63	104	133	117
	Roberval	-	-	-	-
	Chicoutimi	47	50	55	55
	Rivière-du-Loup	21	24	30	29
	St -Georges O.	169	199	201	-
70	Rimouski	13	15	11	15
	Mont Laurier	67	57	62	70
	St - Félicien	4	5	8	7
	Matane	11	4	3	29
	Bécancour	N.D.A.	N.D.A.	15	23
	Sept-Îles	12	9	6	7
	Rouyn	13	7	6	10
	Beloeil[1]	4	0	3	4
	Shawinigan South	1	0	1	4
	Val-d'Or	7	9	19	21
80	Drummondville South	0	62	50	44
	Hauterive	1	1	1	3
	Pointe Gatineau	0	-	-	-
	Chibougamau	0	0	1	3
	Ste-Agathe-des-Monts	0	0	0	2
	Bagotville	1	0	-	0
	Amos	5	3	2	0
	Chicoutimi North	2	2	1	1
	Malartic	2	1	0	0
	Aylmer	0	1	1	1

TABLE 111:12

MALE EMPLOYEES

	QUEBEC	1961	1963	1965	1967
	Québec	12,271	12,837	12,876	13,096
	Trois-Rivières	5,278	5,335	4,694	5,765
	Arvida	- [3]	-	-	-
	Sherbrooke	4,481	5,089	5,469	5,222
	Drummondville	3,516	3,877	4,396	4,148
	Granby	3,442	3,453	3,645	3,908
	Shawinigan	3,872	3,652	3,720	3,658
	St-Jean	2,823	2,467	3,256	3,536
	St-Hyacinthe	2,389	2,439	2,636	2,512
10	St-Jérôme	1,852	2,023	2,233	1,702
	Valleyfield	1,827	1,942	2,343	2,399
	Gatineau	-	-	-	-
	Baie-Comeau	-	-	-	-
	Hull	1,748	1,953	1,939	1,967
	Alma	56	-	-	-
	Tracy	-	1,731	2,241	2,348
	Victoriaville	1,403	1,542	1,571	1,725
	Grand'Mère	1,201	1,400	1,146	1,651
	Ste-Thérèse	863	1,517	2,050	1,874
20	Joliette	1,280	1,431	1,479	1,622
	Magog	-	-	-	1,634
	St - Joseph-de-Sorel	-	-	-	-
	Cowansville	1,098	1,318	1,591	1,660
	La Tuque	-	-	-	-
	Cap-de-la-Madelaine	1,267	1,400	1,516	1,651
	Kénogami	-	-	-	-
	Valcourt	-	-	-	-
	Acton Vale	643	888	965	943
30	Sorel	761	1,413	1,359	1,001
	Beauharnois	760	718	773	796
	Brownsburg	-	-	-	-
	Plessisville	582	670	701	814
	Windsor	-	-	1,006	927
	Port Alfred	-	-	-	-
	Donnaconna	-	-	-	-
	Lachute	300	291	304	902
	Louiseville	554	726	796	829
	Noranda	-	-	-	-
40	Ste - Marie	430	474	433	518
	Waterloo	387	375	602	672
	East Angus	621	639	633	621
	Farnham	580	577	624	611
	Coaticook	603	638	626	653
	Princeville	378	514	564	741
	Dolbeau	-	-	-	-
	Beaupré	-	-	-	-
	Berthierville	303	424	472	470
	Bromptonville	-	-	-	-
50	Thurso	289	-	-	-
	Terrebonne	423	510	530	508
	Chambly	80	68	440	400
	Jonquière	385	324	377	-
	Montmagney	874	971	1,014	1,165

TABLE 111:12 (cont'd)

	QUEBEC (continued)	1961	1963	1965	1967
	Clermont	1	2	3	4
	Lac-Mégantic	23	21	23	23
	Masson	4	3	3	3
	Chandler	6	5	5	4
	Asbestos	13	13	14	16
	Buckingham	13	14	14	11
60	Thetford Mines	35	34	32	34
	Knowlton	5	5	5	5
	Mont Joli	17	18	17	19
	St-Georges	11	16	16	9
	Maniwaki	17	18	14	16
	Iberville	20	23	21	24
	Roberval	10	9	10	7
	Chicoutimi	39	36	37	32
	Rivière-du-Loup	24	23	25	25
	St -Georges O.	7	7	9	7
70	Rimouski	33	36	32	30
	Mont Laurier	23	20	17	11
	St - Félicien	17	16	14	12
	Matane	18	18	16	8
	Bécancour	NDA [2]	NDA	18 [1]	20
	Sept-Îles	19	25	20	20
	Rouyn	24	22	20	17
	Beloeil	10	10	8	8
	Shawinigan South	13	16	16	16
	Val-d'Or	16	12	11	13
80	Drummondville South	8	14	13	11
	Hauterive	11	11	11	11
	Pointe Gatineau	3	2	3	4
	Chibougamau	2	3	7	7
	Ste-Agathe-des-Monts	13	9	8	7
	Bagotville	8	7	6	4
	Amos	13	11	9	7
	Chicoutimi North	6	9	11	10
	Malartic	8	6	5	4
	Aylmer				

1. Figures modified by municipal boundary changes 1961-1967
2. N.D.A. # no data available
3. " _ " confidential, see table 111: 4 text

TABLE 111: 13

FEMALE EMPLOYEES

	QUEBEC	1961	1963	1965	1967
	Québec	4,963	4,827	4,604	4,620
	Trois-Rivières	1,240	1,609	1,620	1,627
	Arvida	-	-	-	-
	Sherbrooke	1,707	1,597	1,666	1,689
	Drummondville	1,268	1,211	1,420	1,631
	Granby	1,594	1,524	1,605	1,625
	Shawinigan	564	392	488	399
	St-Jean	1,096	1,072	1,407	1,522
	St-Hyacinthe	1,432	1,395	1,495	1,610
10	St-Jérôme	955	1,012	1,146	830
	Valleyfield	678	642	717	683
	Gatineau	-	-	-	-
	Baie-Comeau	-	-	-	-
	Hull	405	450	434	456
	Alma	1	-	-	-
	Tracy	-	41	41	34
	Victoriaville	715	1,025	834	1,068
	Grand'Mère	531	584	692	785
	Ste-Thérèse	287	409	433	450
20	Joliette	725	636	721	692
	Magog	-	-	-	556
	St - Joseph-de-Sorel	-	-	-	-
	Cowansville	197	374	541	216
	La Tuque	-	-	-	-
	Cap-de-la-Madelaine	889	590	585	581
	Kénogami	-	-	-	-
	Valcourt	-	-	-	-
	Acton Vale	589	621	647	614
30	Sorel	388	380	269	292
	Beauharnois	135	122	112	120
	Brownsburg	-	-	-	-
	Plessisville	162	202	276	299
	Windsor	-	-	178	145
	Port Alfred	-	-	-	-
	Donnaconna	-	-	-	-
	Lachute	93	92	95	196
	Louiseville	330	408	446	381
	Noranda	-	-	-	-
40	Ste - Marie	335	353	386	358
	Waterloo	278	218	313	322
	East Angus	110	127	137	127
	Farnham	246	259	264	272
	Coaticook	365	334	288	312
	Princeville	44	72	50	74
	Dolbeau	-	-	-	-
	Beaupré	-	-	-	-
	Berthierville	221	202	246	246
	Bromptonville	-	-	-	-
50	Thurso	0	-	-	-
	Terrebonne	83	131	136	189
	Chambly	71	67	154	189
	Jonquière	21	21	23	-
	Montmagny	233	165	147	216

TABLE 111:13 (cont'd)

	QUEBEC (continued)	1961	1963	1965	1967
	Clermont	-	-	-	-
	Lac-Mégantic	386	389	495	505
	Masson	-	-	-	-
	Chandler	-	-	-	-
	Asbestos	-	-	-	-
	Buckingham	-	-	-	-
60	Thetford Mines	214	223	248	360
	Knowlton	-	-	-	-
	Mont Joli	166	179	153	273
	St-Georges	221	179	224	290
	Maniwaki	179	223	302	357
	Iberville	140	236	189	200
	Roberval	-	-	-	-
	Chicoutimi	359	325	336	412
	Rivière-du-Loup	110	139	224	241
	St -Georges O.	156	159	207	-
70	Rimouski	324	320	232	231
	Mont Laurier	197	243	159	175
	St - Félicien	182	219	231	200
	Matane	122	138	128	147
	Bécancour	N.D.A.	N.D.A.	167	181
	Sept-Îles	70	95	82	125
	Rouyn	81	96	123	69
	Beloeil	75	91	94	96
	Shawinigan South	63	109	83	73
	Val-d'Or	100	63	56	60
80	Drummondville South	18	62	57	46
	Hauterive	29	43	50	48
	Pointe Gatineau	3	-	-	-
	Chibougamau	3	2	48	48
	Ste-Agathe-des-Monts	39	25	32	34
	Bagotville	40	18	-	47
	Amos	56	76	49	30
	Chicoutimi North	15	20	19	19
	Malartic	13	12	8	7
	Aylmer	-	-	-	-

TABLE 111:14

TOTAL EMPLOYEES

	QUEBEC	1961	1963	1965	1967	Relative change-Employment
	Québec	17,234	17,664	17,480	17,716	0.156
	Trois-Rivières	6,518	6,944	7,314	7,392	0.721
	Arvida	-	-	-	-	0.849
	Sherbrooke	6,188	6,686	7,135	6,911	0.648
	Drummondville	4,784	5,088	5,816	5,779	1.116
	Granby	5,036	4,977	5,250	5,533	0.541
	Shawinigan	4,436	4,044	4,208	4,057	-.466
	St-Jean	3,919	3,539	4,663	5,058	1.702
	St-Hyacinthe	3,821	3,834	4,131	4,122	0.439
10	St-Jérôme	2,807	3,035	3,379	2,532	-.313
	Valleyfield	2,505	2,584	3,060	3,082	1.242
	Gatineau	-	-	-	-	0.892
	Baie-Comeau	-	-	-	-	1.041
	Hull	2,153	2,403	2,373	2,423	0.695
	Alma	57	-	-	-	-
	Tracy	-	1,772	2,282	2,382	-
	Victoriaville	2,118	2,567	2,405	2,793	1.729
	Grand'Mère	1,732	1,984	2,208	2,436	2.015
	Ste-Thérèse	1,150	1,926	2,483	2,324	5.015
20	Joliette	2,005	2,067	2,200	2,314	0.820
	Magog	-	-	-	2,190	-
	St - Joseph-de-Sorel	-	-	-	-	4.700
	Cowansville	1,295	1,692	2,132	2,243	3,448
	La Tuque		-	-	-	0.503
	Cap-de-la-Madelaine	2,156	1,958	1,956	1,903	-.668
	Kénogami	-	-	-	-	0.569
	Valcourt	-	-	-	-	1.740
	Acton Vale	1,232	1,509	1,612	1,557	1.443
30	Sorel	1,149	1,793	1,628	1,293	1.464
	Beauharnois	895	840	885	916	0.151
	Brownsburg	-	-	-	-	2.026
	Plessisville	744	872	977	1,113	2.406
	Windsor	-	-	1,184	1,072	-
	Port Alfred	-	-	-	-	-.100
	Donnaconna	-	-	-	-	0.323
	Lachute	393	383	399	1,098	9.854
	Louiseville	884	1,134	1,242	1,210	1.963
	Noranda	-	-	-	-	1.792
40	Ste - Marie	765	827	819	876	0.786
	Waterloo	665	593	915	994	2.904
	East Angus	731	766	770	748	0.137
	Farnham	826	836	888	883	0.383
	Coaticook	968	972	914	965	0.001
	Princeville	422	586	614	815	4.265
	Dolbeau	-	-	-	-	0.389
	Beaupré	-	-	-	-	0.550
	Berthierville	524	626	718	716	1.888
	Bromptonville	-	-	-	-	0.424
50	Thurso	289	-	-	-	-
	Terrebonne	506	641	666	697	1.963
	Chambly	151	135	594	589	18.311
	Jonquière	406	345	400	-	-
	Montmagny	1,107	1,136	1,161	1,381	1,325

TABLE 111:14 (cont'd)

	QUEBEC (continued)	1961	1963	1965	1967	Relative change-Employment
	Clermont	-	-	-	-	-.213
	Lac-Mégantic	511	451	574	694	2.031
	Masson	-	-	-	-	0.294
	Chandler	-	-	-	-	0.363
	Asbestos	-	-	-	-	2.509
	Buckingham	-	-	-	-	-.623
60	Thetford Mines	234	246	265	370	2.924
	Knowlton	-	-	-	-	6.729
	Mont Joli	214	239	218	415	5.197
	St-Georges	368	288	365	440	1.424
	Maniwaki	240	311	402	448	3.916
	Iberville	203	340	312	317	3.391
	Roberval	-	-	-	-	2.587
	Chicoutimi	406	375	391	299	-1.499
	Rivière-du-Loup	131	163	254	270	4.824
	St -Georges O.	325	358	408	-	-
70	Rimouski	337	335	243	246	-1.495
	Mont Laurier	264	300	221	245	-.102
	St - Félicien	186	224	239	207	0.766
	Matane	133	142	131	176	1.860
	Bécancour	N.D.A.	N.D.A.	182	204	I.D.
	Sept-Îles	82	104	88	132	3.424
	Rouyn	94	103	129	79	-.220
	Beloeil	71	91	97	100	1.386
	Shawinigan South	64	109	84	77	2.176
	Val-d'Or	107	72	75	81	-1.145
80	Drummondville South	18	124	107	90	31.169
	Hauterive	30	44	54	51	3.558
	Pointe Gatineau	25	-	-	-	-
	Chibougamau	3	2	49	51	29.333
	Ste-Agathe-des-Monts	39	25	32	36	0.257
	Bagotville	41	18	-	47	-
	Amos	61	79	51	30	-2.625
	Chicoutimi North	17	22	20	20	1.132
	Malartic	15	13	8	7	-3.583
	Aylmer	-	-	-	-	0.0

TABLE 111:15
VALUE ADDED

	QUEBEC	1961	1963	1965	1967	Relative change-V.A.
	Québec	159,007	179,518	198,882	216,518	0.629
	Trois-Rivières	67,719	73,304	84,560	88,720	0.306
	Arvida	-	-	-	-	0.898
	Sherbrooke	50,535	63,879	78,712	81,561	1.028
	Drummondville	47,228	55,529	66,469	69,992	0.822
	Granby	46,981	47,765	54,551	59,809	0.493
	Shawinigan	66,815	59,539	72,128	73,231	0.228
	St-Jean	35,243	36,334	51,674	63,033	1.299
	St-Hyacinthe	26,056	25,252	34,369	36,701	0.769
10	St-Jérôme	20,264	24,990	29,102	27,642	0.570
	Valleyfield	26,376	31,076	37,713	42,348	0.994
	Gatineau	-	-	-	-	0.227
	Baie-Comeau	-	-	-	-	0.814
	Hull	18,135	25,469	28,194	32,204	1.262
	Alma	640	-	-	-	-
	Tracy	-	19,840	31,829	25,845	-
	Victoriaville	11,613	14,705	17,200	22,894	1.481
	Grand'Mère	15,863	19,147	22,087	25,205	0.969
	Ste-Thérèse	9,685	18,365	24,674	27,642	2.626
20	Joliette	14,101	19,244	20,391	27,184	1.463
	Magog	-	-	-	28,076	-
	St - Joseph-de-Sorel	-	-	-	-	2.902
	Cowansville	9,973	16,069	22,026	25,832	2,230
	La Tuque	-	-	-	-	0.947
	Cap-de-la-Madelaine	23,154	22,704	24,643	22,944	-.033
	Kénogami	-	-	-	-	0.669
	Valcourt	-	-	-	-	8.070
	Acton Vale	6,079	7,556	9,569	11,278	1.328
30	Sorel	5,765	10,869	21,060	13,106	2.791
	Beauharnois	11,550	11,956	13,716	15,606	0.618
	Brownsburg	-	-	-	-	0.659
	Plessisville	6,204	7,829	10,627	13,531	1.723
	Windsor	-	-	11,412	10,953	-
	Port Alfred	-	-	-	-	-.048
	Donnaconna	-	-	-	-	0.132
	Lachute	2,869	3,116	2,110	8,196	4.413
	Louiseville	6,962	7,980	7,289	7,375	0.138
	Noranda	-	-	-	-	-1.689
40	Ste - Marie	8,874	10,361	13,427	13,384	0.889
	Waterloo	3,236	4,041	7,047	8,627	2.350
	East Angus	6,048	9,147	9,820	9,423	1.053
	Farnham	6,119	6,072	7,224	9,560	0.976
	Coaticook	4,597	5,103	6,318	6,972	0.872
	Princeville	3,859	5,783	6,061	8,782	1.922
	Dolbeau	-	-	-	-	-.254
	Beaupré	-	-	-	-	0.292
	Berthierville	3,535	5,523	6,216	7,584	1.753
	Bromptonville	-	-	-	-	0.617
50	Thurso	1,355	-	-	-	-
	Terrebonne	3,242	3,847	4,771	5,603	1.161
	Chambly	1,216	1,113	5,489	6,449	7.766
	Jonquière	4,203	3,820	6,651	-	-
	Montmagny	9,848	11,540	12,295	18,723	1,468

TABLE 111:15 (cont'd)

	QUEBEC (continued)	1961	1963	1965	1967	Relative change-V.A.
	Clermont	-	-	-	-	0.969
	Lac-Mégantic	2,410	2,518	3,635	4,072	1.175
	Masson	-	-	-	-	0.391
	Chandler	-	-	-	-	3.533
	Asbestos	-	-	-	-	0.471
	Buckingham	-	-	-	-	0.241
60	Thetford Mines	2,520	2,962	3,718	5,203	1.603
	Knowlton	-	-	-	-	2.934
	Mont Joli	1,654	1,954	2,583	4,024	2.049
	St-Georges	1,586	1,440	2,149	3,224	1.739
	Maniwaki	1,275	2,102	2,751	2,513	1.682
	Iberville	1,435	2,100	3,855	2,394	2.946
	Roberval	-	-	-	-	1.361
	Chicoutimi	3,142	3,256	3,913	4,429	0.714
	Rivière-du-Loup	800	1,069	2,320	3,294	3.719
70	St -Georges O.	1,235	1,663	1,945	-	-
	Rimouski	2,441	2,806	2,143	3,075	0.672
	Mont Laurier	2,220	2,284	1,807	2,394	0.280
	St - Félicien	1,589	1,699	3,016	2,431	1.256
	Matane	1,149	1,234	1,384	1,922	1.128
	Bécancour	N.D.A.	N.D.A.	1,564	1,752	I.D.
	Sept-Îles	955	1,258	1,359	2,119	1.847
	Rouyn	1,452	1,482	1,802	1,802	0.457
	Beloeil	523	547	592	892	1.226
	Shawinigan South	725	1,188	1,093	1,245	1.347
	Val-d'Or	885	701	1,059	1,151	0.752
80	Drummondville South	134	574	750	686	6.767
	Hauterive	409	585	794	777	1.479
	Pointe Gatineau	128	-	-	-	-
	Chibougamau	108	92	283	564	5.687
	Ste-Agathe-des-Monts	411	447	554	563	0.663
	Bagotville	298	176	-	250	-
	Amos	494	757	542	459	0.184
	Chicoutimi North	115	194	206	197	1.361
	Malartic	37	165	111	115	6.117
	Aylmer	-	-	-	-	-

TABLE 111: 16

VALUE ADDED/EMPLOYEE $,000

	QUEBEC	1961	1963	1965	1967
	Québec	9.226	10.163	11.378	12.222
	Trois-Rivières	10.390	10.556	11.561	12.002
	Arvida	-	-	-	-
	Sherbrooke	8.167	9.554	11.032	11.802
	Drummondville	9.872	10.914	11.429	12.111
	Granby	9.329	9.597	10.391	10.810
	Shawinigan	15.062	14.723	17.141	18.051
	St-Jean	8.993	10.268	11.082	12.462
	St-Hyacinthe	6.819	6.586	8.326	8.904
10	St-Jérôme	7.219	8.234	8.612	10.917
	Valleyfield	10.529	12.026	12.325	13.740
	Gatineau	-	-	-	-
	Baie-Comeau	-	-	-	-
	Hull	8.423	10.599	11.881	13.291
	Alma	11.228	-	-	-
	Tracy	-	11,196	13,947	10,850
	Victoriaville	5.483	5.728	7.152	8,197
	Grand'Mère	9.159	9.651	10.003	10.347
	Ste-Thérèse	8.422	9.535	10.617	11.894
20	Joliette	7.033	9.310	9.269	11.748
	Magog	-	-	-	12.820
	St - Joseph-de-Sorel	-	-	-	-
	Cowansville	7.701	9.497	10.331	11.517
	La Tuque	-	-	-	-
	Cap-de-la-Madelaine	10.739	11.596	12.599	11.873
	Kénogami	-	-	-	-
	Valcourt	-	-	-	-
	Acton Vale	4.934	5.007	5.936	7.243
30	Sorel	5.017	6.062	12.936	10.136
	Beauharnois	12.905	14.233	15.498	17.037
	Brownsburg	-	-	-	-
	Plessisville	8.339	8.978	10.877	12.157
	Windsor	-	-	9.639	10.217
	Port Alfred	-	-	-	-
	Donnaconna	-	-	-	-
	Lachute	7.300	8.136	5.288	7.464
	Louiseville	7.876	7.037	5.869	6.095
	Noranda	-	-	-	-
40	Ste - Marie	11.600	12.528	16.394	15.279
	Waterloo	4.866	6.815	7.702	8.679
	East Angus	8.274	11.941	12.753	12.598
	Farnham	7.408	7.263	8.135	10.827
	Coaticook	4.749	5.250	6.912	7.225
	Princeville	9.145	9.869	9.871	10.775
	Dolbeau	-	-	-	-
	Beaupré	-	-	-	-
	Berthierville	6.746	8.823	8.657	10.592
	Bromptonville	-	-	-	-
50	Thurso	4.689	-	-	-
	Terrebonne	6.407	6.002	7.164	8.039
	Chambly	8.053	8.244	9.241	10.949
	Jonquière	10.352	11.072	16.628	-
	Montmagny	8,896	10,158	10,590	13,558

TABLE 111:16 (cont'd)

	QUEBEC (continued)	1961	1963	1965	1967
	Clermont	-	-	-	-
	Lac-Mégantic	4.716	5.583	6.333	5.867
	Masson	-	-	-	-
	Chandler	-	-	-	-
	Asbestos	-	-	-	-
	Buckingham	-	-	-	-
60	Thetford Mines	10.769	12.041	14.030	14.062
	Knowlton	-	-	-	-
	Mont Joli	7.728	8.176	11.848	9.696
	St-Georges	4.310	5.000	5.888	7.327
	Maniwaki	5.313	6.759	6.843	5.609
	Iberville	7.069	6.176	12.356	7.552
	Roberval	-	-	-	-
	Chicoutimi	7.739	8.683	10.008	14.813
	Rivière-du-Loup	6.107	6.558	9.134	12.200
	St -Georges O.	3.800	4.645	4.767	-
70	Rimouski	7.243	8.376	8.819	12.500
	Mont Laurier	8.409	7.613	8.176	9.771
	St - Félicien	8.543	7.584	12.619	11.744
	Matane	8.639	8.690	10.565	10.920
	Bécancour	-	-	8.503	8.588
	Sept-Îles	11.646	12.096	15.443	16.053
	Rouyn	15.447	14.388	13.969	22.810
	Beloeil	7.366	6.011	6.103	8.920
	Shawinigan South	11.328	10.899	13.012	16.169
	Val-d'Or	8.271	9.736	14.120	14.210
80	Drummondville South	7.444	4.629	7.009	7.622
	Hauterive	13.633	13.295	14.704	15.235
	Pointe Gatineau	5.120	-	-	-
	Chibougamau	36.000	46.000	5.775	11.059
	Ste-Agathe-des-Monts	10.538	17.880	17.313	15.639
	Bagotville	7.268	9.777	-	5.319
	Amos	8.098	9.582	10.627	15.300
	Chicoutimi North	6.765	8.818	10.300	9.850
	Malartic	2.466	12.692	13.875	16.429
	Aylmer	-	-	-	-

TABLE 111:17

MAGNITUDE OF MANUFACTURING

	QUEBEC	1961	1967	Relative change	
	Québec	13.087	11.42	-12.737	
	Trois-Rivières	5.540	4.97	-10.288	
	Arvida	4.993	4.55	-8.872	
	Sherbrooke	4.396	4.39	-.136	
	Drummondville	3.618	3.57	-1.381	
	Granby	3.810	3.31	-13.123	
	Shawinigan	4.549	3.26	-28.351	
	St-Jean	2.985	3.21	7.357	
	St-Hyacinthe	2.496	2.26	-9.600	
10	St-Jérôme	1.938	2.13	9.793	
	Valleyfield	1.980	2.07	4.545	
	Gatineau	2.105	1.84	-12.796	
	Baie-Comeau	1.831	1.70	-7.103	
	Hull	1.694	1.69	0.00	
	Alma	.044	1.69	4125.000	
	Tracy	0.782	1.62	107.692	
	Victoriaville	1.309	1.49	13.740	
	Grand'Mère	1.361	1.48	8.823	
	Ste-Thérèse	0.820	1.46	78.048	
20	Joliette	1.339	1.42	5.970	
	Magog	1.727	1.42	-17.919	
	St - Joseph-de-Sorel	1.031	1.38	33.980	
	Cowansville	0.898	1.36	51.111	
	La Tuque	1.335	1.23	-8.208	
	Cap-de-la-Madelaine	1.719	1.21	-29.651	
	Kénogami	1.282	1.10	-14.062	
	Valcourt	0.169	0.985	482.840	
	Acton Vale	0.710	0.790	11.267	
30	Sorel	0.690	0.766	11.014	
	Beauharnois	0.821	0.703	-14.372	
	Brownsburg	0.726	0.695	-4.269	
	Plessisville	0.542	0.694	28.044	
	Windsor	0.996	0.691	-30.622	
	Port Alfred	0.906	0.630	-30.463	
	Donnaconna	0.825	0.626	-24.121	
	Lachute	0.275	0.599	117.818	1
	Louiseville	0.595	0.596	0.168	
	Noranda	0.625	0.583	-6.720	
40	Ste - Marie	0.587	0.572	-2.720	
	Waterloo	0.301	0.536	78.073	
	East Angus	0.575	0.525	-8.695	
	Farnham	0.571	0.514	-9.982	
	Coaticook	0.575	0.500	-13.043	
	Princeville	0.312	0.495	58.653	
	Dolbeau	0.664	0.469	-29.367	
	Beaupré	0.484	0.418	-13.636	
	Berthierville	0.336	0.416	23.809	
	Bromptonville	0.473	0.405	-14.376	
50	Thurso	0.231	0.386	67.099	
	Terrebonne	0.331	0.379	14.501	
	Chambly	0.101	0.359	255.445	1
	Jonquière	0.347	0.349	0.576	
	Montmagny	0.790	0.902	14.177	

TABLE 111:17 (Cont'd)

	QUEBEC (continued)	1961	1967	Relative change
	Clermont	0.403	0.346	-14.143
	Lac-Mégantic	0.285	0.332	16.491
	Masson	0.411	0.330	-19.708
	Chandler	0.308	0.328	6.493
	Asbestos	0.283	0.292	3.180
	Buckingham	0.401	0.288	-28.179
60	Thetford Mines	0.185	0.242	30.810
	Knowlton	0.102	0.240	135.294
	Mont Joli	0.146	0.237	62.328
	St-Georges	0.206	0.221	7.281
	Maniwaki	0.143	0.218	52.447
	Iberville	0.138	0.206	49.275
	Roberval	0.173	0.198	14.450
	Chicoutimi	0.279	0.198	-29.032
	Rivière-du-Loup	0.079	0.174	120.253
	St -Georges O.	0.169	0.165	-2.366
70	Rimouski	0.241	0.151	-37.344
	Mont Laurier	0.175	0.131	-25.142
	St - Félicien	0.131	0.123	-6.106
	Matane	0.090	0.115	27.777
	Bécancour	N.D.A.	0.109	I.D.
	Sept-Îles	0.070	0.091	30.000
	Rouyn	0.086	0.062	-27.906
	Beloeil	0.052	0.054	3.846
	Shawinigan South	0.049	0.052	6.122
	Val-d'Or	0.073	0.051	30.136
80	Drummondville South	0.012	0.044	266.666
	Hauterive	0.026	0.036	38.461
	Pointe Gatineau	0.015	0.031	106.666
	Chibougamau	0.004	0.030	650.000
	Ste-Agathe-des-Monts	0.028	0.023	-17.857
	Bagotville	0.028	0.022	-21.428
	Amos	0.040	0.019	-52.500
	Chicoutimi North	0.011	0.011	0.000
	Malartic	0.008	0.004	-50.000
	Aylmer	0.000	0.000	-

TABLE 111:18

(A) INDEX OF SPECIALIZATION and
(B) REFINED INDEX OF MANUFACTURING DIVERSITY

	QUEBEC	A 1961	A 1967	A Relative change(%)	B 1967
	Québec	1.959	1.895	-3.256	67.2
	Trois-Rivières	1.694	1.750	-3.305	607.2
	Arvida	11.726	10.415	-11.180	994.9
	Sherbrooke	2.298	2.192	-4.612	397.3
	Drummondville	2.674	2.331	-12.827	652.8
	Granby	3.256	3.088	-5.159	422.6
	Shawinigan	5.457	6.506	19.223	631.8
	St-Jean	4.743	2.902	-38.815	407.5
	St-Hyacinthe	2.459	2.348	-4.514	464.6
	St-Jérôme	5.524	3.124	-43.446	320.4
10	Valleyfield	2.817	2.339	-16.968	714.7
	Gatineau	4.249	4.429	4.236	958.1
	Baie-Comeau	4.348	3.667	-15.662	917.8
	Hull	2.094	2.550	21.776	707.4
	Alma	5.212	3.807	-26.957	868.5
	Tracy	27.338	11.006	-59.741	902.7
	Victoriaville	5.628	5.348	-4.975	745.7
	Grand'Mère	1.940	2.050	5.670	703.0
	Ste-Thérèse	2.500	2.243	-10.280	186.3
20	Joliette	2.055	1.799	-12.457	353.9
	Magog	3.762	3.320	-11.749	894.5
	St - Joseph-de-Sorel	10.555	8.455	-19.895	932.8
	Cowansville	3.893	2.999	-22.964	727.9
	La Tuque	4.628	4.768	3.025	966.9
	Cap-de-la-Madelaine	2.544	2.211	-13.089	653.8
	Kénogami	4.919	5.187	5.448	985.6
	Valcourt	28.824	18.264	-36.636	995.5
	Acton Vale	5.780	6.336	9.619	759.1
30	Sorel	2.124	2.430	14.406	760.3
	Beauharnois	3.826	4.989	30.397	783.6
	Brownsburg	25.381	31.619	24.577	999.6
	Plessisville	8.416	11.947	41.955	764.9
	Windsor	4.122	25.502	518.680	945.0
	Port Alfred	4.687	4.708	0.448	965.3
	Donnaconna	4.480	4.507	0.602	967.4
	Lachute	2.597	2.608	0.423	853.1
	Louiseville	2.874	2.993	4.140	843.5
	Noranda	10.209	8.636	-15.407	961.8
40	Ste - Marie	9.097	8.626	-5.177	899.2
	Waterloo	7.827	8.275	5.723	693.0
	East Angus	4.222	4.249	0.639	939.5
	Farnham	3.035	3.331	9.752	806.6
	Coaticook	4.077	3.730	-8.511	778.0
	Princeville	6.416	4.283	-33.245	641.0
	Dolbeau	4.159	19.073	358.595	960.7
	Beaupré	4.519	4.605	1.903	971.3
	Berthierville	6.678	5.210	-21.982	686.5
	Bromptonville	4.648	4.162	-10.456	943.2
50	Thurso	35.952	10.804	-69.948	820.7
	Terrebonne	6.184	3.306	-46.539	520.6
	Chambly	5.916	7.850	32.691	568.8
	Jonquière	3.124	3.877	24.103	943.5
	Montmagny	3.277	4.222	18.837	613.4

TABLE 111:18 (cont'd)

	QUEBEC (continued)	A 1961	A 1967	A Relative change(%)	B 1967
	Clermont	5.438	5.566	2.353	997.7
	Lac-Mégantic	12.028	10.002	-16.844	836.6
	Masson	4.831	5.237	8.404	988.1
	Chandler	4.865	4.985	2.466	980.3
	Asbestos	35.596	29.182	-18.018	912.6
	Buckingham	14.408	17.611	22.230	878.6
60	Thetford Mines	3.292	3.379	2.642	649.7
	Knowlton	9.442	21.870	131.624	959.4
	Mont Joli	5.924	8.893	50.118	791.4
	St-Georges	7.661	8.796	14.815	743.6
	Maniwaki	15.547	20.847	34.090	967.7
	Iberville	4.599	4.594	-0.108	398.5
	Roberval	12.622	13.933	10.386	935.2
	Chicoutimi	4.622	5.377	16.334	725.9
	Rivière-du-Loup	1.993	1.862	-6.573	674.4
	St -Georges O.	3.635	4.580	25.997	961.2
70	Rimouski	2.866	7.476	160.851	700.2
	Mont Laurier	18.470	19.842	7.428	965.4
	St - Félicien	15.561	19.073	22.569	961.5
	Matane	7.378	4.932	-33.152	756.5
	Bécancour	I.D.	6.310	I.D.	848.6
	Sept-Îles	7.390	3.767	-49.025	603.2
	Rouyn	6.401	6.634	3.640	835.8
	Beloeil	6.684	9.361	40.050	899.6
	Shawinigan South	5.712	6.518	14.110	703.2
	Val-d'Or	10.048	2.178	-78.537	848.1
80	Drummondville South	8.614	3.086	-64.174	748.9
	Hauterive	8.671	6.498	-25.060	737.7
	Pointe Gatineau	16.898	48.429	186.596	985.6
	Chibougamau	13.717	14.546	6.043	938.9
	Ste-Agathe-des-Monts	5.972	7.164	19.959	866.0
	Bagotville	26.564	17.476	-34.211	959.9
	Amos	7.384	7.917	7.218	815.6
	Chicoutimi North	10.442	9.757	-6.560	825.8
	Malartic	8.201	9.793	19.412	970.7
	Aylmer	-	-	-	-

TABLE 111:19

LOCATION QUOTIENT

	QUEBEC	1961	1966	Relative change
	Québec	0.622	0.522	-16.077
	Trois-Rivières	1.490	1.606	7.785
	Arvida	-	-	-3.550
	Sherbrooke	1.199	1.113	-7.172
	Drummondville	2.210	2.139	-3.212
	Granby	2.064	1.954	-5.329
	Shawinigan	1.779	1.689	-5.059
	St-Jean	1.872	2.187	16.826
	St-Hyacinthe	2.174	2.144	-1.379
10	St-Jérôme	1.475	1.481	0.406
	Valleyfield	1.184	1.247	5.320
	Gatineau	-	-	-17.133
	Baie-Comeau	-	-	-21.788
	Hull	.488	.462	-5.532
	Alma	0.037		
	Tracy		2.479	-
	Victoriaville	1.453	1.562	7.501
	Grand'Mère	1.413	1.813	28.308
	Ste-Thérèse	1.260	2.281	81.031
20	Joliette	1.402	1.432	2.139
	Magog	-	1.415	-
	St - Joseph-de-Sorel	-	-	25.814
	Cowansville	2.369	2.650	11.861
	La Tuque	-	-	-1.182
	Cap-de-la-Madelaine	1.033	0.808	-21.781
	Kénogami	-	-	6.619
	Valcourt	-	-	198.527
	Acton Vale	4.016	4.399	9.536
30	Sorel	0.864	0.754	-12.731
	Beauharnois	1.326	1.199	-9.577
	Brownsburg	-	-	33.679
	Plessisville	1.461	1.852	26.762
	Windsor	-	2.125	-
	Port Alfred	-	-	-10.753
	Donnaconna	-	-	8.074
	Lachute	0.482	1.448	200.414
	Louiseville	2.755	3.525	27.949
	Noranda	-	-	-9.131
40	Ste - Marie	2.694	2.588	-3.934
	Waterloo	1.888	2.484	31.567
	East Angus	1.982	1.968	-0.706
	Farnham	1.677	1.024	-38.938
	Coaticook	1.808	1.696	-6.194
	Princeville	6.416	2.322	-63.809
	Dolbeau	-	-	-2.708
	Beaupré	-	-	-8.513
	Berthierville	1.823	2.253	23.587
	Bromptonville	-	-	-1.877
50	Thurso	1.126	-	-
	Terrebonne	1.051	0.978	6.945
	Chambly	0.521	0.704	35.124
	Jonquière	0.183	-	-
	Montmagny	2.084	1.377	-33.925

TABLE 111:19 Cont'd)

	QUEBEC (continued)	1961	1966	Relative change
	Clermont	-	-	12.532
	Lac-Mégantic	0.940	0.988	5.106
	Masson	-	-	-17.074
	Chandler	-	-	5.255
	Asbestos	-	-	55.492
	Buckingham	-	-	-10.364
60	Thetford Mines	0.140	0.162	15.714
	Knowlton	-	-	80.555
	Mont Joli	0.447	0.629	40.715
	St-Georges	0.885	0.604	-31.751
	Maniwaki	0.488	0.715	46.516
	Iberville	0.345	0.483	40.000
	Roberval	-	-	-20.138
	Chicoutimi	0.165	0.147	-10.909
	Rivière-du-Loup	0.156	0.287	83.974
	St -Georges O.	0.882	-	-
70	Rimouski	0.228	0.164	-28.070
	Mont Laurier	0.581	0.487	-16.179
	St - Félicien	0.467	0.457	-2.141
	Matane	0.156	0.142	-8.974
	Bécancour	-	0.281	-
	Sept-Îles	0.074	0.062	-16.216
	Rouyn	0.065	0.060	-7.692
	Beloeil	0.144	0.117	-18.750
	Shawinigan South	0.065	0.092	41.538
	Val-d'Or	0.126	0.090	-28.571
80	Drummondville South	0.032	0.092	187.500
	Hauterive	0.065	0.051	-21.538
	Pointe Gatineau	0.036	-	-
	Chibougamau	0.008	0.038	375.000
	Ste-Agathe-des-Monts	0.088	0.075	-14.772
	Bagotville	0.094	0.077	-18.085
	Amos	0.129	0.066	-48.837
	Chicoutimi North	0.020	0.019	-5.000
	Malartic	0.028	0.015	-46.428
	Aylmer	-	-	-

TABLE 111:20

MAGNITUDE; DEGREE OF SPECIALIZATION; LEADING MANUFACTURING SECTORS;[1]
SELECTED CENTRES - QUEBEC 1961 - 1967

GROUP A: ABOVE-AVERAGE MAGNITUDE

A-1 Diversified Centres

	Leading Sector or Sectors	Growth		
		Employment	Value Added	Magnitude
Québec City	Food & Beverage, Clothing, Non-Metallic Minerals	+	+	−
Sherbrooke	Textiles, Clothing, Machinery	+	+	−
St-Jérôme	Textiles, Clothing, Leather, Petroleum	−	+	+
Joliette	Paper, Knitting Mill, Primary Metal	+	+	+
Granby	Textiles, Electrical Machinery, Metal Fabricating, Tobacco Products.	+	+	−

A-2 Intermediate Centres

Trois Rivières	Paper and allied and/or Primary Metal	+	+	−
Hull	Industries	+	+	no change
Cap-de-la-Madeleine		−	−	−
Shawinigan	(Chemical Products Industries)[2]	−	+	−
Grand-Mère (C & T)		+	+	+
Drummondville (T)	Clothing and/or Textile Industries	+	+	−
St-Jean (T & C)		+	+	+
St-Hyacinthe (T & C)		+	+	−
Cowansville (T)	(Furniture and Fixture Industries)	+	+	+

TABLE 111:20 (cont'd)

A-3 Specialized Centres

	Leading Sector	Growth Employment	Growth Value Added	Magnitude
Gatineau		+	+	-
La Tuque		+	+	-
Kénogami	Paper & Allied Industries	+	+	-
Alma		+[3]	+[3]	+
Baie-Comeau	Primary Metal Industries	+	+	-
Arvida		+	+	-
St-Joseph-de-Sorel	-(Machinery Industries)	+	+	+
Valleyfield (T)	Textiles (T) and/or Clothing (C)	+	+	+
Magog (T)	Industries	N.A.	N.A.	-
Victoriaville (C)				
Valcourt	Transportation Equipment Industries	+	+	+
Tracy		+[3]	+[3]	+

(B) BELOW-AVERAGE MAGNITUDE

B-1 Diversified - None

B-2 Intermediate Centres

Princeville	Furniture, Wood Industries	+	+	+
Iberville	Leather and Electrical Products	+	+	+
Sept-Îles	Food and Beverage Industry	+	+	+

TABLE III:20 (cont'd)

B-3 Specialized Centres: Below Average magnitude

	Leading Sector	Employment	Value Added	Magnitude
Donnacona		+	−	−
Dolbeau		+	+	−
Beaupré		+3	+3	−
Jonquière		+	+	+
Bromptonville		+	+	−
Windsor	(Machinery)	N.A.	N.A.	−
Clermont	Paper and Allied Industries	−	+	−
Port Alfred		−	−	−
Masson		+	+	−
Chandler		+	+	+
East Angus		+	+	−
Thurso	(furniture & fixture industry)	N.A.	N.A.	+
Rivière du Loup		+	+	+
Lachute		+	+	+
Maniwaki		+	+	+
St-Félicien		+	+	−
Val d'Or		−	+	+
Chibougamau		+	+	+
Mont Laurier	Wood and Wood Products Industries	−	+	−
Roberval		+	+	+
Lac-Mégantic		+	+	+
Amos		−	+	−
Rimouski	(metal fabricating industry)	−	+	−
Malartic		−	+	−
Ste-Marie	Food and Beverage Industries	+	+	−
Berthierville		+	+	+

TABLE 111:20 (contd)

B-3 (Cont'd)

	Leading Sector	Growth: Employment	Growth: Value Added	Magnitude
Bécancour	Food and Beverage Industries (cont'd)	+[3]	+[3]	+[3/4]
Chicoutimi		-[3]	+	-
Rouyn		-	+	-
Hauterive		+	+	+
Ste-Agathe-des-Monts		+	+	-
Thetford Mines		+	+	+
Noranda	Primary Metal Industries	+	+	-
Mont Joli		+	+	+
Beauharnois	(furniture & fixture industry)	+	+	-
Sorel (T)		+	+	+
Farnham (C & T)		+	+	-
St-Georges (T)		+	+	+
St-Georges O. (T)	(leather & leather products ind.)	+[3]	+[3]	-
Shawinigan S.(CT)	Clothing(C)and/or Textile(T)Industry	+	+	+
Acton Vale (T)		+	+	+
Louiseville (C & T)		+	+	+
Coaticook (T)		+	+	+
Montmagny (T)	(electrical, machinery, equipment & supply)	+	+	+
Other Specializations				
Matane	Non-Metallic Mineral Industries	+	+	+
Asbestos		+	+	+
Bagotville		N.A.	N.A.	-
Pointe Gatineau		+	+	+
Knowlton	Chemical and Chemical Products Industry	+	+	+
Buckingham		-	+	-
Brownsburg		+	+	-

TABLE 111:20 (cont'd)

B-3(Cont'd)

	Leading Sector	Growth		
		Employment	Value Added	Magnitude
Drummondville S.	Electrical Machinery Equipment and Supply	+	+	+
Chicoutimi North	Furniture & Fixtures, Metal Fabricating Industries	+	+	no change
Waterloo	Plastics (Miscellaneous Manufacturing)	+	+	+
Plessisville	Machinery & Clothing	+	+	+

1. Centres not included in this table are Chambly, Beloeil, Ste-Thérèse and Terrebonne. These centres are now part of the C. M. A. of Montreal.

2. Bracheted activities point out other manufacturing specialties of a given centre not covered in the general grouping.

3. Centres where no direct or indirect statistics are available but where growth or decline is known to have taken place.

4. The centres of Lachute and Bécancour have had thier statistics on manufacturing activity modified by municipal boundary changes.

SOURCE OF DATA:

1. Unpublished data: Statistics Canada.

2. Girard J., "Geographie de L'industrie Manufacturière du Québec. Ministère de L'industrie et du commerce, Québec, 1970.

3. (a) Community Data Sheets of the various departments of Industry and/or Commerce, Manitoba, Saskatchewan and Alberta.

CHAPTER FOUR

RETAIL TRADE AND SERVICES

Introduction

The value of retail trade and services provides a strong indication of a centre's importance to its own and surrounding population. The importance of a city's role as a trade and service centre is manifest by several theories that have been developed which regard this function as the main reason for the growth and existence of urban areas.[1] Small urban centres interspersed throughout the rural countryside have especially been regarded this way.[2] The significance of retail trade has also long been acknowledged even for large conglomerate centres. As far back as 1937, the United States National Resources Committee stated, "...the rapid growth of the larger cities has reflected their increasing importance as commercial and service centres rather than as industrial centres."[3] Any effort, therefore, which intends to provide an overview describing either large or small urban centres must include sufficient information on retail trade to facilitate a comparison on that basis.

In assessing retail trade and services for the selected centres listed at the beginning of this report,the following questions were obviously at the forefront:

1. How much money do consumers have to spend, i.e. what is their buying power?
2. Where do consumers spend their money?
3. What do they buy?

To answer these questions in a way that enables one to compare centres, several indexes have been computed using basic data on incomes, absolute and relative consumption, and the relative specialization of each centre. The raw data is contained in twenty tables and fifteen maps some of which are appended to this report, the rest are included in the text.

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1. i.e., Walter Christaller's theory in essence states that a "..centre exists because essential services must be performed for the surrounding land." E. Ullman, "A Theory of Location for Cities", American Journal of Sociology, XLVI (May 1941), pp. 836.
2. Cf. Dwight Sanderson, "Locating the Rural Community", Perspectives On The American Community, ed. Rolland Warren, (Chicago, 1966), pp. 179.
3. Ullman, op.cit., pp.864.

1. Data Source

Before discussing these indexes in detail, a word should be said on the data source. There are various commercial establishments which publish annual retail and service statistics and some data is available for years as recent as 1970. There was, nevertheless, a hesitancy to use them. In some instances when the research team compared statistics furnished by private publishers for 1966 (a census year) with data compiled from Statistics Canada, little congruence was found. Moreover, the discrepancies were not consistently above or below the census figures. They varied considerably, and in many cases, private reports published higher values in retail trade than did Statistics Canada for one particular centre whereas another centre would be reported lower. There were other firms which claimed that their figures for recent years were based upon projections from 1961 and 1966 Census data. But they refused to disclose their methods of extrapolation. Consequently, their figures were not used because there was no way of assessing their reliability. In other instances, the research team discovered piecemeal and incomplete data which appeared to be reliable. But they only covered either one province or part of it, thereby precluding regional comparisons. Reluctantly, this data could not be used since one of the main purposes of this study was to provide a basis for the comparison of the selected centres. Hence, a decision was made to sacrifice the more recent data for that which was more accurate and more complete. The source of data was therefore, restricted to the data supplied by Statistics Canada[4] for the retail trade and service analysis, even though the most recent year that could be used was 1966. For purposes of comparison, 1961 census data was used. In regard to information on income the situation was more encouraging since income estimates up to 1969 were kindly made available from the Department of National Revenue. These estimates represented average earned income of those who filed tax returns only and therefore, they do not include all sources of income.

The nature of the data limited the results of the study in that the information is dated. Secondly, the breakdown of the data was not sufficiently fine to permit more exhaustive analysis. For example, a detailed breakdown of

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4. The following catalogues were used: 1966 - nos. 97-602, 603, 642, 643; and"Small Area Income Estimates" reprinted from "Canadian Statistical Review, (April 71); and 1961 - nos. 97-502, 518, 95-542.

services was only available for centres having a population of 30,000 or greater. In other instances, data was withheld to avoid disclosure although, thanks to the generous assistance of the staff of Statistics Canada, several useful indexes were calculated in this Section. These indices made possible the comparison of centres while still respecting the rules of confidentiality.

2. Presentation of Data

The intention of this study, as stated earlier, is to provide a descriptive overview of various selected centres. It was the understanding of the research team that basic information was to be gathered and presented in such a way as to provide a pool of information from which future researchers, who were operating within a specific theoretical frame of reference, would be able to draw. Concomitantly, an effort has been made to express the basic data in tabular and cartographic form that will facilitate the comparison of the centres both quantitatively as well as spatially.

It should be noted that for presentation, the data is grouped in a two-fold manner. First, the centres within the two regions of the Province of Québec and the Prairies were kept separate and no comparisons were made between the regions. Second, the wide range of population size among centres made it necessary to group them according to size within each region so that more meaningful comparisons could be made. When one begins to compare centres on the basis of growth rates and other demographic characteristics, it can readily be appreciated why such stratification is important. For small centres especially, a slight increase in the absolute value of a commodity will often result in a very large rate of increase. Consequently, if centres are ranked on the basis of, for example, rates of growth; the smallest ones will invariably receive high rankings. As there are many small towns among the 149 centres selected for consideration in this report, it is probable that large cities would not appear in any comparisons when the first fifteen or twenty centres were ranked.

In order to avoid this problem of relativity, the cities have been stratified into the following classes according to the 1966 Census:

(1) Very Small-population: 5,000 and under; (2) Small-population: 5,001 to 10,000; (3) Intermediate-population: 10,001 to 25,000; (4) Large-population: 25,001 to 100,000; and (5) Very Large-population: over 100,000. In the province of Québec, the smallest category was excluded since centres containing less than 5,000 were not considered. Furthermore, the fifth category was also excluded for the Province of Québec since only two cities (Québec and Montréal) came under this category.

A frequency distribution of class sizes according to the two regions is outlined below:

Prairie Region		Québec	
Class	Frequency	Class	Frequency
Very Small	49	Small	27
Small	11	Intermediate	31
Intermediate	5	Large	12
Large	6	Very Large	2
Very Large	2		
	73		72

While the frequency distribution is biased in favour of small centres, it was thought that such a grouping was most plausible as it permitted what was felt to be practical comparisons. The large number of centres in the first category of the Prairie region presented no problem since the purpose of stratifying these centres was to counter the effect of size. If all centres fell within a small population range, no stratification would be necessary and ranking could be done simply on the basis of the various indexes. It is felt that a range of only 2,500 (the size of the "Very Small" category) is narrow enough to justify a straight ranking.

Regarding other aspects of data presentation, this section of the report follows a simple plan of first presenting the most fundamental information and then discussing how this basic data was manipulated. The Chapter concludes by briefly identifying various trends that result from this manipulation.

3. Absolute Values and Indicators of Change

The most fundamental of all of the data in the sense that it is the basis for all other computations, is absolute values. Tables have been included which indicate the absolute values of sales in the various retail trade categories, plus the total value of sales. Also included is the number of retail outlets for the years 1961 and 1966. While one would expect the largest metropolitan centres to have the highest level of retail trade, Tables IV.1 and IV.11 and the accompanying maps will be of value in assessing centres other than the more obvious.

Most reports dealing with retail trade include a ranking of centres according to the number of services available. The only information available for smaller centres was that compiled by Dunn and Bradstreet. Due to the limitations, as well as the fact that there was insufficient time to conduct field surveys, a technique was adopted that provided a comparative measure of diversification based upon the kinds of goods sold - the coefficient of specialization.

The raw data used for this index was the distribution of the retail sales by commodity class. The distribution for each centre was compared to the distribution of the respective region as a whole. The calculation of the coefficient is explained in the Introduction of this report. However, it is appropriate to mention that as the coefficient approaches unity, it indicates that the kinds of goods sold in the centre under examination are more specialized. Conversely, the lower the coefficient, the more diversified is the centre with respect to the type of good sold.

The accompanying maps whose centres are identified by a star, highlight those urban areas offering the widest range of goods. The tables appended at the end of this chapter, outlining the actual coefficient for all centres for the years 1961 and 1966, can be used to supplement these maps. As would be expected, the most diversified centres are usually the largest.

The next step in the analysis of retail trade is to examine this function on a per capita and on a per store basis. At this time there will

be only a discussion of the absolute values(per capita consumption)for each centre and for each census division in 1966.

An important indicator of change is the per cent change (rate of growth) of absolute retail sales of each centre. As mentioned in a previous section, growth rates were calculated by comparing 1961 and 1966 census data.

The per cent change in retail sales per store is a second indicator of change that is computed from absolute sales. This information can be used in conjunction with the change in the number of retail outlets. By considering the two rates of change, the astute observer can discern areas having a high potential for new business. One would expect an increase in absolute sales to be accompanied by an increase in retail sales per store if the number of stores remained constant. But if both the above indicators are accompanied by a large increase in the number of outlets then it would appear that business has been exceptionally good. To illustrate this latter point, one may observe that Hauterive is ranked among the first five in absolute sales and retail sales per store, yet it had an increase of 100 per cent in the number of outlets. Lac-Mégantic, on the other hand, is also ranked among the first five in both ratings, but the increase in the total number of stores is very low indicating that most of the increase in retail activities went to established merchants. In some cases among the larger centres, the number of outlets actually declined even though there was a large increase in volume. This could indicate two things: 1) earnings are not increasing even though sales are; 2) competition or other factors inducing consolidation. Since the limitation of the data does not allow a discussion of causal relationships, all this report can do is observe various phenomena that emerge from the basic data and illustrate how this data may offer some leads for further research.

Two indicators of change associated with income and consumption are: 1) per cent change in per capita retail sales and 2) per cent change in average income. The former was calculated by comparing 1961 and 1966 retail sales. Maps and tables have been drafted which spatially and quantitatively express the information. From the complete tables in the appendix, tables have been

compiled, ranking the first five in each city size category for each region. The per cent change in average income was computed by averaging the trend over four years, from 1966 through 1969. Maps and tables similar to those prepared for retail sales were compiled and presented.

4. Income-Consumption Analysis

Following are three comparative indexes. Again these are primarily descriptive but, hopefully, they will be precursors to further analytical work.

a. The Sales Rating Index

One obvious measure that has heretofore not been considered is per capita consumption. In this study, the value of retail goods plus the value of services were summed and then divided by the population. However, in looking at per capita consumption for one centre alone, it was impossible to know whether the centre compared favourably with others in the region. Clearly, it would be advantageous if one number itself would indicate how each centre compared with the others in the region. To facilitate such a comparison, the per capita consumption of each centre was divided by a common denominator: - the average per capita consumption of each respective region as a whole.[5] The resulting index is referred to as the Sales Rating Index.

b. The Income Rating Index

A fundamental economic assumption is that consumption is a function of income. In any overview study such as this, it is important to include information on incomes so as to provide an indication of average purchasing power. To enable a comparison of centres to be made on this basis, an Income Rating Index was computed in a manner similar to the Sales Rating Index.

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5. The Sales Rating is calculated by $\dfrac{\frac{Ti\ \ Si}{Pi}}{\frac{Tr\ \ Sr}{PR}} = SR$

"T" is the value of retail trade, "S" is the value of services, "P" is population, "i" represents individual centres and "r" represents the region as a whole. If the index is 1, a city's per capita consumption is identical to the region. The higher the rating, the greater the city's per capita consumption with respect to the region.

Ideally, this index should have been computed by dividing each centre and county by the average personal disposable income of each respective region as a whole. Unfortunately data on disposable income was unavailable. For each centre the index was calculated on estimates of average earned income supplied by the Department of National Revenue. Since these estimates are based only on incomes reported by those filing tax returns, a large segment of the income is automatically left out. These segments include incomes which are either too low to be reported or those that involve transfer payments. Realizing that the major purpose of including the Income Rating Index was to compare centres, it was hoped that valid comparison could still be made (on the basis of consistency) even though there were some data omissions.

When calculating Income Ratings for counties' "Money Income"[6], the main difficulty encountered was that it still was not possible to determine how much of this total income was derived from personal disposable income. Nevertheless, on the basis that the data on incomes was consistent for all counties, it was felt that a comparison could be made of relative purchasing power.

c. Income-Consumption Index

In a report such as this, one could simply rank the various centres according to the sales rating and income rating separately. Hopefully, data of this nature would be useful for descriptive purposes as well as for future theoretical and analytical research. While each index has its own uses, a comparison of the two would indicate those centres having a relatively strong attractiveness to residents of their respective hinterlands. Therefore, it was felt that a composite index derived by comparing the Sales and Income Ratings would facilitate the comparison of the two indexes. Consumers do not necessarily purchase all goods and services where they live. Therefore, when comparing the two ratings, if it is noticed that a centre has a very high income rating (i.e. purchasing power is high) but has a low sales rating, it is possible

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6. The concept "money income" includes income from employment, income-yielding assets and transfer payments. It does not include receipts from the sale of assets, windfall gains, and capital gains. It also excludes income in kind. D.B.S. "Small Area Income Estimates "1966", op.cit., pp.4.

that consumers are making purchases outside of the area. Conversely, if a centre has a very high sales rating accompanied by a low income rating, it is possible that the centre's sales are driven up by purchases from residents of the surrounding area who find it a convenient or attractive service and trade centre.

To more readily compare the two indexes, the Sales Rating was divided by the Income Rating for every centre and county. The resulting quotient has been named the Income-Consumption Index.

By taking into consideration the relative buying power of a city's population and the relative consumption rate, the Income-Consumption Index should indicate the area of influence of that particular centre. This notion is based upon the assumption that if incomes increase, consumption will also increase. Such an assumption is indeed acknowledged in basic economic theory, and forms the basis of fiscal policy when governments endeavour to stimulate the economy. It is conceded that if an individual's income were to rise extremely high, there would be a reduction in the marginal utility rate of most goods as the consumer's wants become saturated. Beyond a certain level of satisfaction, the marginal propensity to save may increase. However, for the most part, the average incomes in the centres under discussion are quite low, as can be seen from the tables in the appendix, and therefore, it is assumed that there is a relatively uniform propensity to consume. On the basis of this assumption then, it is further assumed that if a centre's per capita retail sales and average incomes are high, thus resulting in an <u>average</u> Income-Consumption Index of slightly over one, then most of the sales are to consumers in the town. On the other hand, if incomes are high and sales are extremely high, resulting in a <u>high</u> Income-Consumption Index, then it could be assumed that the high index may be attributed to sales to residents of the hinterland who come to the centre to shop. A similar conclusion would be drawn from a high Income-Consumption Index resulting from an average Income Rating and High Sales Rating.

A note of caution, however, must be mentioned at this time. This

concerns a high Income-Consumption Index that results from an average Sales Rating but abnormally low Income Rating. There is a further well-known assumption in economic theory which maintains that even if incomes are extremely low, consumers will continue to make expenditures in excess of their disposable income even though this may mean drawing from the use of credit and savings. Therefore, a high Income-Consumption Index resulting from an extremely low Income Rating and only an average Sales Rating may be due to consumers satisfying their minimum requirement for retail goods. This high Income-Consumption Index would, therefore, not be regarded as an indication that the centre is as important to its hinterland as another centre with an equally high Income-Consumption Index but which is due to very high sales and average income.

In summary then, a high Income-Consumption Index may be due to:

(1) A high Sales Rating and an average Income Rating, this indicates the city is important as a trade centre.

(2) An average Sales Rating and an abnormally low Income Rating: this indicates that the city's drawing power may not be as great as the high Income-Consumption Index would initially indicate.

Despite this qualification, it is strongly felt that when the three indexes, Sales Ratings, Income Rating and Income-Consumption Index, are used in conjunction, valuable knowledge can be obtained in regard to various centres' relative importance to their respective hinterlands.

To effectively illustrate the relationships between the three indices, several maps have been included. The values for the three indexes as well as all raw data necessary for their computation are found in four tables, in the appendix. Those tables included in the text only rank the first five centres in each size category (Very Small to Very Large, mentioned previously) for each region.

It can readily be appreciated why stratification by size is necessary when comparing centres by the Income-Consumption Index. Stratification is especially justified when one considers the relative effect the hinterland's population has on per capita sales rates of centres of different sizes. To

elaborate more fully, consider two centres, one with a population of 5,000, the other of 10,000. Assume both have a similar density of population living within the surrounding ten-mile radius (a common occurance on the Prairies). The effect of the purchases made by the residents of the hinterland will obviously result in much higher per capita sales for the small centre. Because of the fact that usually just as many people live in the countryside within convenient driving distance surrounding larger centres as smaller ones, the small centres inevitably have larger Income-Consumption indexes. The situation is, of course somewhat different for a metropolis with surrounding suburbs. However, the suburbs have many shopping centres which stem the flow to the city centre. This factor is of little significance in this report because entire metropolitan areas have been considered as separate and complete urban centres. It must be conceded that for certain goods, the hinterland will be larger for large centres. However, the volume of these usually "esoteric" commodities is low. Moreover, because of confidentiality, it is not possible to distinguish them from the large volume of everyday purchases on food, automotive supplies and the like.

One final remark should be mentioned regarding the Income-Consumption analysis. It will be noted that the maps and tables record the Income-Consumption index for each county and division. The presentation of these two features on one map was not an endeavour to discern which counties were trading centres. Rather, the purpose was to facilitate a greater understanding of income and consumption characteristics in areas within which various centres are situated. Lack of data made it a rather arid exercise and it was thought that this information need not be included. After some discussion, however, it was decided that since this report is a descriptive summary, the data may be a starting point for further analyses and it was subsequently included as a matter of convenience. In its present form, it merely indicates the counties and divisions whose populations spend a greater proportion of their income on retail trade than others.

Findings and Observations

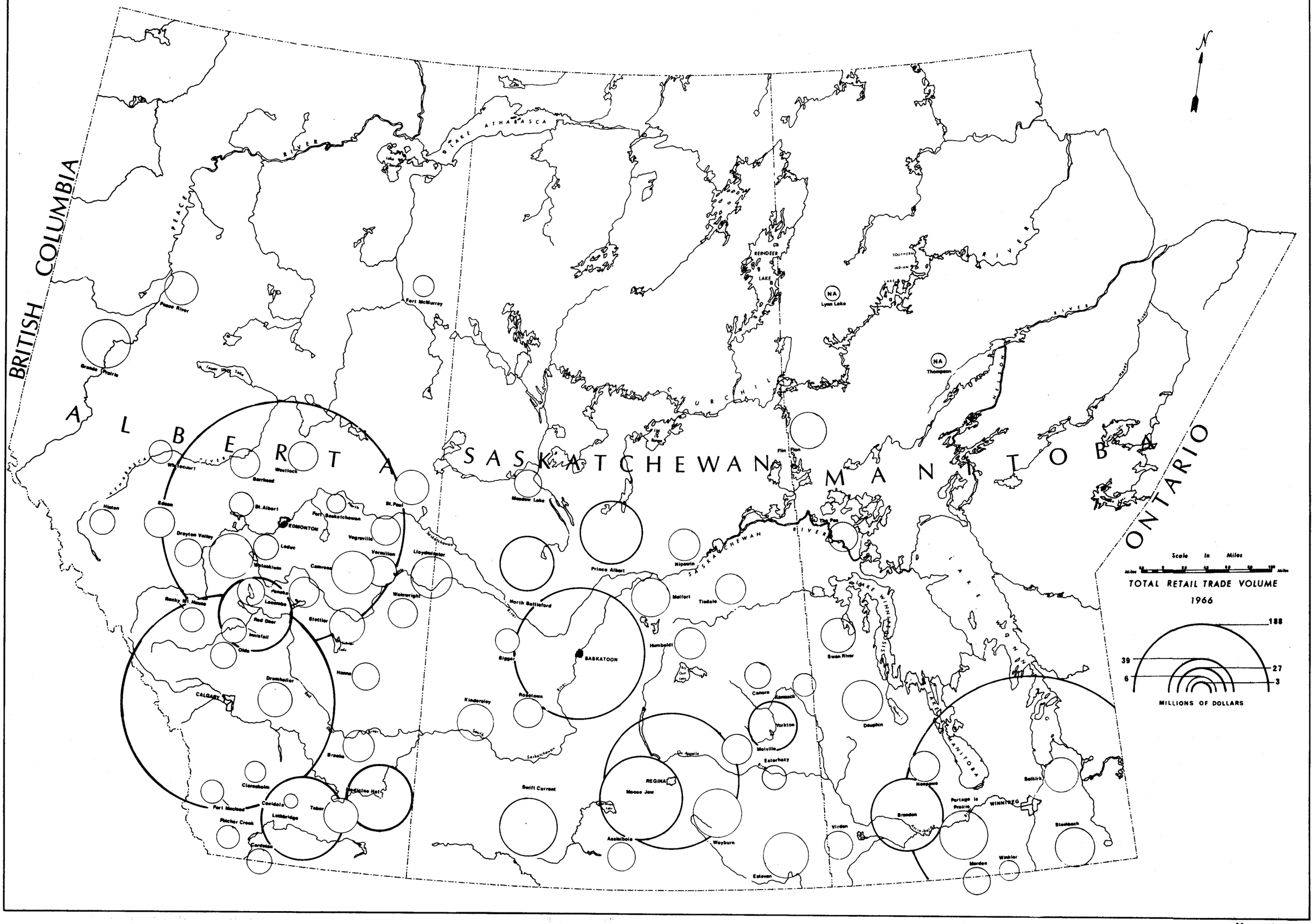
PRAIRIES

A descriptive analysis has been prepared on the retail trade and services in selected urban centres within the Prairie Provinces based on the techniques described in the previous section. The discussion will be in four stages and will culminate in an analysis of the Income-Consumption Index as it relates to the Prairies. The four stages include a discussion of : - 1) Absolute values, 2) Per Cent Distribution, 3) Per Capita Values, and 4) Rates of Growth.

1. Absolute Values

The absolute values of sales in the various retail trade categories plus the total value of sales are provided in Table IV.1 for 1961 and Table IV.2 for 1966, both located in the appendix at the end of the chapter. The various categories described are: food, general, automotive, apparel, hardware and other. Map IV.1 illustrates the total retail trade volume for 1966 by using proportional circles. It is obvious from the map that Winnipeg has the highest volume of trade, ($624,472,500), with Edmonton, ($551,160,700), and Calgary, ($461,444,200), coming second and third. There is evidently a positive correlation between the size of the centre and the size of the trade area. Another observation which could be noted is that the centres with the smallest trade areas, Winkler ($3,466,800), Fort Saskatchewan (3,233,500), Claresholm ($4,009,400), and Coaldale ($1,584,200) are all within or near the trade areas of the three larger centres. This is due to the fact that people living within these small centres can easily travel to the larger centres for a better selection of goods and services than they would find in their own centre.

The number of retail outlets for each centre for the years 1961 and 1966 are summarized on Table IV.3 in the appendix. When analysed in conjunction with the absolute sales values, it is possible to obtain a very general idea


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
N
PEACE RIVER
LAKE ATHABASCA
Peace River
Fort McMurray
Lesser Slave Lake
Edson
Hinton
Drayton Valley
Westlock
Barrhead
St. Albert
EDMONTON
Fort Saskatchewan
St. Paul
Vegreville
Vermilion
Lloydminster
Leduc
Wetaskiwin
Camrose
Wainwright
Rocky Mt. House
Lacombe
Ponoka
Red Deer
Innisfail
Olds
Stettler
Hanna
Drumheller
CALGARY
Brooks
Claresholm
Fort Macleod
Coaldale
Lethbridge
Taber
Medicine Hat
Pincher Creek
Cardston
Meadow Lake
Prince Albert
North Battleford
Battle River
SASKATOON
Biggar
Rosetown
Kindersley
Swift Current
Saskatchewan River
Nipawin
Melfort
Tisdale
Humboldt
Canora
Kamsack
Yorkton
Melville
Esterhazy
REGINA
Moose Jaw
Assiniboia
Weyburn
Estevan
Flin Flon
Thompson
Lynn Lake
REINDER LAKE
SOUTHERN INDIAN LAKE
CHURCHILL RIVER
NELSON RIVER
Lake Winnipegosis
Swan River
Dauphin
Virden
Brandon
Portage la Prairie
WINNIPEG
Neepawa
Selkirk
Steinbach
Morden
Winkler
Scale in Miles
TOTAL RETAIL TRADE VOLUME
1966
188
39
27
6
3
MILLIONS OF DOLLARS

Map IV. 1

of the state of the economy of the centre. For example, in Brandon, the number of retail outlets increased from 209 in 1961 to 221 in 1966, and the total value of sales increased from $35,176,100 in 1961 to $49,250,000 in 1966. From this one can assume that the retail trade is expanding. It is interesting to note that in Flin Flon the number of retail outlets decreased from 75 to 65 and that the total sales volume increased from $11,477,600 in 1961 to $11,920,700 in 1966. This difference could possibly be due to the introduction of large department stores or a large shopping mall. Such a shopping centre would cause a decline and possibly the collapse of older and smaller established retail outlets in the downtown area. Another value which should be taken into consideration is the per cent change in sales per retail outlet and this is presented at a later time.

2. Per Cent Distributions

In any detailed analysis of retail trade it is necessary to consider the various sectors of the retail trade and to determine which sector dominates. In this way it is possible to determine if a centre is specialized in retail goods and if so, to what extent and in which commodity. By considering the retail trade for each selected centre in 1961 and 1966, it is possible to conduct a trend analysis of the retail trade.

Tables IV.1 and IV.2 illustrate the absolute values of sales in each category and the percentage distribution for the years 1961 and 1966 respectively. In Manitoba, in 1961, the predominant sector was the Automotive Sector with 27% of the value of sales ($155,919,900). The next two largest categories were Food and General, each of which had a value of 25%. The same is basically true in 1966 with Automotive (30%) and General (26%), both slightly higher than in 1961 and with Food (23%) slightly lower. The rise in the Automotive category could be due to the increased cost of automobiles and accessories and to the increased mobility of people in general. In Saskatchewan, the same general trend is present with the three larger categories, but the per cent distribution is quite different. The people in Saskatchewan spend more on automobiles, (30.86% in 1961 and 35.68% in 1966) and much less on food (19.15% in 1961 and

17.93% in 1966). It appears that the people are able to spend proportionally less on the necessities of life such as food, shelter and clothing and can now spend more on luxuries such as cars. Alberta shows a different trend in that the percentage distribution among the various sectors of retail trade remained fairly constant from 1961 to 1966 (i.e. Automotive 32.26% in 1961, 32.48% in 1966). However the same three categories do dominate the retail trade as in the other two provinces.

Another observation that can be made from the tables concerns the range of values within each sector. In Manitoba the range in the per cent distribution in Food Sales in 1961 is from 34.41% for Selkirk to 8.54% for Winkler. In 1966, the range is from 32.91% in Selkirk to a low of 4.52% in Swan River. It is interesting to note that in 1966, 25.45% of retail trade in Winkler was in food sales, an increase of 16.91% in five years. This startling difference in both Winkler and Swan River could be a result of the categories themselves. Often, in smaller towns, food is sold in general stores rather than larger grocery stores. If this were the case in both centres, then the total volume of sales for food would be reported in the General group rather than the Food group. As the towns grew larger perhaps, grocery stores became established in the community.

The per cent distribution in the General category ranges from 41.25% in Winkler to 4.70% in Steinbach in 1961, and from 40.27% in Swan River to 10.38% in Steinbach in 1966. As mentioned previously, the high per cent in Winkler and Swan River could possibly be a result of the recording of general stores which sell food, in the General category.

Steinbach* leads the Automotive category with a per cent of 62.96 in 1961; Kamsack has the low value at 19.77%. In 1966 Leduc has the highest value 62.07% and St. Albert has the lowest - 16.19%. These wide ranges of values indicate that spending in this category depends strictly on the affluence of the people rather than their essential requirements.

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* Steinbach is known throughout Manitoba as the "Automobile City" because of the large number of cars that are sold from this centre.

The final three categories: Apparel, Hardware and Other, all have quite small variations in value. The per cent distribution in sales value in Apparel ranges from 13.57% in Biggar to 2.80% in Rocky Mountain House in 1961. In 1966 there was little change in the range of the values, 10.92% for Camrose to 2.58% for Whitecourt. In the Hardware category, which includes home furnishings, Edson is high with 12.82% and Drumheller is low with 2.69% in 1961. The 1966 values ranged from 16.38% for Esterhazy to 2.48% in Drayton Valley. In 1961, in the Other category the range in values is from 20.61% at Olds to 2.0% at Steinbach. In 1966 the values range from 31.47% for Fort McMurray to 3.17% for Steinbach. A possible reason for the extremely high value for Fort McMurray is that due to its proximity to the far north it is a strong marketing and service centre for the entire area and as such it must offer a wide variety of goods and services.

In 1961, fifty-five of the centres had the largest per cent distribution of retail sales in the Automotive category. In only nine centres was the General category predominant and four centres had the largest proportion of retail sales in Food. The same was generally true in 1966 when sixty-three of the centres had the highest per cent distribution of retail sales in the Automotive category, six centres dominated the General category and only one centre had the largest value of retail sales in the Other category.

After discussing all six categories it is still difficult to determine how specialized each centre is. The amount of specialization would be easier to determine if only one value were to be used. The previous six figures can be used to ascertain one value, the coefficient of specialization. The values of this coefficient for each centre are given on Tables IV.1 and IV.2. The coefficient is derived essentially from a comparison of two percentage distributions which have common units of classification. The limits to the value of this coefficient are 0 and 1. The more specialized a centre is the closer its coefficient will approach one. This coefficient has little value in identifying or evaluating cause and effect relationships but can assist the analyst to perceive certain general empirical associations. For example, it is possible to say that the most highly specialized centre in 1961 was Steinbach which had

a coefficient of .3568 and that Edmonton is the most diversified centre with a value of .0086. In 1966, the most highly specialized centre was St. Albert (.3979) and Edmonton was still the most diversified centre (.0187). In general it can be expected that the larger centres will have lower values because they offer a wider range of all possible commodities than do the smaller centres. This trend can be seen on the accompanying map (Map IV.2). A further examination of the coefficient of specialization can be conducted by viewing the change in the coefficient from 1961 to 1966 and relating this change to the size of the centres. After such an analysis it was found that 68% of the very small centres, (pop. 5000 and under), became more diversified since 1961. For example the coefficient of specialization for Hanna decreased from .1283 in 1961 to .0973 in 1966. Also 66% of the centres in the small centres (population 5001 - 10,000) became more diversified. In the next two class sizes, intermediate population (10,001 - 25,000) and large population (25,001 to 10,000), exhibited an opposite trend in that 60% tended to become more specialized as did all the centres in the largest size category. This is probably due to the fact that the smaller centres are being forced to offer a wider range of goods, relatively, than the larger centres. Such a phenomenon would be expected due to the increased technology in the field of consumer goods and the people's desires.

3. Per Capita Values

The next step in the analysis of retail trade is to examine this function on a per capita basis and on a per store basis. At this time there will only be a discussion of the absolute values per capita consumption for each centre and for each census divisions in 1966. This information is provided in the appendix on Tables IV.4 and IV.5 respectively. A more in-depth analysis of the per cent change of these values will be presented in the next section, "Rates of Growth".

According to Table IV.4, there appears to be quite a range in the per capita consumption, from a high of $3698.36 in Kindersley to $619.18 in St. Albert. In general, it appears that many of the smaller centres have a higher per capita consumption than the larger centres. The five largest cities

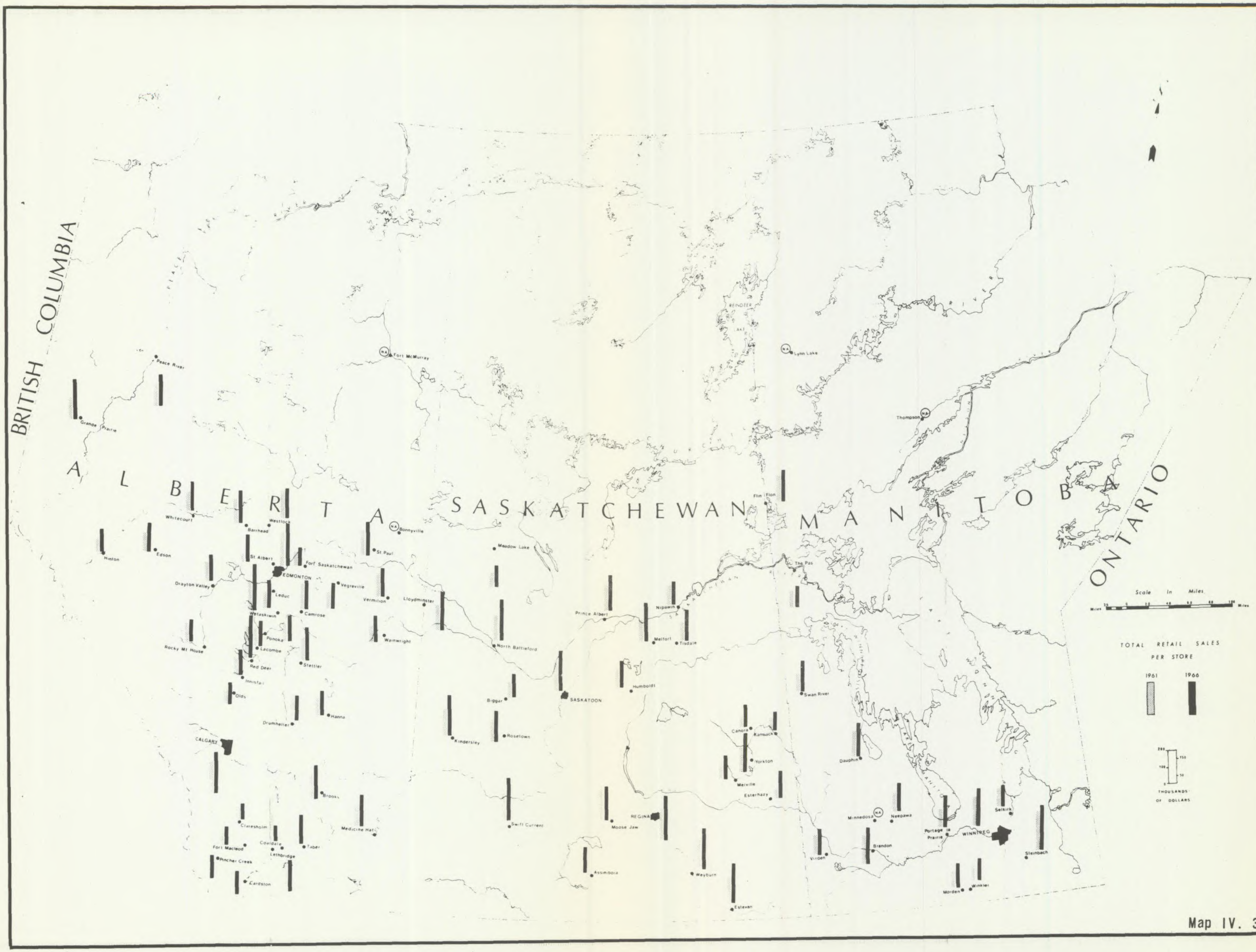
definitely appear grouped by value: Winnipeg- $1443.77, Regina - $1712.68, Saskatoon - $1686.66, Calgary - $1724.47 and Edmonton - $1661.29. The values for some of the smallest centres in Manitoba are: Morden - $2432.55, Neepawa - $3120.44, Steinbach - $3391.35, Swan River - $3404.27 and Virden - $2810.74. The smaller centres would serve a relatively larger area outside the centre than the larger centre. The effect of just a few people coming into the smaller centre for all their retail goods and services would be greater in a smaller centre such as Swan River than in a large one such as Winnipeg.

Table IV.5 summarizes the per capita consumption of retail trade and services by census division. The values here range from $2,460.87 in Census Division 9, in Alberta, to $544.59 in Census Division 18, in Manitoba. The values and ranges are considerably lower than the per capita values provided for each centre. Census Division 20 in Manitoba has the highest value for the province ($1529.77), and this is probably due to the fact that this census division consists entirely of the metropolitan area of Winnipeg.

Map IV.3 illustrates the total retail sales per store for 1961 and 1966. Only one centre on the map indicated an actual decrease in retail sales and this was Drumheller. This decline could be a result of the decline of the coal mining industry in this area. Several other centres showing relatively little change, i.e. a more stable economy, are Moose Jaw, Selkirk, Westlock and Lethbridge. Several centres indicated a high increase in the absolute value of retail sales and these are Melfort, North Battleford and St. Albert. This aspect can be examined more in depth when considering the per cent change or rates of growth.

4. Rates of Growth

There are several aspects of per cent change which will be discussed in this section. These are: 1) per cent change in the absolute value of retail sales and in the number of outlets; 2) per cent change in per capita purchases from 1961 to 1966; 3) per cent change in retail sales per store; and 4) per cent change in average income from 1966 to 1969. The analysis of these various rates of growth will lead to the formulation of an index, the Income-Consumption Index.



BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
Peace River
Grande Prairie
Fort McMurray
Lynn Lake
Thompson
Flin Flon
Whitecourt
Barrhead
Westlock
Bonnyville
Hinton
Edson
St Albert
Fort Saskatchewan
St Paul
Meadow Lake
EDMONTON
Drayton Valley
Vegreville
Vermilion
Lloydminster
Leduc
Camrose
Wetaskiwin
Ponoka
Wainwright
Rocky Mt House
Lacombe
Red Deer
Stettler
Innisfail
Olds
Drumheller
Hanna
CALGARY
Brooks
Claresholm
Fort Macleod
Coaldale
Lethbridge
Taber
Medicine Hat
Pincher Creek
Cardston
The Pas
Prince Albert
Nipawin
Melfort
Tisdale
North Battleford
Humboldt
Biggar
SASKATOON
Kindersley
Rosetown
Swift Current
Moose Jaw
REGINA
Assiniboia
Weyburn
Estevan
Swan River
Canora
Kamsack
Yorkton
Melville
Esterhazy
Dauphin
Minnedosa
Neepawa
Portage la Prairie
Selkirk
WINNIPEG
Steinbach
Virden
Brandon
Morden
Winkler
Scale In Miles
TOTAL RETAIL SALES PER STORE
1961
1966
THOUSANDS OF DOLLARS

Map IV. 3

Table IV.6 indicates the per cent change in the absolute value of retail sales and in the number of outlets. Map IV.4 shows graphically the per cent change in retail sales. In observing the spatial distribution in the Prairie Provinces, generally, there does not appear to be a significant concentration of centres where growth rates are high. There is a slight bias in favour of the area in the southern part of the region along the provincial border between Manitoba and Saskatchewan for the smaller centres. There also appears to be a tendency for a concentration of the centres in southwestern Alberta with a low rate of per cent change in the absolute value of retail sales. In addition to Esterhazy, Melfort, Canora, and Swan River (which are among the first five of the Very Small Centres), Tisdale, Melville, and Kamsack have high ratings. These last three centres are among the first fifteen when ranked according to the highest growth in absolute retail sales. St. Albert, a small centre, shows the highest per cent increase in the absolute value of retail sales (683.81%). This centre also has the highest per cent change in the number of retail outlets (175.00%). These high increases are probably due to the increased importance of St. Albert as a dormitory community for Edmonton.

From Table IV.6 it can be seen that seven of the twenty-five centres listed decreased in the number of outlets from 1961 to 1966. However, all of these centres increased in the absolute value of retail sales. For example, North Battleford decreased 7.32% in the number of outlets but increased 52.60% in retail sales. This occurence could possibly be attributed to the establishment of large department stores or large shopping places in the various centres. Moose Jaw and Flin Flon appear to be suffering from a slackening of business trade since there was a reduction in the number of businesses (-4.04% and -13.33%) respectively. This reduction did not appear to improve the position of the remaining outlets since the increase in volume per store remained low.

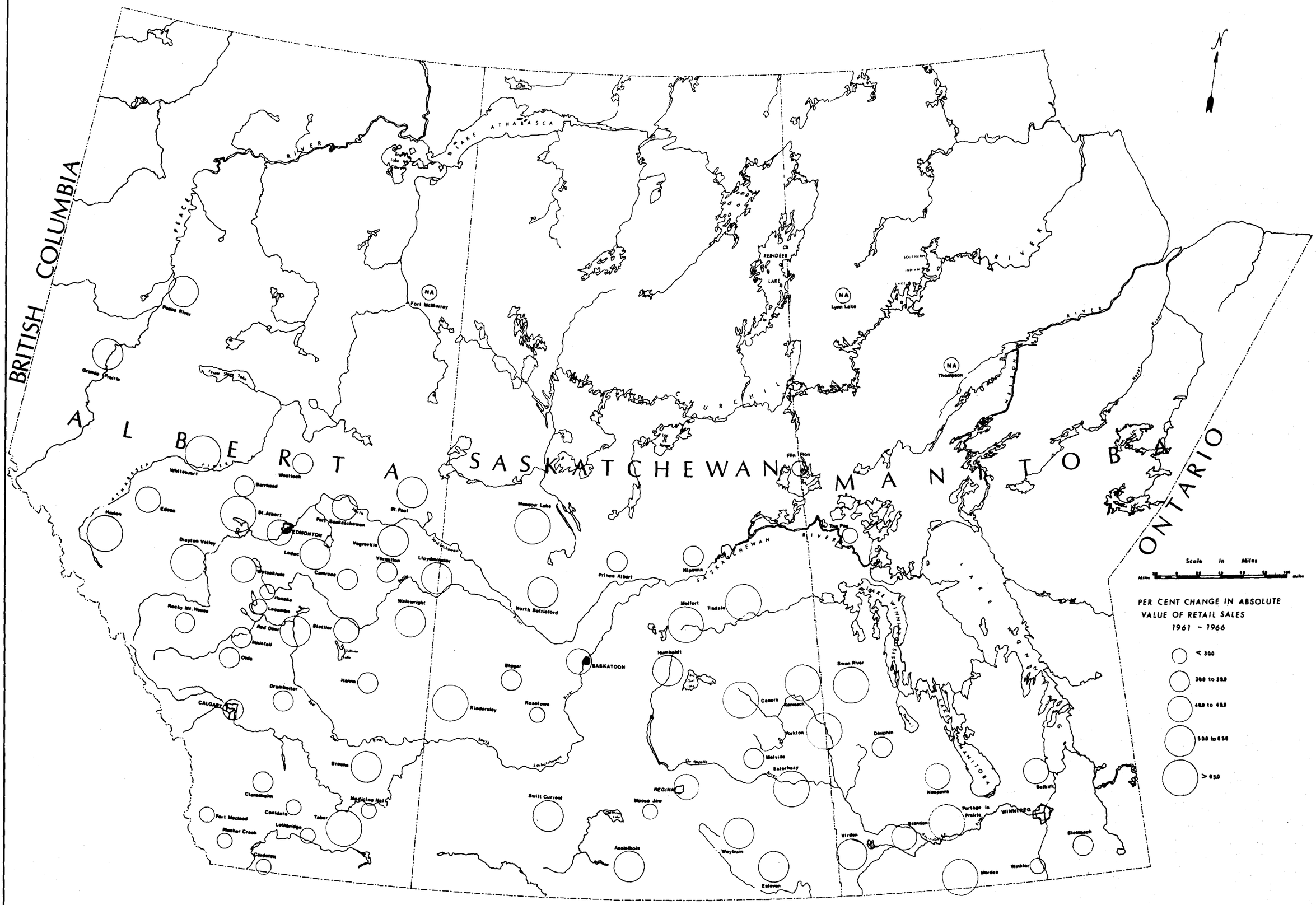
Table IV.7 ranks the various centres in each population classification according to the per cent change in per capita purchases. Map IV.5 indicates the spatial distribution. Generally the per cent change is higher in the smaller centres than in the larger centres. For example the per cent change in the Very Small Centres ranges from 82.88% in Whitecourt to 65.13% in Kamsack and in the Very Large Centres, the values range from 22.63% in Saskatoon to

TABLE IV.6

Per Cent Change in Absolute Value of
Retail Sales and Number of Outlets

Prairie Region - 1966

NAME	Per Cent Change of Sales	Per Cent Change of Number of Outlets
Very Small Centres		
Whitecourt	295.45	163.64
Esterhazy	226.40	47.62
Canora	116.31	12.20
Melfort	89.31	13.21
Swan River	88.78	3.57
Small Centres		
St. Albert	683.81	175.00
Weyburn	63.60	17.33
Estevan	57.08	0
Lloydminister	52.45	- 4.17
Wetaskiwin	45.97	- 4.41
Intermediate Centres		
Yorkton	102.30	27.78
Portage la Prairie	69.35	0
Grande Prairie	60.52	- 8.82
Swift Current	53.75	3.33
North Battleford	52.60	- 7.32
Large Centres		
Red Deer	52.50	6.90
Brandon	40.01	5.74
Prince Albert	38.31	1.66
Medicine Hat	27.87	- 6.49
Moose Jaw	11.04	- 4.04
Very Large Centres		
Saskatoon	48.77	8.92
Regina	42.37	7.93
Edmonton	41.96	12.05
Calgary	35.05	6.81
Winnipeg	26.63	- 2.40


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
N
Peace River
Fort McMurray
Lake Athabasca
Reindeer Lake
Lynn Lake
Southern Indian Lake
Churchill River
Nelson River
Thompson
Whitecourt
Westlock
Barrhead
Edson
Hinton
St. Albert
Edmonton
Fort Saskatchewan
St. Paul
Meadow Lake
Drayton Valley
Leduc
Vegreville
Vermilion
Lloydminster
Camrose
Wetaskiwin
Ponoka
Lacombe
Rocky Mt. House
Red Deer
Innisfail
Stettler
Olds
Wainwright
North Battleford
Prince Albert
Nipawin
Saskatchewan River
Flin Flon
The Pas
Melfort
Tisdale
Humboldt
Saskatoon
Biggar
Kindersley
Rosetown
Nanna
Drumheller
Calgary
Swift Current
Moose Jaw
Regina
Canora
Kamsack
Yorkton
Melville
Esterhazy
Swan River
Dauphin
Lake Manitoba
Neepawa
Portage la Prairie
Brandon
Virden
Winnipeg
Selkirk
Steinbach
Morden
Winkler
Assiniboia
Weyburn
Estevan
Brooks
Medicine Hat
Claresholm
Coaldale
Lethbridge
Taber
Fort Macleod
Pincher Creek
Cardston
Peace River
Grande Prairie
Scale in Miles
PER CENT CHANGE IN ABSOLUTE VALUE OF RETAIL SALES 1961 - 1966
< 30.0
30.0 to 39.9
40.0 to 49.9
50.0 to 65.0
> 65.0

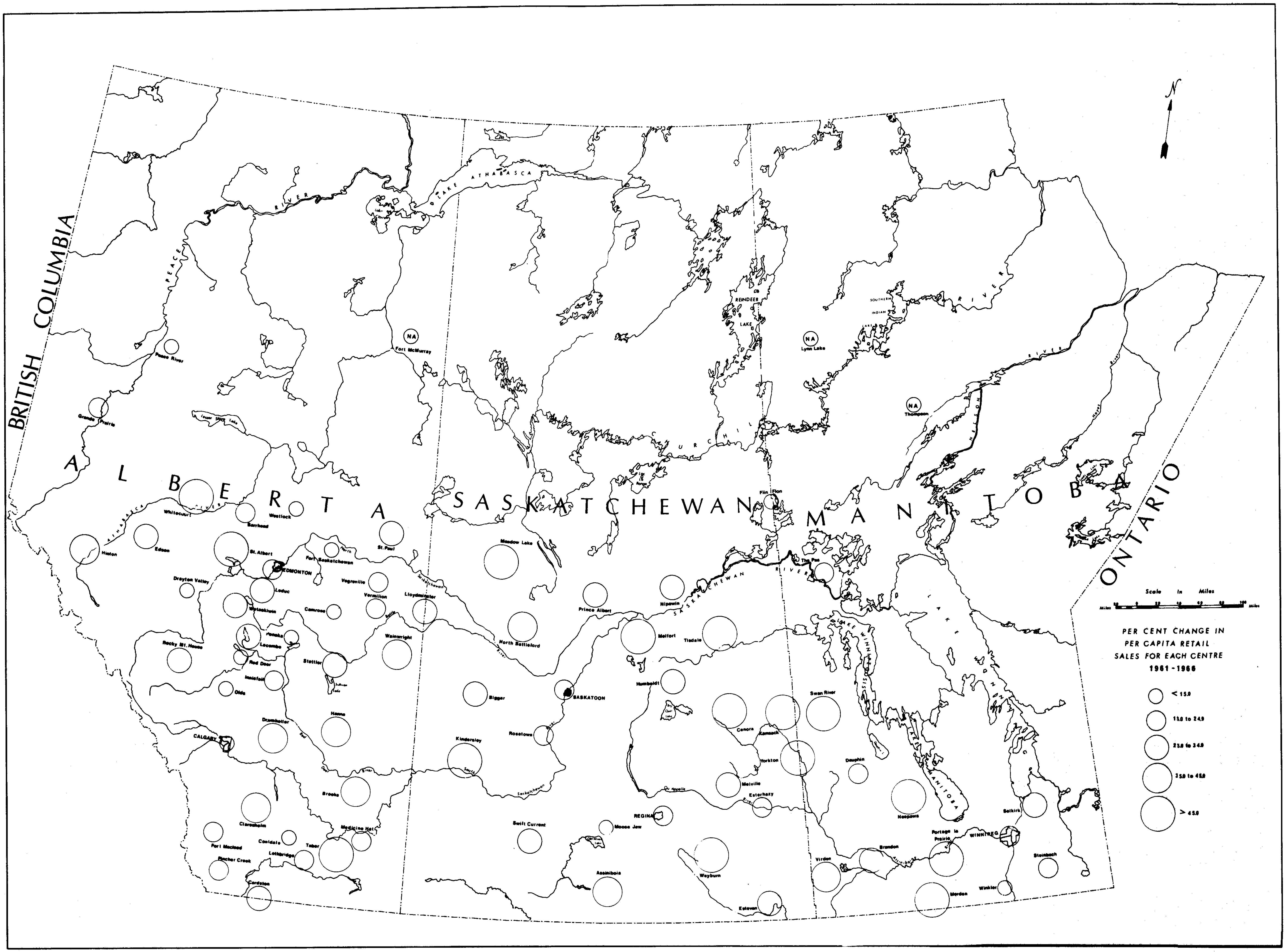
Map IV. 4

TABLE IV.7

Per Cent Change in Per Capita Purchases

Prairie Region - 1961-66

Very Small Centres	
Whitecourt	82.88
Melfort	74.46
Swan River	72.08
Canora	67.50
Kamsack	65.13
Small Centres	
St. Albert	226.77
Weyburn	65.44
Esterhazy	15.93
Selkirk	31.30
Wetaskiwin	29.11
Intermediate Centres	
Portage la Prairie	61.23
Yorkton	59.91
North Battleford	39.75
Swift Current	29.41
Grande Prairie	18.72
Large Centres	
Brandon	31.53
Prince Albert	27.28
Medicine Hat	22.42
Lethbridge	16.97
Red Deer	14.28
Very Large Centres	
Saskatoon	22.63
Regina	21.79
Edmonton	19.41
Winnipeg	19.17
Calgary	13.97


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
N
PER CENT CHANGE IN
PER CAPITA RETAIL
SALES FOR EACH CENTRE
1961 - 1966
< 15.0
15.0 to 24.9
25.0 to 34.9
35.0 to 45.0
> 45.0
Scale In Miles
NA
Fort McMurray
Lynn Lake
Thompson
Flin Flon
The Pas
Peace River
Grande Prairie
Whitecourt
Barrhead
Westlock
Hinton
Edson
St. Albert
EDMONTON
Fort Saskatchewan
St. Paul
Drayton Valley
Vegreville
Vermilion
Lloydminster
Leduc
Camrose
Wetaskiwin
Ponoka
Lacombe
Rocky Mt. House
Red Deer
Stettler
Wainwright
Innisfail
Olds
Drumheller
Hanna
CALGARY
Brooks
Claresholm
Medicine Hat
Coaldale
Taber
Fort Macleod
Lethbridge
Pincher Creek
Cardston
Meadow Lake
Prince Albert
Nipawin
North Battleford
Melfort
Tisdale
Humboldt
Biggar
SASKATOON
Kindersley
Rosetown
Swift Current
Moose Jew
REGINA
Assiniboia
Weyburn
Estevan
Canora
Kamsack
Yorkton
Melville
Esterhazy
Swan River
Dauphin
Neepawa
Virden
Brandon
Portage la Prairie
WINNIPEG
Selkirk
Steinbach
Morden
Winkler

Map IV. 5

13.97% in Calgary. Again St. Albert stands out as the centre with the highest per cent change, this time in per capita sales (266.77%). Another observation that could be made from the map is that there appears to be a higher per cent change per centre in Saskatchewan than in the other two provinces.

The rate of growth in retail sales per store is indicated on Table IV.8. As was mentioned previously, per cent change in retail sales per store can be especially valuable when used in conjunction with the change in the number of retail outlets recorded on Table IV.6 and Table IV.5, in the appendix at the end of the chapter. In considering this variable, it is worthy to note from Tables IV.8 and IV.6 that the centres of Esterhazy and Canora had, for example, a high rate of growth of absolute sales (226.40% and 116.31% respectively), significant increases in the number of outlets (47.62% and 12.2%), and higher rates of increase in the volume of sales per outlet (121.12% and 92.81% respectively). Other examples could be cited but these serve to illustrate that these towns, (and those with similar growth rates), attracted entrepreneurs to open businesses. On the other hand, places such as Portage la Prairie, for example, had a high rate of growth relative to other cities its size in the region, but the retail business went mostly to established merchants and while undoubtedly new businesses were opened, just as many were shut down in the first five years between 1961 and 1966.

Table IV.9 and Map IV.6 are used to illustrate the per cent change in average income for the Prairie Provinces from 1966 to 1969. From the map and the selected centres on the table, it appears that there is a higher rate of growth in income in the smaller centres than in the larger centres. For example, the values range from a high of 9.25% for Rocky Mountain House to 3.48% for Yorkton and 3.83% for Regina. The most northerly centres all have relatively high rates of growth in average income: Peace River, 7.06%; Fort McMurray, 6.83%; Grande Prairie, 7.66%; Lynn Lake, 5.50%; and Thompson, 6.38%.

TABLE IV.8

Per Cent Change in Retail Sales
Per Store

Prairie Region - 1961-66

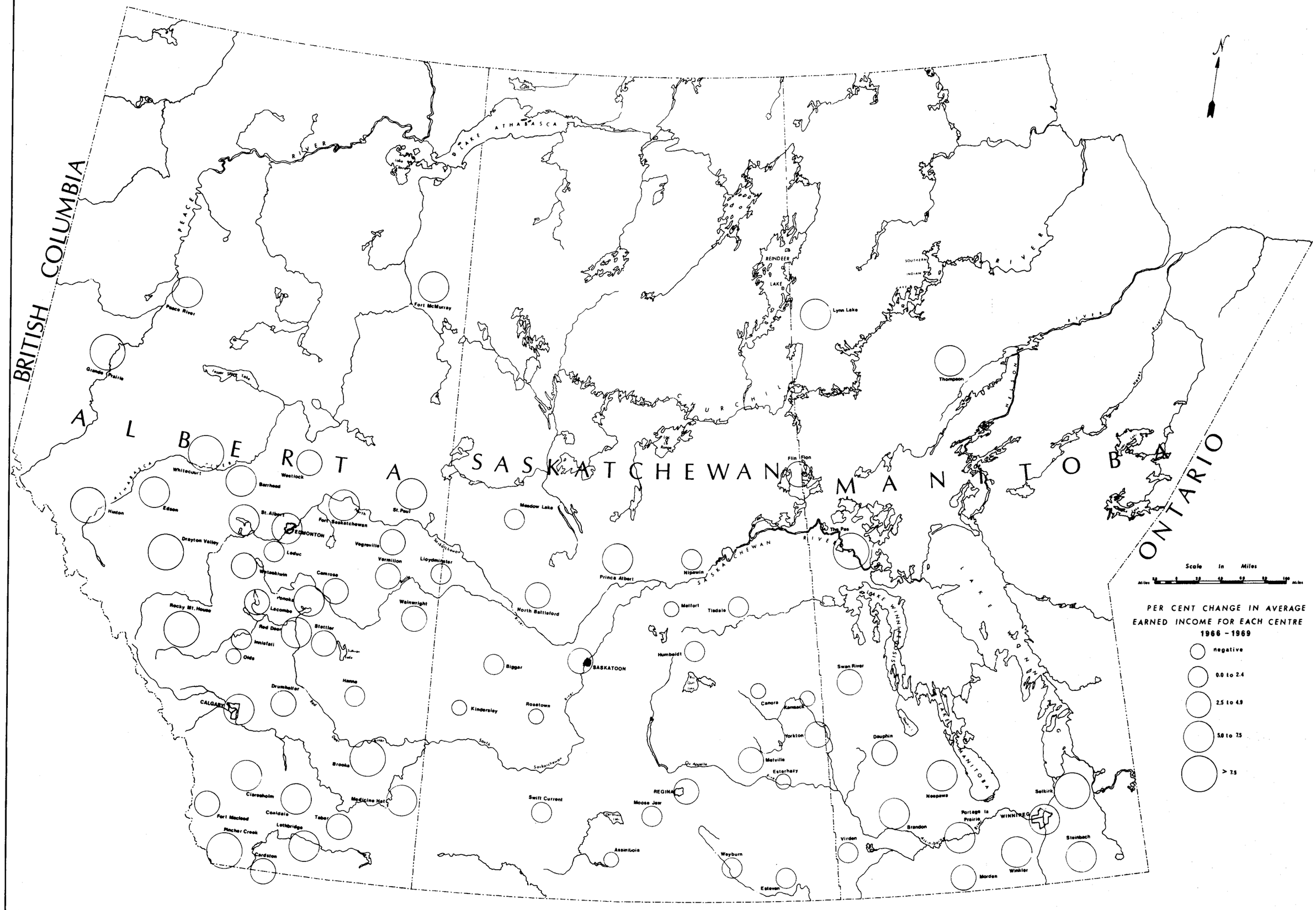
Very Small Centres	
Esterhazy	121.12
Canora	92.81
Swan River	82.29
Taber	75.77
Leduc	74.36
Small Centres	
St. Albert	184.83
Melville	59.47
Lloydminister	59.08
Estevan	57.09
Weyburn	39.43
Intermediate Centres	
Grande Prairie	76.06
Portage la Prairie	69.35
North Battleford	64.65
Yorkton	58.33
Swift Current	48.79
Large Centres	
Red Deer	42.66
Prince Albert	40.64
Medicine Hat	36.75
Brandon	31.40
Lethbridge	18.25
Very Large Centres	
Saskatoon	36.59
Regina	31.91
Winnipeg	29.75
Edmonton	26.69
Calgary	26.44

TABLE IV.9

Per Cent Change in Average Income

Prairie Region - 1966-1969 (incl.)

Very Small Centres	
Rocky Mt. House	9.25
Whitecourt	8.63
Hinton	8.17
Brooks	8.06
Pincher Creek	8.00
Small Centres	
The Pas	7.79
Selkirk	7.64
St. Albert	6.87
Dauphin	4.91
Camrose	3.85
Intermediate Centres	
Grande Prairie	7.66
Portage la Prairie	5.04
North Battleford	4.17
Flin Flon	3.59
Yorkton	3.46
Large Centres	
Prince Albert	8.77
Lethbridge	7.00
Brandon	6.27
Medicine Hat	5.16
Red Deer	5.03
Very Large Centres	
Edmonton	6.79
Winnipeg	6.39
Calgary	5.52
Saskatoon	4.95
Regina	3.83


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
PEACE RIVER
ATHABASCA
LAKE ATHABASCA
REINDEER LAKE
SOUTHERN INDIAN LAKE
CHURCHILL RIVER
NELSON RIVER
SASKATCHEWAN RIVER
LAKE WINNIPEGOSIS
LAKE MANITOBA
LAKE WINNIPEG
Peace River
Fort McMurray
Lynn Lake
Thompson
Grande Prairie
Whitecourt
Westlock
Barrhead
Hinton
Edson
St. Albert
EDMONTON
Fort Saskatchewan
St. Paul
Drayton Valley
Leduc
Vegreville
Vermilion
Lloydminster
Wetaskiwin
Camrose
Ponoka
Lacombe
Rocky Mt. House
Red Deer
Stettler
Innisfail
Olds
Wainwright
Meadow Lake
Prince Albert
North Battleford
Nipawin
The Pas
Flin Flon
Melfort
Tisdale
Humboldt
SASKATOON
Bigger
Kindersley
Rosetown
Hanna
Drumheller
CALGARY
Canora
Kamsack
Yorkton
Swan River
Dauphin
Melville
Esterhazy
Brooks
Medicine Hat
Clareholm
Coaldale
Taber
Fort Macleod
Lethbridge
Pincher Creek
Cardston
Swift Current
REGINA
Moose Jaw
Assiniboia
Weyburn
Estevan
Neepawa
Portage la Prairie
WINNIPEG
Selkirk
Steinbach
Brandon
Virden
Morden
Winkler
Scale in Miles
PER CENT CHANGE IN AVERAGE EARNED INCOME FOR EACH CENTRE 1966 - 1969
negative
0.0 to 2.4
2.5 to 4.9
5.0 to 7.5
> 7.5

Map IV. 6

Income-Consumption Index

In order to make a more detailed analysis of the income of each centre and the centre's importance as a trade centre, it is necessary to correlate income with retail sales. It should be noted that a high rate of increase in per capita retail sales may not be an indication of a centre's growing importance as a trade centre. This would especially be true if average incomes are also significantly rising. Also, it would simply mean that the residents are using their increased buying power.

Perhaps the most important observation to note is that the centres growing with respect to income are not necessarily the ones which have a high rate of growth respecting per capita sales, which may indicate the effect of purchases made by the hinterland's population. Several centres have a relatively high per cent change in per capita purchases but have a relatively low per cent change in average income, for example St. Albert has a 226.77% change in per capita retail purchases and a low per cent change in average income (6.87). A high rate of increase in per capita sales of a centre may indicate that the centre's residents have relatively more income than those of another centre. The danger is that abnormally low incomes may result in a high index giving the impression that a centre is more important as a trade centre than it really is.

When employing the Income-Consumption Index, a basic assumption is that there is a minimum threshold or requirement for a standard level of living or expenditures. From Table IV.10 and Table IV.4, in the appendix, it is possible to determine the range of values for the selected centres. When grouped according to population, there appears to be a definite tendency for the smaller centres to have a higher Income-Consumption Index than the larger centres (i.e. Barrhead, 3.24 and Winnipeg, 1.03). In determining why this is so, one must be careful not to compare the separate cities but only the population classes since a high index can be caused by several very different ratings. A high Income - Consumption Index may be due to either a high sales rating and an average income rating or an average sales rating and an abnormally low income rating. The accompanying Table IV.4 shows the variation in the sales index and whether it

TABLE IV.10

Income-Consumption Index
Prairie Region - 1966

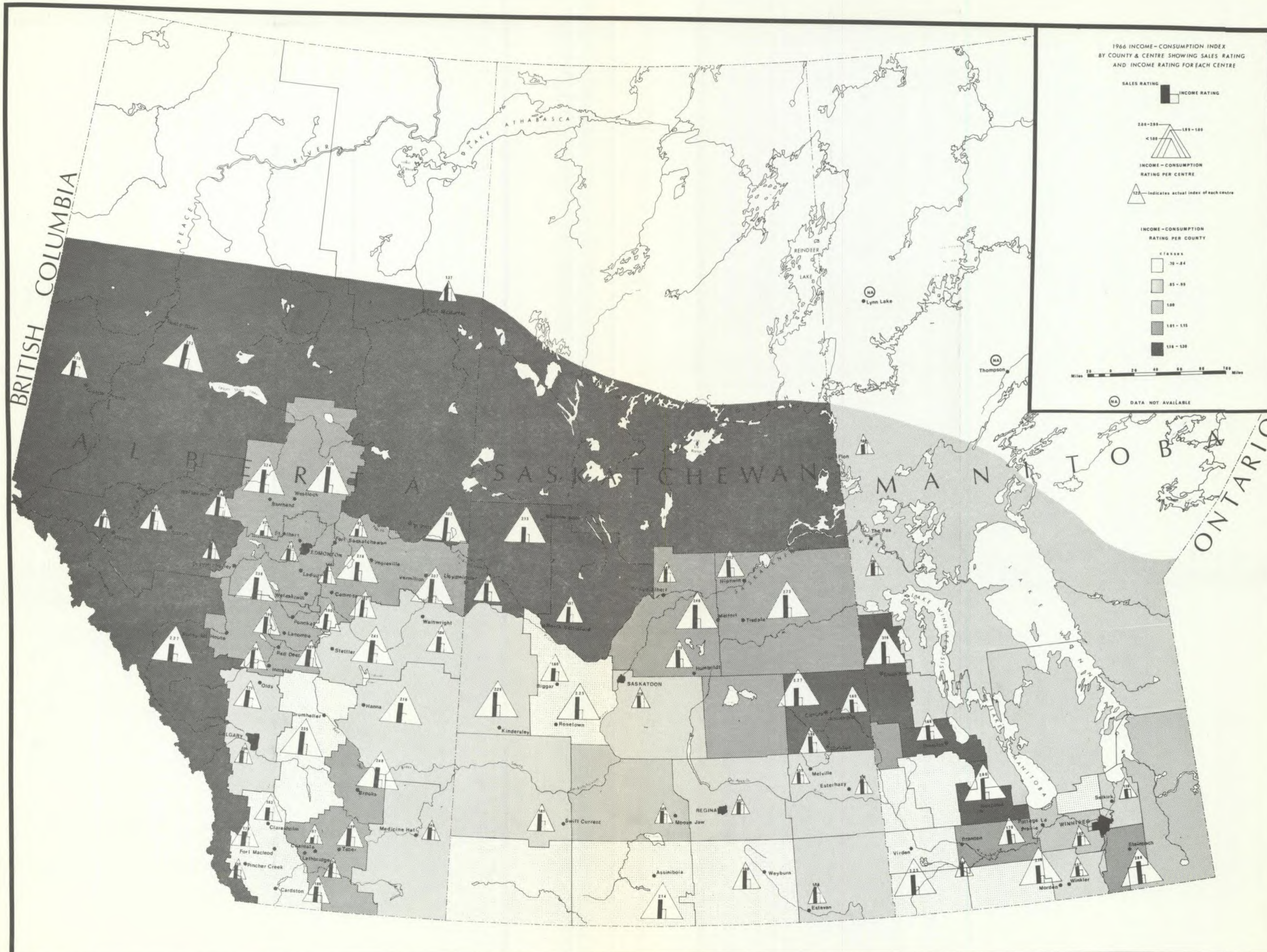
(see text for details)

Very Small Centres	
Barrhead	3.24
Swan River	3.16
Vermilion	3.07
St. Paul	3.02
Steinbach	2.88
Small Centres	
Lloydminister	2.04
Weyburn	1.90
Camrose	1.82
Dauphin	1.68
Estevan	1.58
Intermediate Centres	
North Battleford	1.97
Yorkton	1.88
Swift Current	1.81
Grande Prairie	1.70
Portage la Prairie	1.70
Large Centres	
Red Deer	1.61
Lethbridge	1.54
Brandon	1.54
Moose Jaw	1.45
Prince Albert	1.41
Very Large Centres	
Saskatoon	1.18
Regina	1.17
Edmonton	1.13
Calgary	1.09
Winnipeg	1.03

is greater than the income index.

It can be observed from Map IV.7 that there is a considerable number of small centres with high indexes which follow a band northwest across the region through Manitoba and Saskatchewan. It is probable that this is related to the fact that the population density is somewhat higher in these areas. The location of these small towns may then be partly due to serving the needs of the rural population.

Regarding the Income-Consumption Index, which is expressed for the census divisions by the shading on Map IV.7, it is necessary to remember that a high index represents the fact that a higher proportion of income is spent on retail trade (as opposed to savings, housing costs, etc.). The spatial distribution reveals an obvious trend of generally higher indexes toward the north. As to why this is so, again it must be repeated that this study could not investigate causal relationships in the time allocated. However, one might speculate that the high Income-Consumption Index is often due to the fact that incomes are generally lower and from what is known of consumer behaviour, consumers will endeavour to maintain a minimum level of consumption. Consequently in low income areas, purchases will often be made even if this means zero savings or dissavings, whereas, in the areas of higher income a greater proportion of income may be spent on other things (i.e. housing, capital investment) or cash savings. The consumer with a high income may consume more absolute retail goods but a lower proportion of his income is required to do so. With respect to the counties, apparently the populations with the lowest incomes spend a greater proportion of income on retail goods and services.


1966 INCOME – CONSUMPTION INDEX
BY COUNTY & CENTRE SHOWING SALES RATING
AND INCOME RATING FOR EACH CENTRE
SALES RATING
INCOME RATING
2.00 – 2.99
1.99 – 1.00
< 1.00
INCOME – CONSUMPTION
RATING PER CENTRE
123 Indicates actual index of each centre
INCOME – CONSUMPTION
RATING PER COUNTY
classes
.70 – .84
.85 – .99
1.00
1.01 – 1.15
1.16 – 1.30
Miles 20 0 20 40 60 80 100 Miles
NA DATA NOT AVAILABLE
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
LAKE ATHABASCA
PEACE
RIVER
REINDEER LAKE
Lynn Lake
Thompson
The Pas
Flin Flon
EDMONTON
CALGARY
SASKATOON
REGINA
WINNIPEG
Westlock
Barrhead
St. Albert
Fort Saskatchewan
Vegreville
Vermilion
Lloydminster
Leduc
Camrose
Wetaskiwin
Ponoka
Lacombe
Red Deer
Innisfail
Stettler
Wainwright
Olds
Drumheller
Hanna
Brooks
Claresholm
Fort Macleod
Pincher Creek
Cardston
Lethbridge
Taber
Medicine Hat
Kindersley
Rosetown
Biggar
North Battleford
Prince Albert
Nipawin
Melfort
Tisdale
Humboldt
Swift Current
Moose Jaw
Assiniboia
Weyburn
Estevan
Melville
Esterhazy
Yorkton
Canora
Virden
Brandon
Portage La Prairie
Selkirk
Steinbach
Morden
Winkler
LAKE WINNIPEG
LAKE MANITOBA

Map IV. 7

QUEBEC

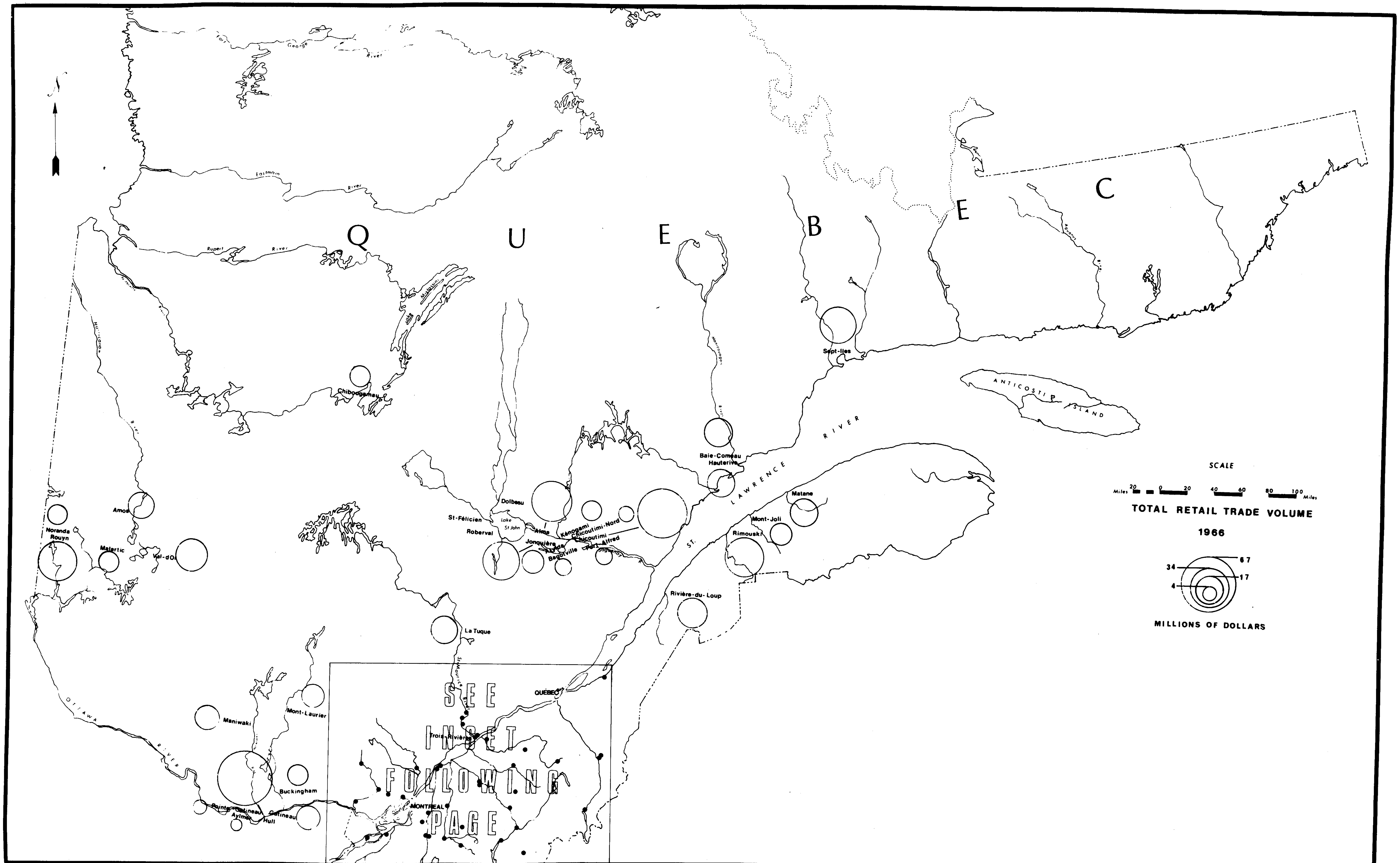
A descriptive analysis has been prepared on the retail trade and services in selected urban centrés within Québec based on the techniques described in the introduction of this chapter. As in the Prairies, the discussion will be in four stages and will conclude with an analysis of the Income-Consumption Index as it relates to Québec.

The four stages include a discussion of 1) Absolute Values, 2) Per Cent Distribution, 3) Per Capita Values, and 4) Rates of Growth.

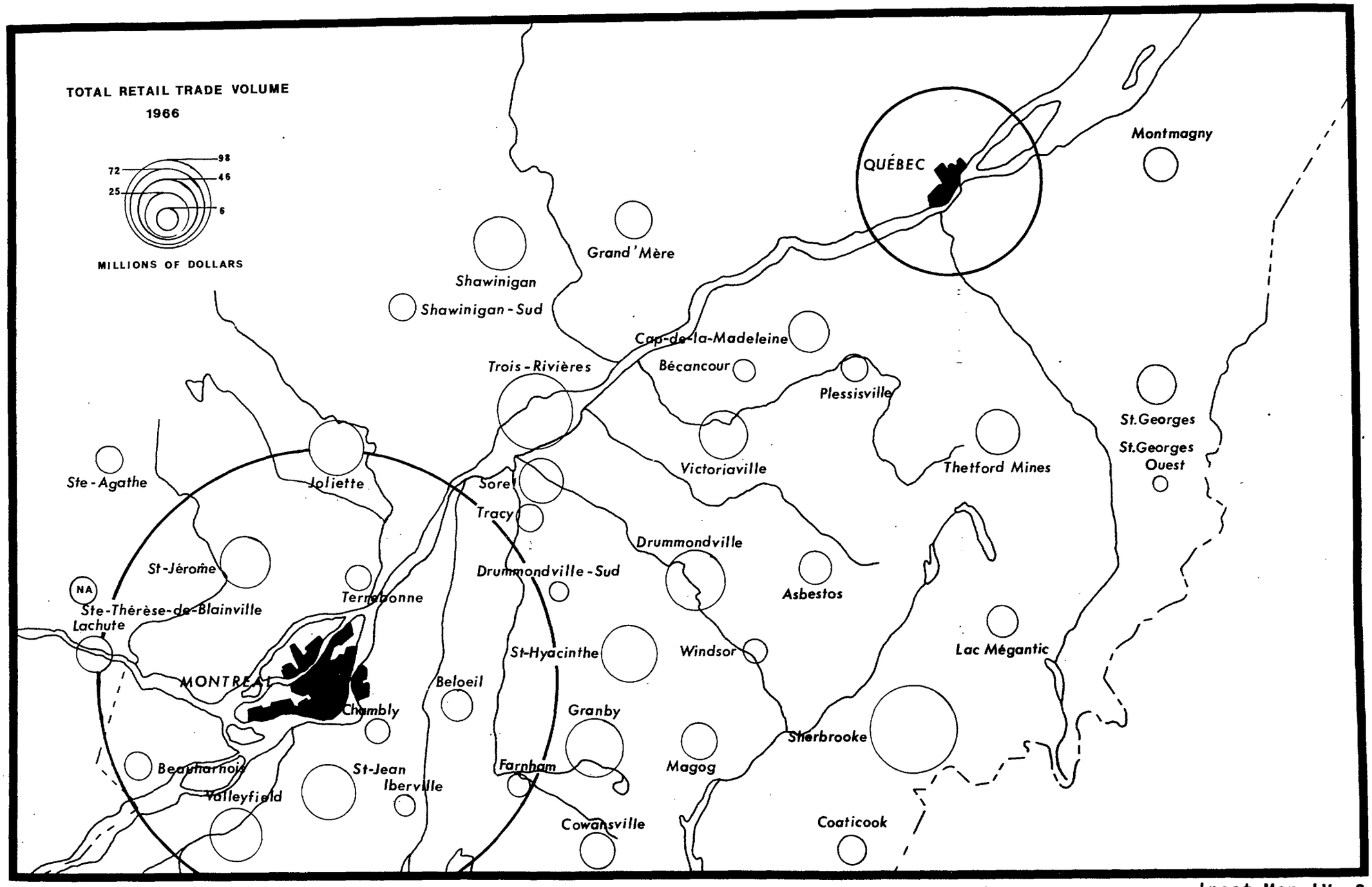
1. Absolute Values

The absolute values of sales in the various retail trade categories plus the total value of sales are provided in Table IV.11 for 1961 and Table IV.12 for 1966 in the appendix at the end of the chapter. The various categories described are: food, general, automotive, apparel, hardware and other. Map IV.8 illustrates the total retail trade volume for 1966 by using proportional circles. It is obvious from the map that Montréal has the highest volume of trade - ($2,890,431,900). Other centres with a high volume of retail trade are Québec - ($497,206,700), Sherbrooke - ($98,179,800), Hull - ($66,566,400) and Chictoutimi- ($54,570,000). Obviously, the larger the centre, the higher is the volume of retail trade. Another observation which could be noted is that the centres with the smallest volume of retail trade in 1966, Aylmer - ($2,594,300), Drummondville South - ($4,555,900), Chicoutimi North - ($4,764,900), and Bagotville - ($5,766,400), are all within or near the trade areas of the larger centres. This is due to the fact that people living within these small centres can easily travel to the larger centres for a better selection of goods and services than they would find in their own centre.

Table IV.13 in the appendix summarizes the number of retail outlets for each centre for 1961 and 1966. When analysed in conjunction with the absolute sales values, it is possible to obtain a very general idea of the state of the economy of the centre. In Alma, for example, the number of retail


QUEBEC
Eastmain River
Rupert River
Chibougamau
Sept-Iles
Baie-Comeau
Hauterive
ANTICOSTI ISLAND
ST. LAWRENCE RIVER
Matane
Mont-Joli
Rimouski
Rivière-du-Loup
Dolbeau
St-Félicien
Roberval
Lake St John
Alma
Kénogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Arvida
Bagotville
Port-Alfred
Amos
Noranda
Rouyn
Malartic
Val-d'Or
La Tuque
QUÉBEC
Trois-Rivières
MONTREAL
Maniwaki
Mont-Laurier
Buckingham
Pointe-Gatineau
Gatineau
Aylmer
Hull
OTTAWA RIVER
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
TOTAL RETAIL TRADE VOLUME
1966
67
34
17
4
MILLIONS OF DOLLARS

Map IV. 8



Inset Map IV. 8

outlets increased from 134 in 1961 to 180 in 1966, and the total value of sales increased from $14,271,300 in 1961 to $34,434,200 in 1966. From this one can assume that retail trade is expanding. It is interesting to note that in Drummondville the number of retail outlets decreased from 356 to 343 and that the total sales volume increased from $31,565,900 in 1961 to $45,764,100 in 1966. This difference could possibly be due to the introduction of large department stores or a large shopping mall. Such a development would cause a decline and possibly the collapse of older and smaller established retail outlets in the downtown area.

2. Per Cent Distribution

When analyzing retail trade for Québec centres, it is necessary to consider the various sectors of the retail trade and to determine which dominates. In this way will it be possible to determine the extent to which a centre specializes in retail goods, and if so, in which commodity. Also, by considering the retail trade for each selected centre in 1961 and 1966, it is possible to conduct a trend analysis of the retail trade.

The absolute values of sales in each category and the percentage distributions for the years 1961 and 1966 are included in Tables IV.11 and IV.12. The predominant category in the province of Québec in 1961 was Food with 31.16% of the value of sales ($980,215,300). The next two largest categories were Automotive with 23.81% and Other with 31.66%. In 1966, the same three categories again dominated but in different degrees: Food - (29.30%), Automotive - (27.58%) and Other - (13.55%). The rise in the Automotive category could be due to the increased cost of automobiles and accessories and to the increased mobility of people in general.

Another observation that can be made from the tables concerns the range of values within each sector. In 1961 the range in the per cent distribution of Food Sales is from 58.80% in Aylmer to 11.33% in Sept-Îles. In 1966, the range is from 56.87% in Chicoutimi North to a low of 12.38% in St-Georges. This wide range within the category could be a result of food which is sold in general stores being reported in the General group rather than the Food category.

Chambly leads the Automotive category with a per cent of 57.89 in 1961; Arvida has the low value of 9.32%. In 1966, Shawinigan South has the highest value, 48.30% and Hull has the lowest, 5.13%. These wide ranges of values indicate that spending in this category depends strictly on the affluence of the people rather than on their essential requirements.

The per cent distribution in the Other category ranges from 24.38% for Ste-Agathe to 4.30% for Pointe-Gatineau in 1961;and in 1966, from 26.48% for Aylmer to 2.99% for Bécancour.

The final three categories: General, Apparel, and Hardware have approximately the same variations in value. The per cent distribution in the General category in 1961 ranges from 30.38% in Sept-Îles to 2.21% in Cap-de-la-Madeleine; and in 1966, from 21.08% in Maniwaki to 4.27% in Coaticook. As mentioned previously the high per cent in Sept-Îles could possible be a result of the recording of general stores which sell food in this category. The per-cent distribution in Apparel ranges from 19.28% for St-Georges to 1.45% for Chambly in 1961. In 1966, there was little change in the range of values, from 20.45% for Sorel to 1.66% for Tracy. The Hardware category, which includes home furnishings, has a high value of 15.18% for Amos and a low of 1.59% for Chicoutimi North in 1961; and in 1966, Alma has the high of 33.60% and Tracy has the low of 3.03%.

In 1961, forty-three of the centres had the largest percent distribution of retail sales in the Food category. For only twenty-six centres was the Automotive category dominant. In 1966, more centres had a larger proportion of sales in the Automotive category, thirty-seven, than were dominant in the Food category which only had thirty-three centres. One centre, Alma, had the largest percent of retail sales in the Hardware category.

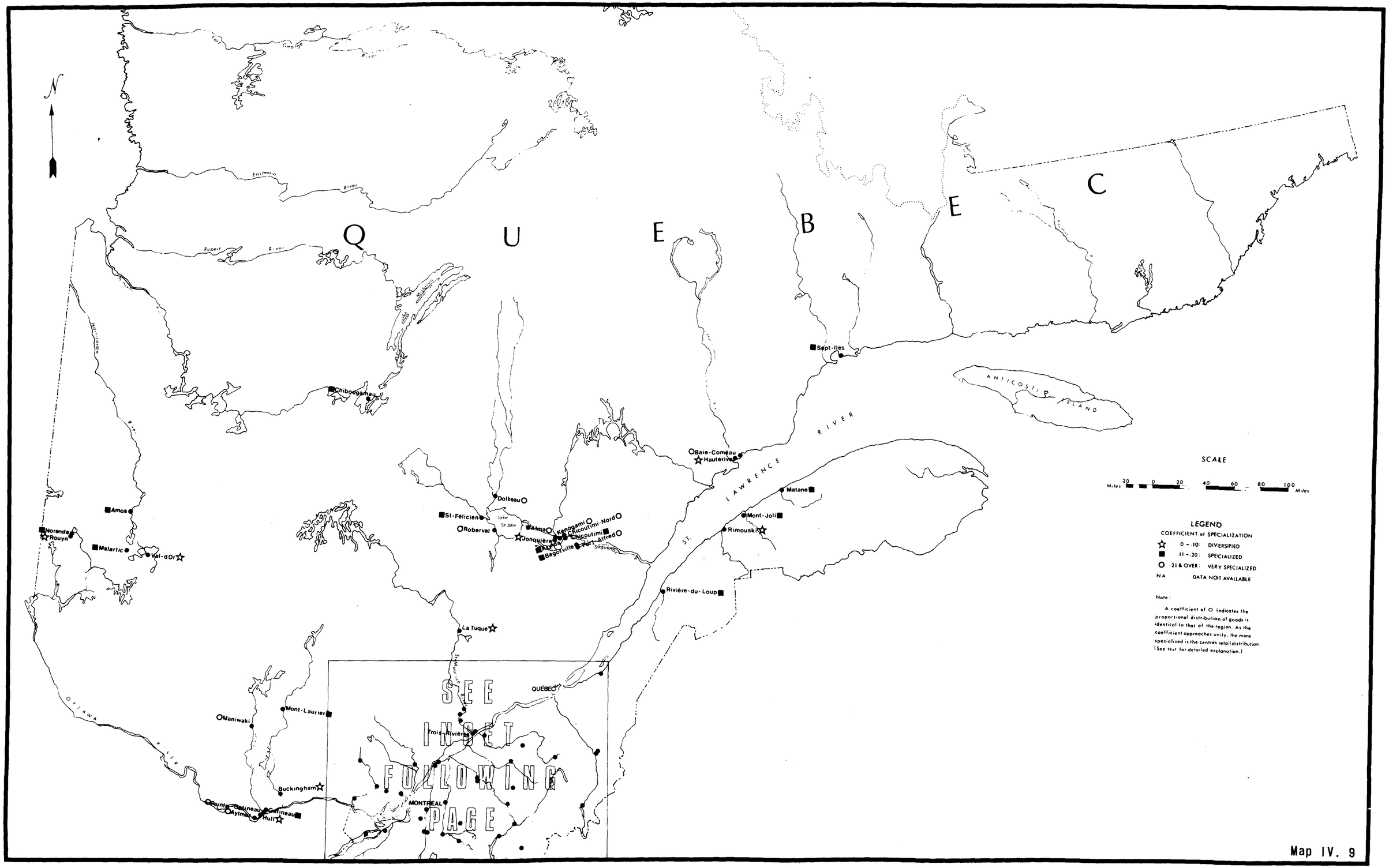
After discussing all six categories it is still difficult to determine how specialized each centre is. The amount of specialization would be easier to determine if only one figure were to be used. The previous six figures can be used to ascertain one value, the coefficient of specialization. This coefficient is discussed in the Introduction to the chapter and in the section on the Prairies. The coefficient of specialization was calculated for

each centre and is given on Tables IV.11 and IV.12. Map IV.9 was compiled to identify spatially those centres which, by virtue of the goods sold, are known to offer a wide range of commodities relative to the region as a whole. This coefficient has little value in identifying or evaluating cause and effect relationships but can be used to highlight certain general associations. For example, it is possible to say that in 1961, Shawinigan, with a coefficient of .3018 is the most highly-specialized centre in Québec and the Montréal is the most diversified centre with a value of .0279. In 1966, the most highly-specialized centre is St-Georges Ouest (.3395) and Québec is now the most diversified centre (.0255) in the province. In general, one would expect to find centres having lower values because they offer a wider range of all possible commodities than do the smaller centres. This trend can be seen on the accompanying map. (Map IV.9) The coefficient of specialization can be further examined by viewing the change in the coefficient from 1961 to 1966 and relating this change to the size of the centres. Of the small-sized centres, (5,001 to 10,000 population), 71% became more diversified since 1961. For example, the coefficient of specialization for Iberville decreased from .2492 in 1961 to .1388 in 1966. In the intermediate class size, (population 10,001 to 25,000), 54% of the centres became less specialized and 90% of the centres in the large class size, (population 25,001 to 100,000), exhibited the same trend. Of the two largest centres, Montréal tended to more specialization and Québec, toward more diversification. Of all the centres for which the coefficients were calculated for both years, 67% became more diversified and 33% became more specialized. Obviously the majority of the centres are being forced to offer a wider range of goods. Such a phenomenon would be expected due to the increased technology in the field of consumer goods and the peoples' desires.

3. Per Capita Values

The next step in the analysis of the retail trade is to examine this function on a per capita basis and on a per store basis. At this time there will only be a discussion of the absolute values per capita consumption for each centre and for each census division in 1966. This information is provided

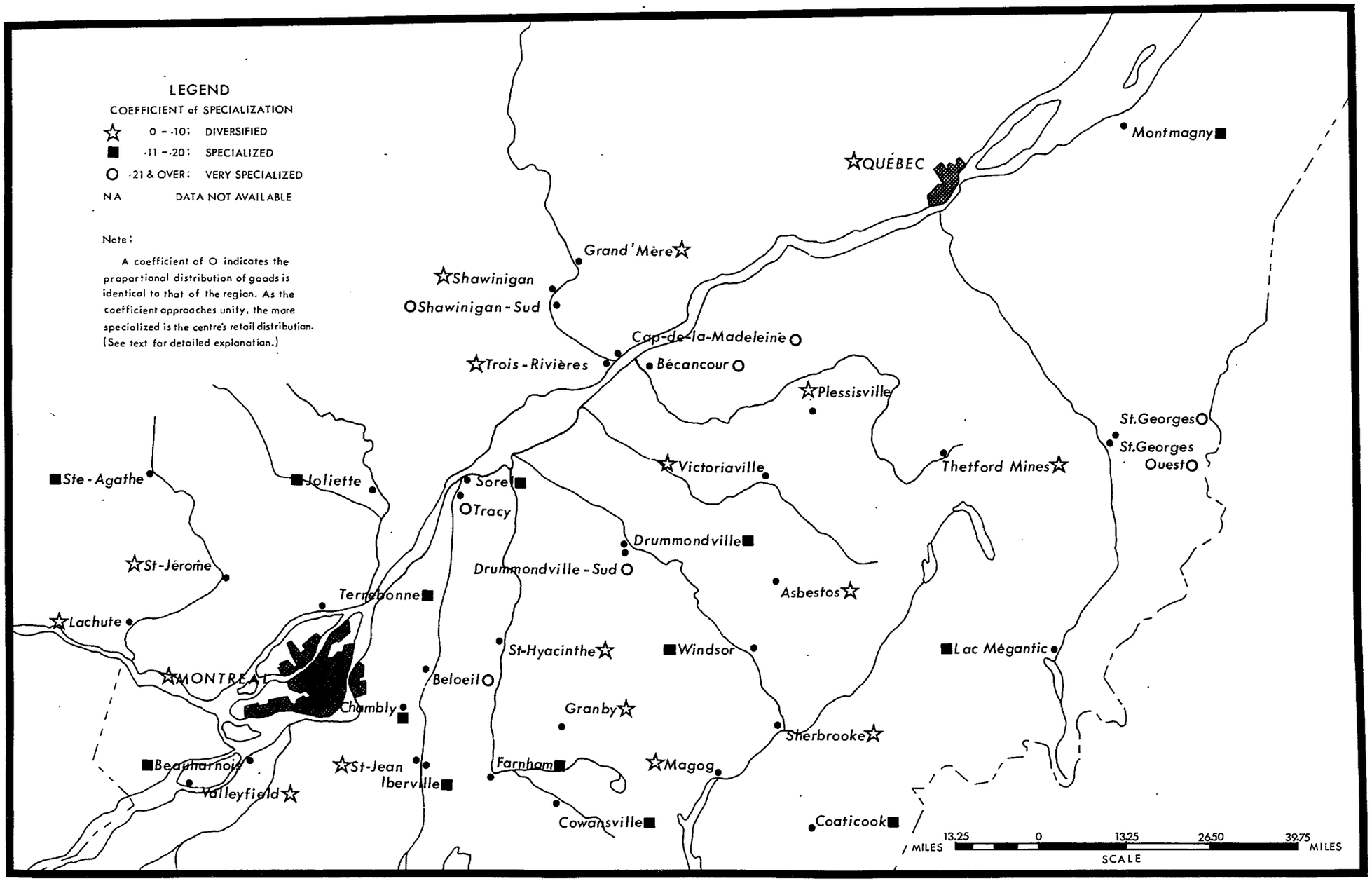
COEFFICIENT of SPECIALIZATION RETAIL TRADE 1966



Map IV. 9

IN 759

COEFFICIENT of SPECIALIZATION RETAIL TRADE 1966



Inset Map IV. 9

on Tables IV.14 and IV.15 respectively in the appendix. A more in-depth analysis of the percent change of these values will be presented in the next section, "Rates of Growth."

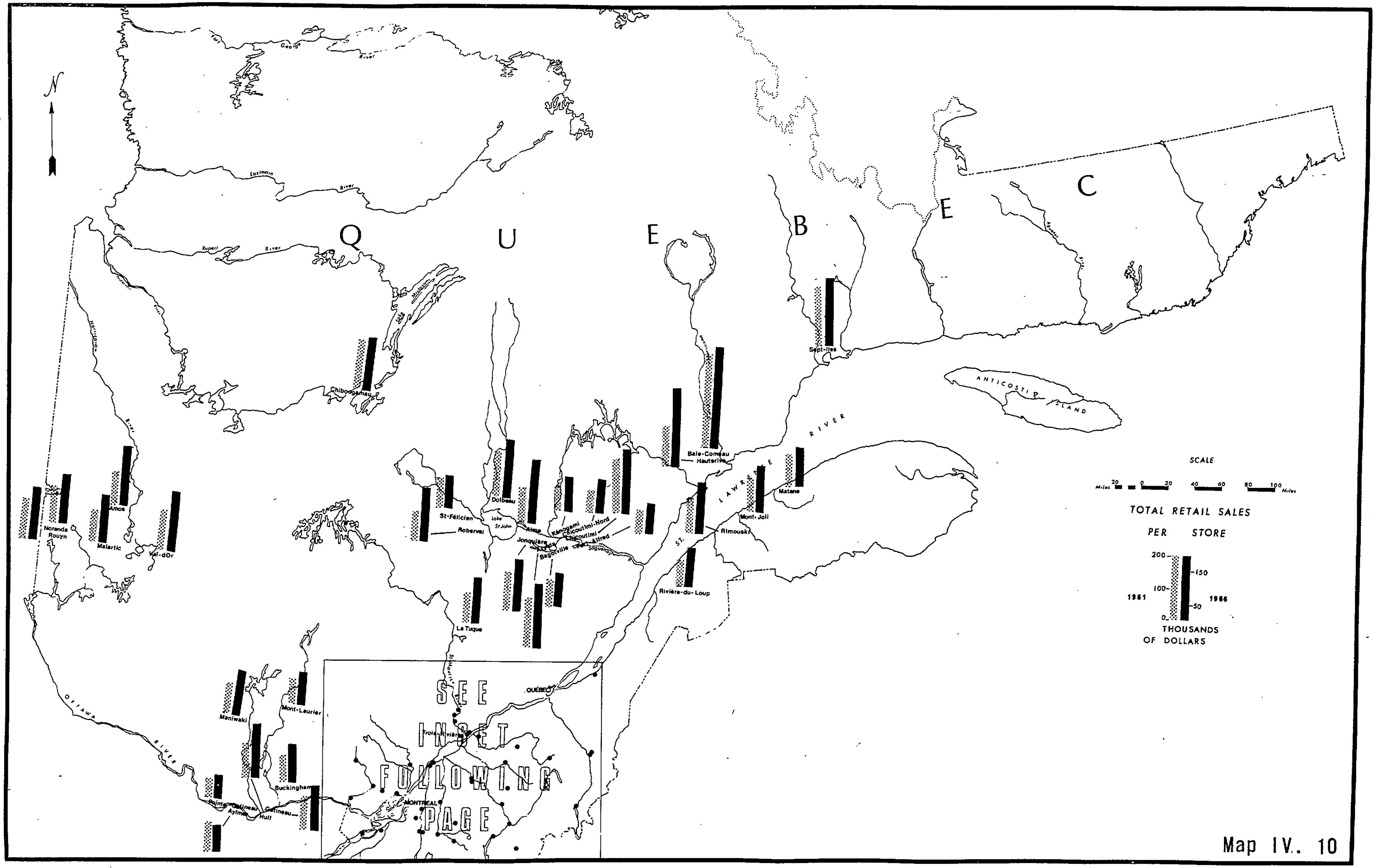
According to Table IV.14, there appears to be quite a range in the per capita consumption, from $3,275.27 in St-Georges to $509.79 in Aylmer. In general, there does not appear to be any relationship between the size of the centre and the per capita consumption. Table IV.15 summarizes the per capita consumption of retail trade and services by census division. The values here range from $1,556.96 for Census Division 28, (Ile-de-Montréal), to $581.28 for Census Division 7, (Bellechasse). The values and ranges are considerably lower than the per capita values provided for each centre. Census Division 28 has the highest value for the province and this is probably due to the fact that the population in this area is entirely urban.

Map IV.10 illustrates the total retail sales per store for 1961 and 1966. Only three centres on the map indicated an actual decrease in retail sales: Aylmer, (93.65% in 1961 to 78.61% in 1966); Chambly, (136.21% in 1961 to 111.15% in 1966); and Lachute, (118.54% in 1961 to 112.44% in 1966). Iberville shows very little change over the years, 63.39% in 1961 and 63.78% in 1966. Several centres indicated a high increase in the absolute value of retail sales and these are Hauterive, Tracy, Joliette and Lac-Mégantic. This aspect of retail trade can be examined more in depth when considering the percent change or rates of growth.

4. Rates of Growth

Several aspects of percent change values will be discussed in this section. These are: 1) percent change in absolute value of retail sales and in the number of outlets, 2) percent change in per capita purchases from 1961 to 1966, 3) percent change in retail sales per store and 4) percent change in average income from 1966 to 1969. The analysis of the various rates of growth will lead to a formulation of an index, the Income-Consumption Index.

Table IV.16 indicates the percent change in the absolute value of



N
Q U E B E C
ANTICOSTI ISLAND
ST. LAWRENCE RIVER
OTTAWA RIVER
Sept-Iles
Baie-Comeau
Hauterive
Chibougamau
Dolbeau
St-Félicien
Roberval
Alma
Kénogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Bagotville
Port-Alfred
Matane
Mont-Joli
Rimouski
Rivière-du-Loup
La Tuque
Amos
Noranda
Rouyn
Malartic
Val-d'Or
Maniwaki
Mont-Laurier
Buckingham
Pointe-Gatineau
Gatineau
Aylmer
Hull
QUÉBEC
Trois-Rivières
MONTREAL
SEE INSET FOLLOWING PAGE
SCALE
TOTAL RETAIL SALES PER STORE
200
150
100
50
0
1961
1966
THOUSANDS OF DOLLARS

Map IV. 10

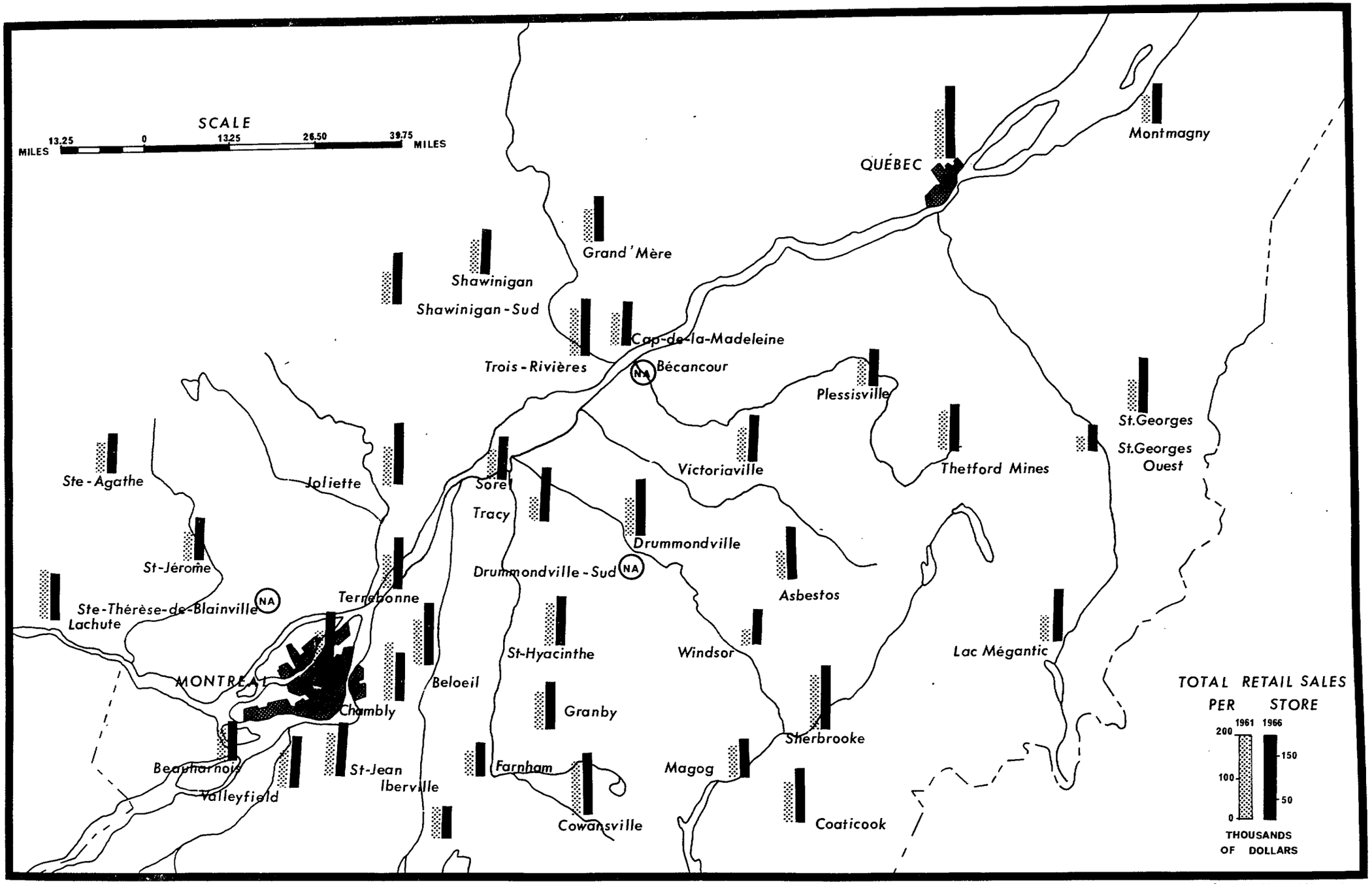


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TABLE IV.16

PER CENT CHANGE OF ABSOLUTE VALUE OF
RETAIL SALES AND NUMBER OF OUTLETS

- Québec - 1966 -

Small Centres

Centre		
Hauterive	274.19	100.00
Tracy	184.40	26.32
St-Georges	107.07	55.10
Roberval	105.92	19.12
Lac-Mégantic	95.69	1.98

Intermediate Centres

Alma	141.29	34.33
Shawinigan S.	67.39	2.74
Rimousky	57.17	16.58
La Tuque	57.12	6.20
Gatineau	56.75	18.75

Large Centres

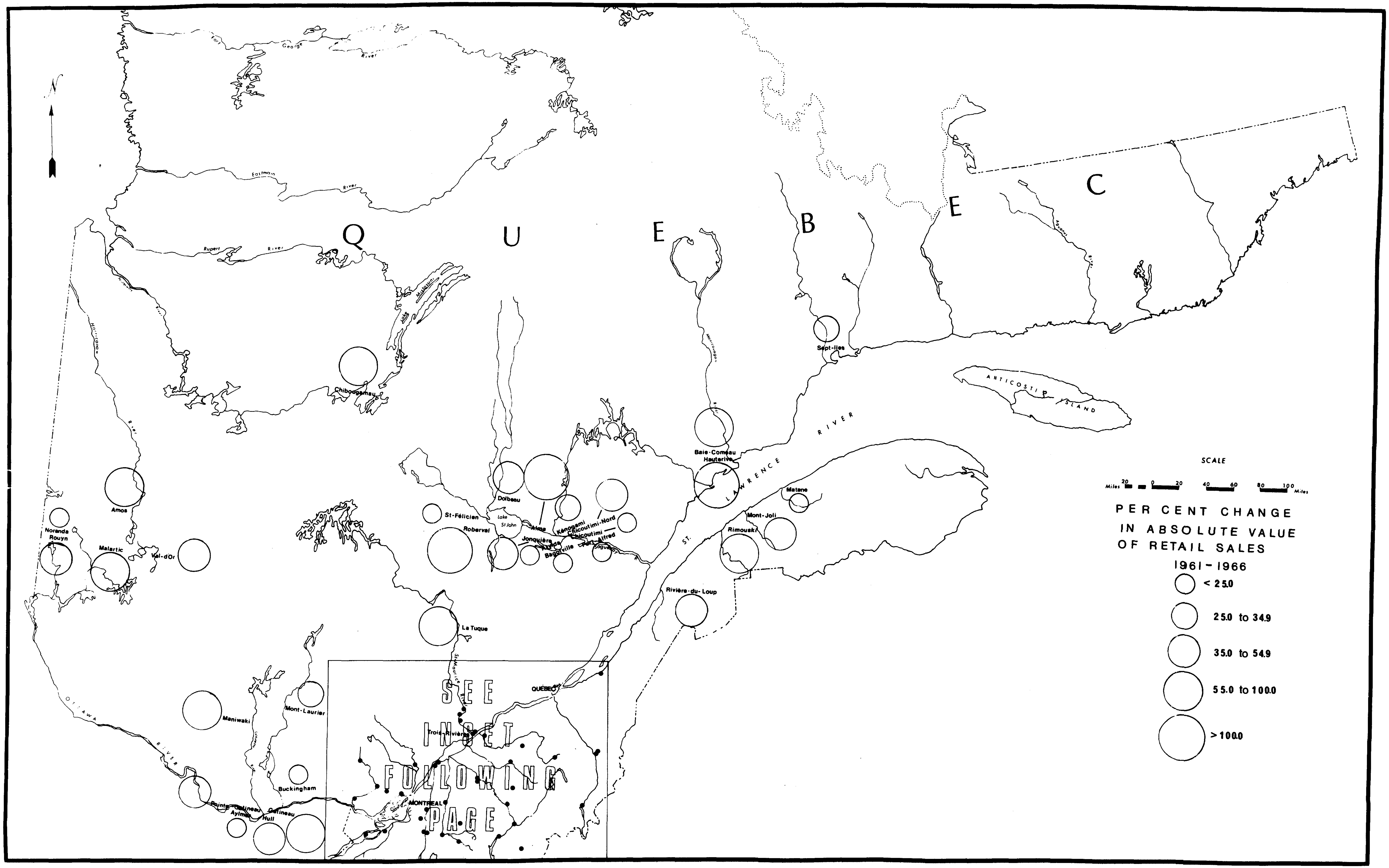
Chambly	60.81	97.06
Hull	47.86	8.21
Valleyfield	40.13	6.67
Drummondville	44.98	-3.65
Granby	44.43	7.04

retail sales and in the number of outlets for the various city sizes. From the table it appears that the smaller centres such as Hauterive,(274.19), has a higher percent change in absolute value of retail sales than the larger centres such as Hull (47.86%). Hauterive, in addition to showing the highest percent change in retail sales, also has the highest percent change in retail outlets (100.00%). Map IV.11 illustrates graphically the percent change in retail sales. In observing the spatial distributions in the province of Québec, generally, there does not appear to be a significant concentration of centres where growth rates are high. Further, the increases in the growth rates do not appear to be due to a significant increase in one or two particular commodities.

According to Table IV.16, only one of the fifteen centres decreased in the number of outlets while increasing in the absolute value of retail sales. In Drummondville, the percent change in the number of retail outlets is 03.65% or from 356 to 343. This occurrence could possibly be attributed to the establishment of large department stores or a large shopping mall in the community.

Table IV.17 ranks the various centres in each population classification according to the percent change in per capita purchases. Map IV.12 indicates the spatial distribution. Generally, the percent change is higher in the smaller centres than in the larger centres. For example, the percent change in the five Small Centres ranges from 112.87% for Tracy to 86.31% for Roberval, and in the Large Centres, the values range from 39.88% in Hull to 31.56% in Jonquière.

The rate of growth in retail sales per store is indicated on Table IV.18. As was mentioned previously, the percent change in retail sales per store can be especially valuable when used in conjunction with the change in the number of retail outlets recorded on Table IV.13 and IV.16 in the appendix at the end of the chapter. In considering this variable, it is worthy to note from Tables IV.16 and IV.18 that the centres of Alma and Hauterive had, for example, a high rate of growth of absolute sales, (141.29% and 274.19% respectively); significant increases in the number of retail outlets, (34.33% and 100.00%); and higher rates of increase in the volume of sales per outlet, (79.62% and 87.09% respectively). Other examples could be cited but these serve to illustrate that these towns, (and those with similar growth rates), attracted entrepreneurs to start new businesses.


Q U E B E C
Fort George River
Eastmain River
Rupert River
Lake Mistassini
Chibougamau
Amos
Noranda
Rouyn
Malartic
Val-d'Or
St-Félicien
Roberval
Dolbeau
Lake St John
Alma
Kénogami
Chicoutimi-Nord
Chicoutimi
Jonquière
Bagotville
Port Alfred
Baie-Comeau
Hauterive
Sept-Iles
ANTICOSTI ISLAND
ST. LAWRENCE RIVER
Matane
Mont-Joli
Rimouski
Rivière-du-Loup
La Tuque
St Maurice
QUÉBEC
Trois-Rivières
MONTREAL
Maniwaki
Mont-Laurier
Buckingham
Pointe-Gatineau
Aylmer
Hull
Gatineau
OTTAWA RIVER
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
PER CENT CHANGE IN ABSOLUTE VALUE OF RETAIL SALES 1961 - 1966
< 25.0
25.0 to 34.9
35.0 to 54.9
55.0 to 100.0
> 100.0

Map IV. 11

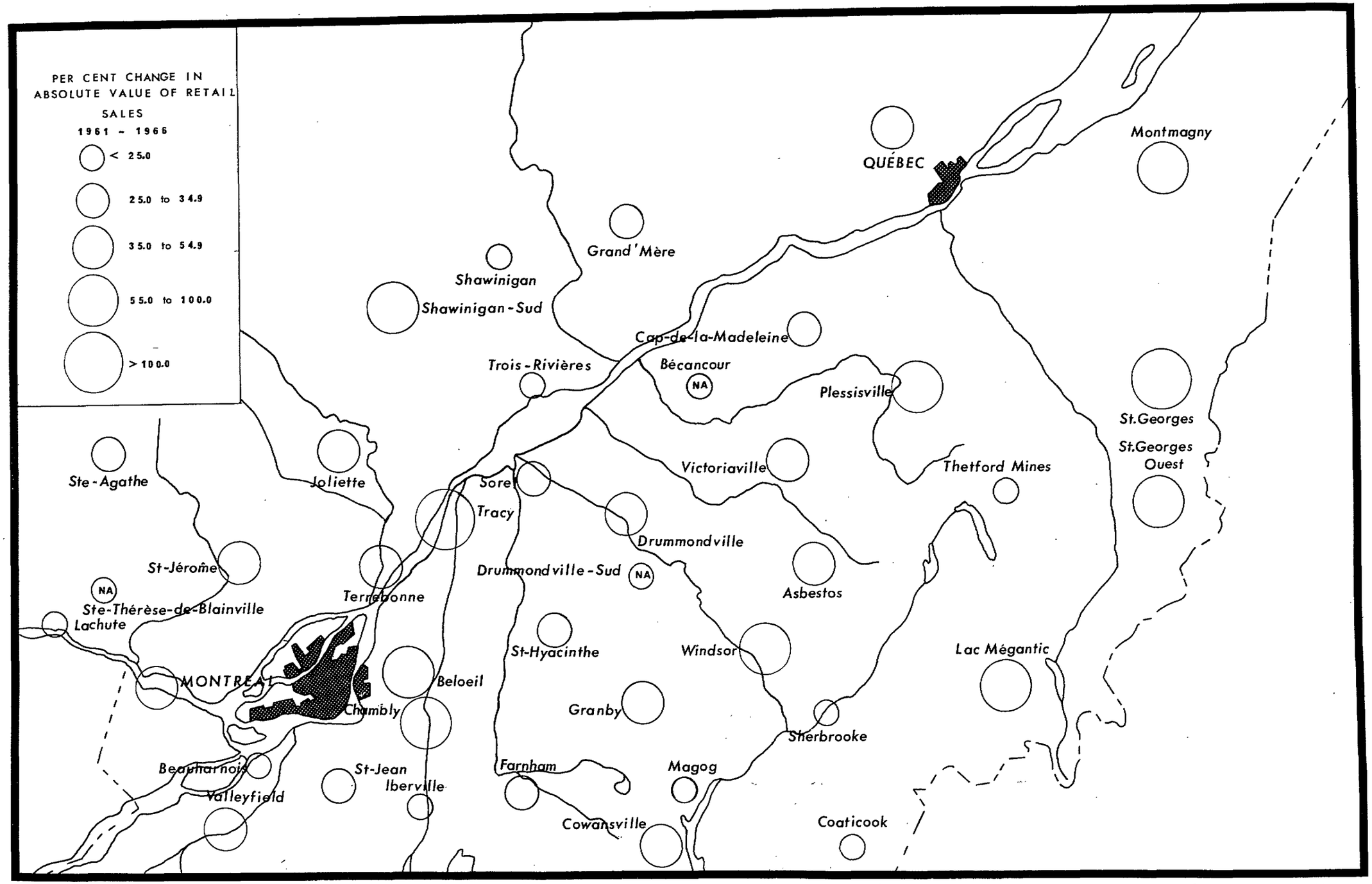


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TABLE IV.17

PER CENT CHANGE IN PER CAPITA PURCHASES

- Québec - 1961-66 -

Small Centres

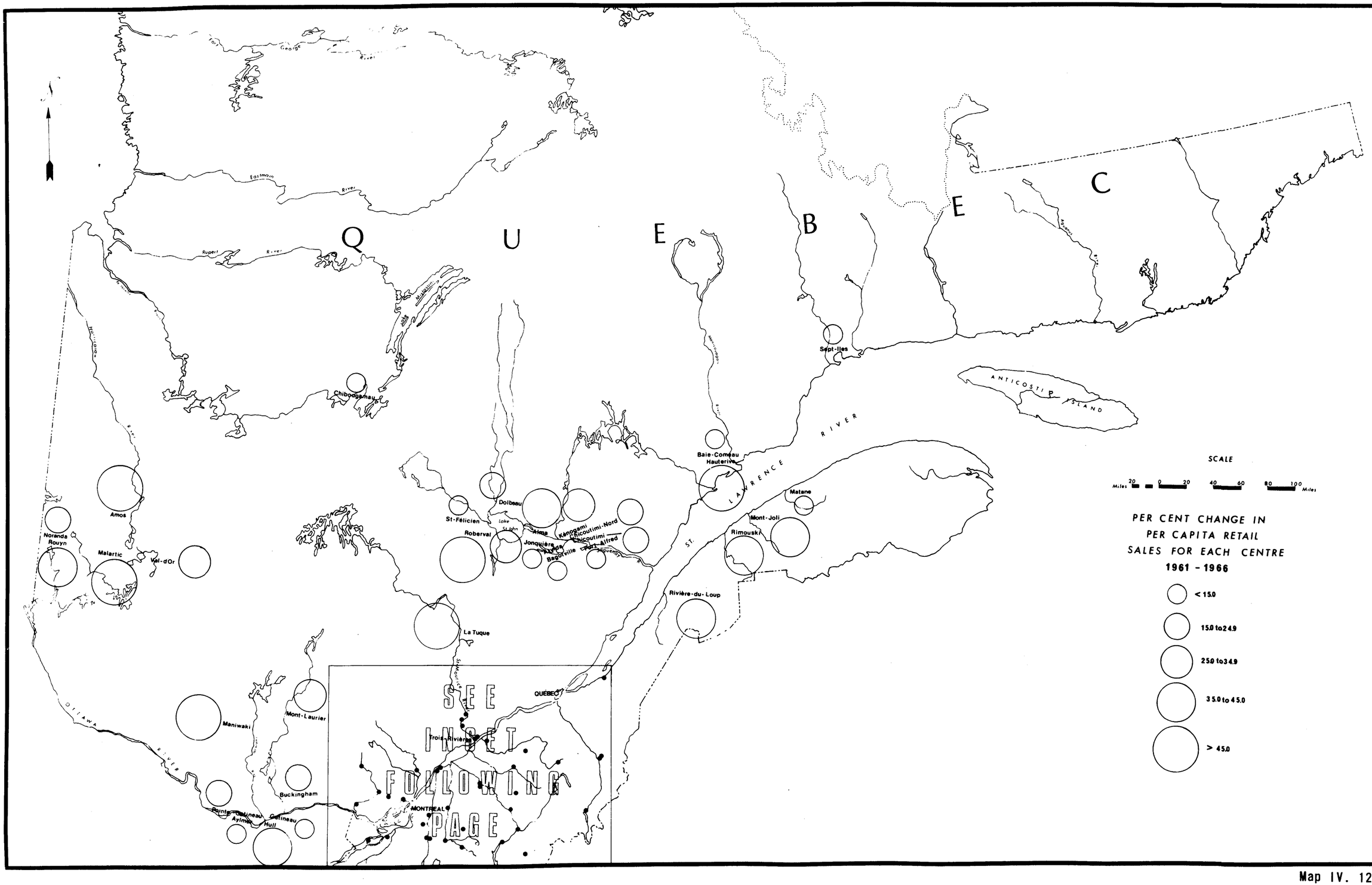
Centre	
Tracy	112.87
Lac-Mégantic	97.28
Hauterive	96.89
Malartic	90.13
Roberval	86.31

Intermediate Centres

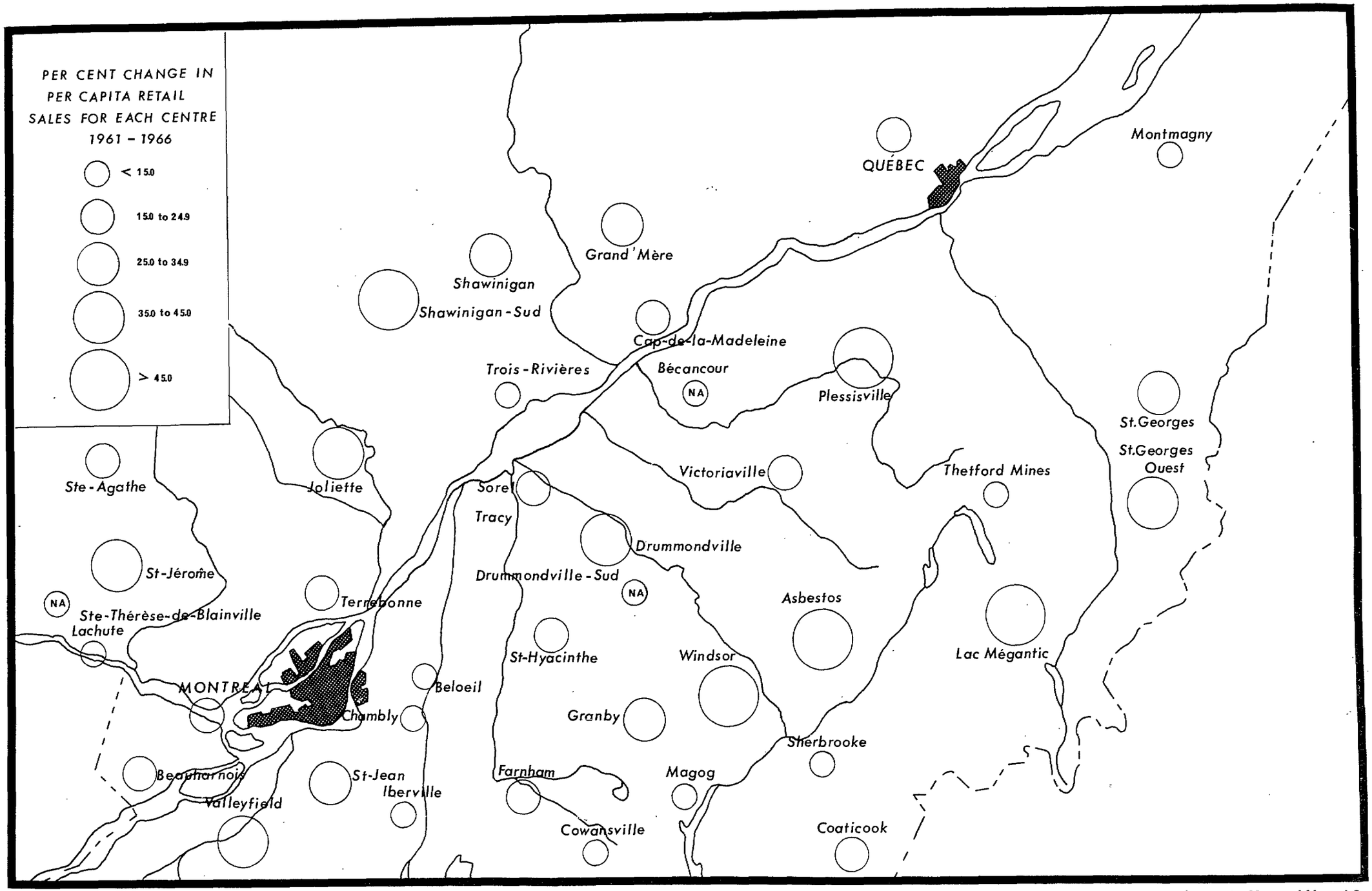
Shawinigan South	73.31
Asbestos	52.97
La Tuque	50.97
Rouyn	44.77
Rivière-du-Loup	43.21

Large Centres

Hull	39.88
Drummondville	38.49
Valleyfield	38.19
Granby	32.29
Jonquière	31.56


Eastmain River
Rupert River
Chibougamau
Amos
Norandа Rouyn
Malartic
Val-d'Or
Maniwaki
Mont-Laurier
Buckingham
Pointe-Gatineau
Aylmer
Gatineau
Hull
OTTAWA RIVER
Dolbeau
St-Félicien
Lake St. John
Roberval
Alma
Jonquière
Kénogami
Chicoutimi-Nord
Chicoutimi
Port-Alfred
Bagotville
La Tuque
St. Maurice River
Baie-Comeau
Hauterive
Sept-Iles
ANTICOSTI ISLAND
Matane
Mont-Joli
Rimouski
Rivière-du-Loup
ST. LAWRENCE RIVER
QUÉBEC
Trois-Rivières
MONTREAL
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
PER CENT CHANGE IN PER CAPITA RETAIL SALES FOR EACH CENTRE 1961 - 1966
< 15.0
15.0 to 24.9
25.0 to 34.9
35.0 to 45.0
> 45.0

Map IV. 12



Inset Map IV. 12

TABLE IV.18

PER CENT CHANGE RETAIL SALES PER STORE

- Québec - 1961-66 -

Small Centres

Centre	
Tracy	125.14
Lac-Mégantic	91.88
Hauterive	87.09
Amos	78.51
St-Georges O.	75.60
Malartic	73.58

Intermediate Centres

Alma	79.62
Rivière-du-Loup	57.62
Joliette	50.71
Chicoutimi	48.23
La Tuque	47.95

Large Centres

Drummondville	39.88
Jonquière	38.58
Valleyfield	38.16
Hull	36.64
Granby	34.93

Table IV.19 and Map IV.13 are used to illustrate the percent change in average income for the province of Québec from 1966 to 1969. From the map and the selected centres on the table, it appears that there is a higher rate of growth in income in the smaller centres than in the larger centres. For example, Thetford Mines, (an Intermediate-sized centre), has a high value of 12.25%. The values then range down to a low of 6.40% for Drummondville. From the map it appears that most of the centres involved in primary industry, such as mining, especially those in Northern Québec, i.e. Chibougamau, Bagotville, and Rouyn, have high rates of growth in income.

Income-Consumption Index

In order to provide a more detailed analysis of the income of each centre and the centre's importance as a trade centre, it is necessary to correlate income with retail sales. It should be noted that a high rate of increase in per capita retail sales may not be an indication of a centre's growing importance as a trade centre. This would be especially true if average incomes are also significantly rising. Also, it would simply mean that the residents are using their increased buying power.

Perhaps the most important observation to note is that the centres growing with respect to income are not necessarily the ones which have a high rate of growth respecting per capita sales, which may indicate the effect of purchases made by the hinterland's population.

Several centres have a relatively high sales rating but have a relatively low income rating. For example, Lac-Mégantic has a sales rating of 1.566 and an income rating of .741. Therefore, it could probably be assumed that the sales are high in spite of low incomes because the community is important as a trade centre.

One basic assumption, when employing the Income-Consumption Index, is that there is a minimum threshold or requirement for a standard of living or expenditures. From Table IV.20 and IV.14, in the appendix, it is possible to

TABLE IV.19

Per Cent Change in Average Income

Québec - 1966-1969 (incl.)

Small Centres

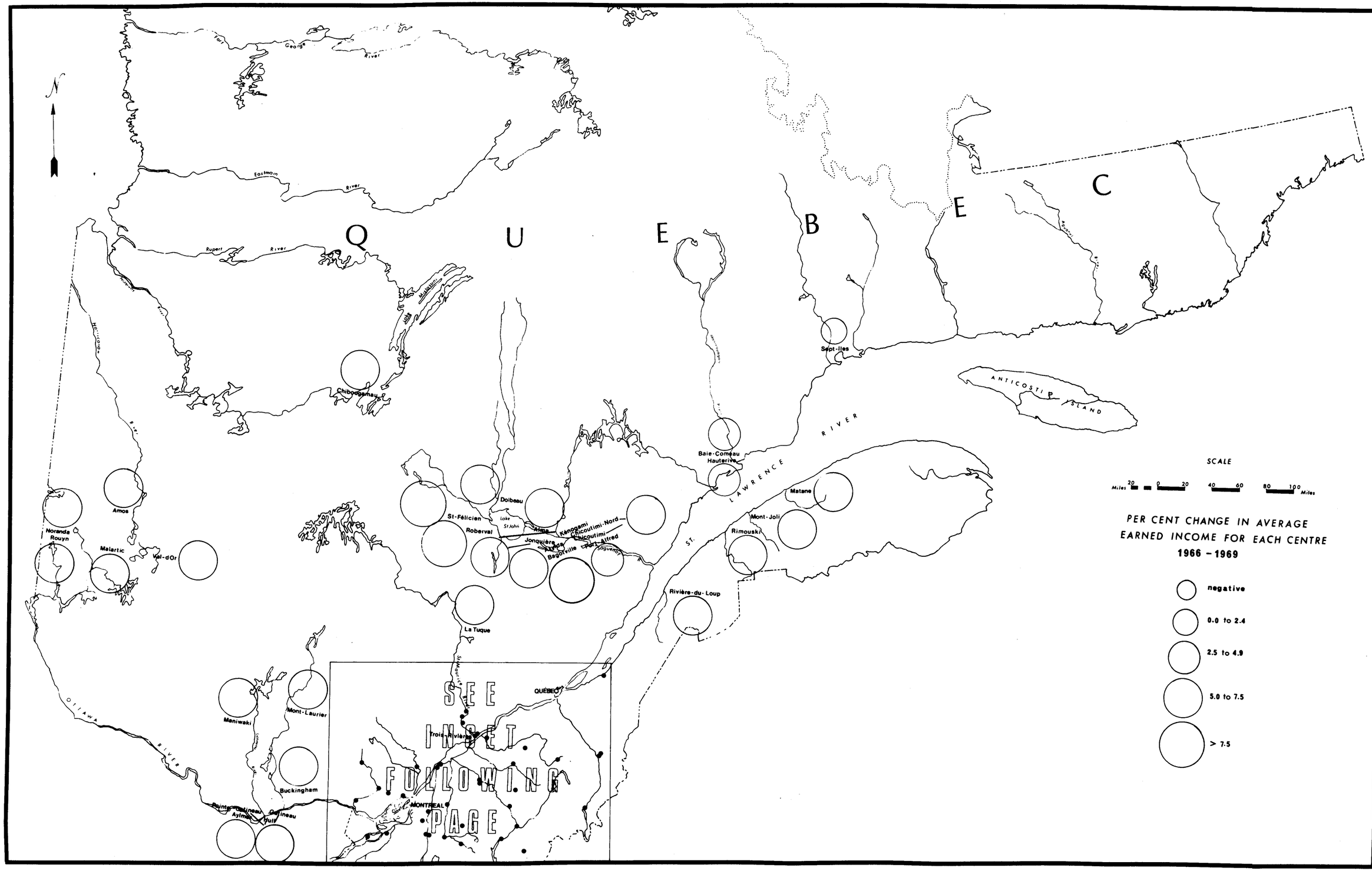
Roberval	9.69
Lac-Mégantic	9.52
Bagotville	8.57
St - Georges O.	8.57
Ste-Thérèse	8.28

Intermediate

Thetford	12.25
St-Jérôme	9.82
Magog	8.94
Rouyn	7.30
Rimouski	7.18

Large Centres

Cap-de-la-Madeleine	7.37
Granby	7.12
Trois-Rivières	6.46
Hull	6.40
Drummondville	6.40


N
Q
U
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E
C
Fort George River
Eastmain River
Rupert River
Nottaway River
Harricana River
Mistassini
Chibougamau
Amos
Noranda
Rouyn
Malartic
Val-d'Or
La Tuque
St-Maurice River
Doibeau
Lake St John
St-Félicien
Roberval
Alma
Jonquière
Kénogami
Kitchee
Bagotville
Chicoutimi-Nord
Chicoutimi
Port-Alfred
Saguenay
Sept-Iles
Baie-Comeau
Hauterive
ANTICOSTI ISLAND
ST. LAWRENCE RIVER
Matane
Mont-Joli
Rimouski
Rivière-du-Loup
QUÉBEC
Trois-Rivières
MONTREAL
Mont-Laurier
Maniwaki
Buckingham
Gatineau
Hull
Aylmer
Pointe-Gatineau
OTTAWA RIVER
SEE INSET FOLLOWING PAGE
SCALE
Miles 20 0 20 40 60 80 100 Miles
PER CENT CHANGE IN AVERAGE EARNED INCOME FOR EACH CENTRE
1966 - 1969
negative
0.0 to 2.4
2.5 to 4.9
5.0 to 7.5
> 7.5

Map IV. 13

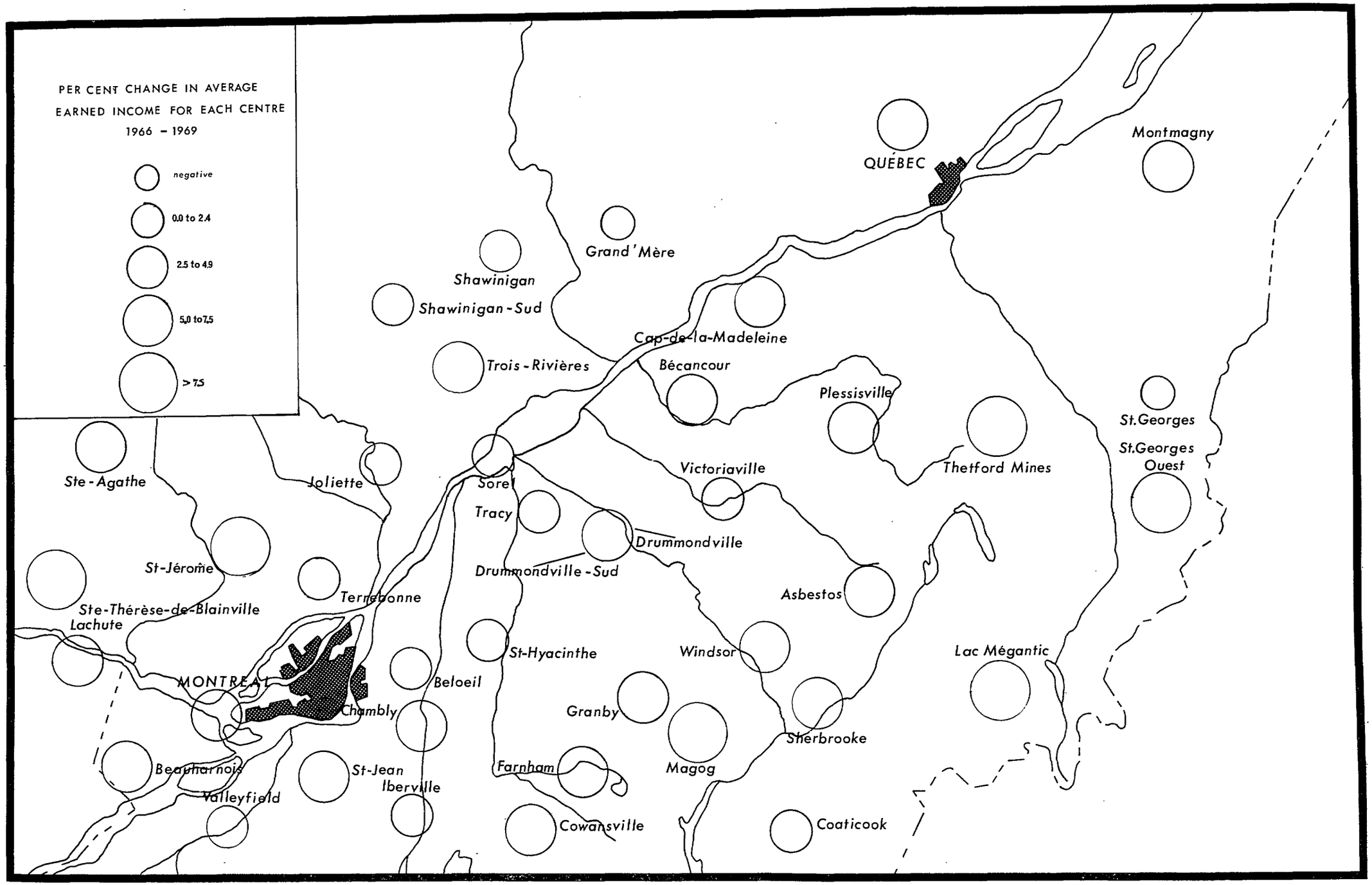

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TABLE IV.20

INCOME-CONSUMPTION INDEX

- Québec - 1966 -
(see text for details)

Small Centres

Centre	
St - Georges	2.75
Amos	2.42
Maniwaki	2.22
Mont-Laurier	2.12
Lac-Mégantic	2.11

Intermediate Centres

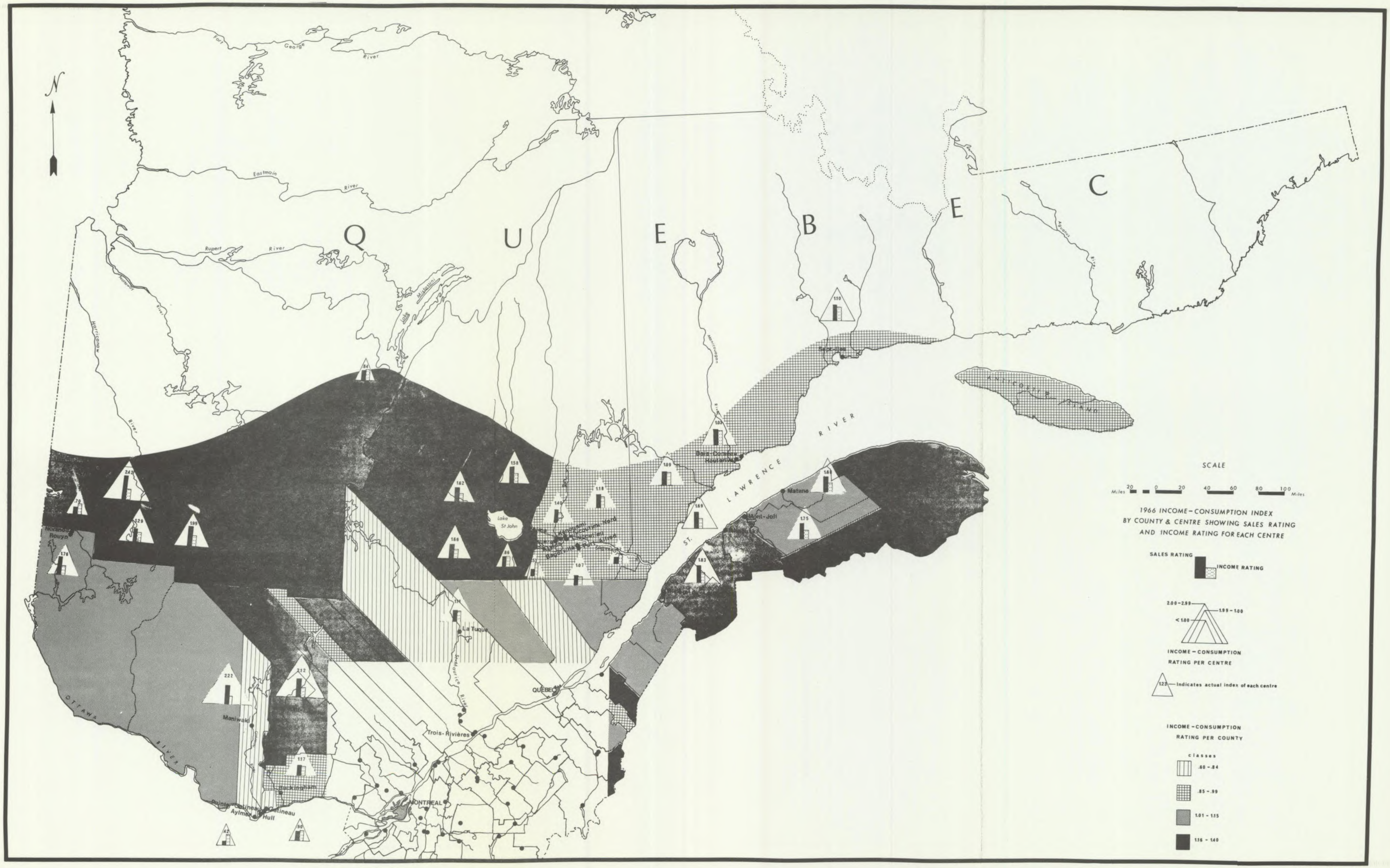
Joliette	1.99
Val-d'Or	1.99
Rivière-du-Loup	1.83
St-Hyacinthe	1.79
Rouyn	1.76

Large Centres

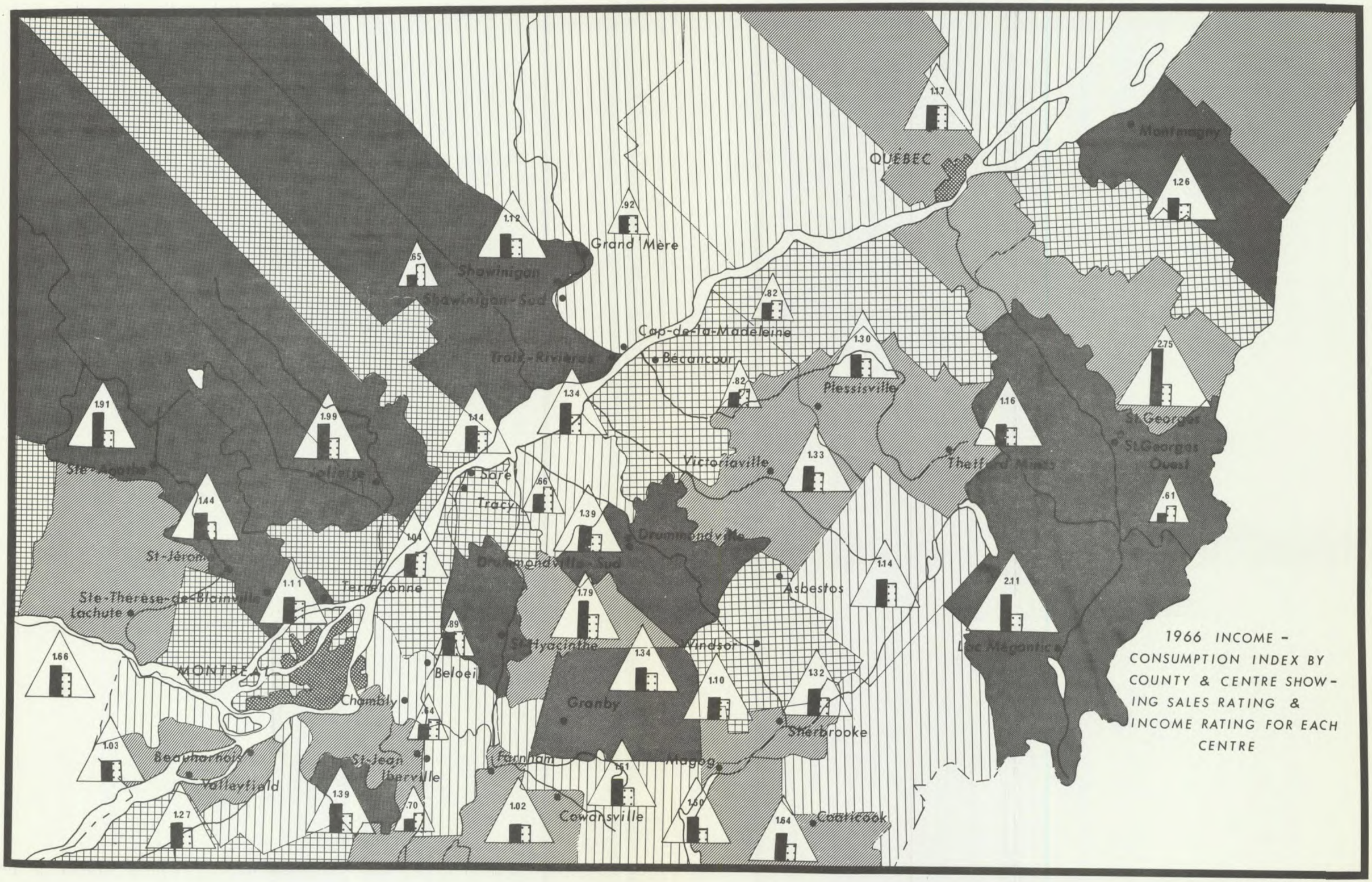
St-Jérôme	1.44
Drummondville	1.39
St-Jean	1.39
Granby	1.34
Trois-Rivières	1.34

determine the range of values for the selected centres. When grouped according to population, there appears to be a definite tendency for the smaller centres to have a higher Income-Consumption Index than the larger centres (i.e. St-Georges-2.75 and Trois-Rivières - 1.34). In determining why this is so, it is necessary to be careful not to compare the separate cities but only the population classes since a high index can be caused by several very different ratings. A high Income-Consumption Index may be due to either a high sales rating and an average income rating or an average sales rating and an abnormally low income rating.

With regard to the spatial distribution, Map IV.14, the important trade centres of all size categories are widely scattered and are not concentrated in any one area. With respect to the counties, apparently the populations with the lowest income spend a greater proportion of that income on retail goods and services, in an effort to maintain a minimum level of consumption. Consequently, in low income areas, purchases will often be made even if this means zero savings or dissavings, whereas, in the areas of higher income a greater proportion of income may be spent on other items (i.e. housing, capital investment) or cash savings.


QUEBEC
Fort George River
Eastmain River
Rupert River
ST. LAWRENCE RIVER
OTTAWA RIVER
Lake St John
Anticosti Island
QUEBEC
MONTREAL
Trois-Rivières
La Tuque
Maniwaki
Buckingham
Hull
Matane
Rouyn
SCALE
Miles 20 0 20 40 60 80 100 Miles
1966 INCOME-CONSUMPTION INDEX
BY COUNTY & CENTRE SHOWING SALES RATING
AND INCOME RATING FOR EACH CENTRE
SALES RATING
INCOME RATING
2.00-2.99
1.99-1.00
< 1.00
INCOME-CONSUMPTION
RATING PER CENTRE
123 Indicates actual index of each centre
INCOME-CONSUMPTION
RATING PER COUNTY
classes
.60-.84
.85-.99
1.01-1.15
1.16-1.40

Map IV. 14



1966 INCOME - CONSUMPTION INDEX BY COUNTY & CENTRE SHOWING SALES RATING & INCOME RATING FOR EACH CENTRE

Inset Map IV. 14

APPENDIX

The following tables were constructed from sources contained in:

1. Census of Canada, 1966, Retail Trade, Catalogue No 97-602, Volume VI (6-2).

2. Census of Canada, 1961, Retail Trade, Catalogue No 97-602, Volume V (4-2).

3. Census of Canada, Service Trade, Catalogue No 97-643, Volume VIII (8-3), for the two years 1961 and 1966

TABLE IV.1

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1961

	Retail Trade Categories - Value in Thousands of Dollars					
	TOTAL SALES	%	FOOD SALES	%	GENERAL SALES	%
Manitoba						
Brandon	35,176.1	100	6,464.5	18.37	7,551.0	21.46
Dauphin	11,690.2	"	1,958.1	16.74	2,611.1	22.33
Flin Flon	11,477.6	"	--	--	3,216.6	28.02
Lynn Lake	D*					
Morden	4,167.3	"	864.5	20.74	269.8	6.47
Neepawa	5,884.7	"	1,334.9	22.68	785.9	13.35
Portage la Prairie	12,970.5	"	3,575.4	27.56	1,975.7	15.23
Selkirk	7,832.8	"	2,695.8	34.41	--	--
Steinbach	10,741.3	"	1,658.6	15.44	505.5	4.70
Swan River	5,752.4	"	--	--	2,144.7	37.28
The Pas	5,922.0	"	1,534.0	25.91	452.0	7.64
Thompson	D					
Virden	4,889.5	"	523.1	10.69	1,119.2	22.88
Winkler	2,996.9	"	256.1	8.54	1,444.9	48.21
Winnipeg	493,139.0	"	127,156.6	25.78	129,395.2	26.23
TOTAL	572,890.4	100	143,111.6	24.98	142,055.2	24.79
Saskatchewan						
Assiniboia	4,641.1	100	235.6	5.07	1,453.9	31.32
Biggar	3,742.9	"	683.9	18.27	528.9	14.13
Canora	2,916.1	"	606.9	20.81	614.3	21.06
Esterhazy	D					
Estevan	12,475.3	"	2,404.5	19.27	1,522.7	12.20
Humboldt	5,497.8	"	904.1	16.44	1,316.1	23.93
Kamsack	2,952.3	"	791.6	26.81	785.7	26.61
Kindersley	6,863.0	"	667.4	9.72	1,747.1	25.45
Lloydminster	10,444.1	"	1,715.4	16.42	2,922.3	27.98
Meadow Lake	4,080.5	"	698.4	17.11	1,328.2	32.54
Melfort	7,073.8	"	1,222.5	17.28	1,757.9	24.85
Melville	6,183.9	"	1,466.6	23.71	1,499.5	24.24
Moose Jaw	50,507.1	"	10,171.3	20.13	15,107.2	29.91
Nipawin	6,265.4	"	855.3	13.65	1,273.2	20.32
Battleford	18,243.4	"	3,089.5	16.93	3,616.4	19.82
Prince Albert	28,135.0	"	5,151.7	18.31	6,350.8	22.57
Regina	132,189.3	"	25,856.1	19.55	36,234.4	27.41
Rosetown	6,003.9	"	722.8	12.03	1,492.5	24.85
Saskatoon	111,175.8	"	24,839.1	22.34	25,672.9	23.09
Swift Current	20,885.2	"	3,367.0	16.12	4,337.1	20.76
Tisdale	4,500.8	"	528.4	11.74	746.6	16.58
Weyburn	13,194.8	"	1,929.4	14.62	1,431.4	10.84
Yorkton	13,572.4	"	2,492.7	18.36	3,109.4	22.90
TOTAL	415,032.9	100	79,506.1	19.15	98,248.8	23.67
Alberta						
Barrhead	5,804.8	"	861.1	14.05	1,216.1	20.94
Brooks	5,475.3	"	1,340.9	24.48	1,207.3	22.04
Calgary	329,984.2	"	74,867.1	22.68	77,534.1	23.49
Camrose	13,355.4	"	2,918.6	21.85	2,067.6	15.48
Cardston	4,449.9	"	1,129.9	25.39	--	--
Claresholm	2,870.7	"	665.1	23.16	422.7	14.72
Coaldale	1,429.2	"	125.8	8.80	757.7	53.01
Drayton Valley	3,734.2	"	794.7	21.28	1,085.2	29.06
Drumheller	8,091.1	"	2,308.2	28.52	818.0	10.10

*D Indicates data not available

TABLE IV.1 cont'd

Retail Trade Categories - Value in Thousands of Dollars

	TOTAL SALES	%	FOOD SALES	%	GENERAL SALES	%
Alberta - (Continued)						
Edmonton	551,160.7	100	117,399.7	21.30	129,211.1	23.44
Edson	8,269.5	"	2,262.9	27.36	--	--
Ft. Macleod	4,626.2	"	,376.7	29.76	495.2	10.70
Ft. McMurray	3,806.8	"	319.2	8.38	965.8	25.37
Ft. Saskatchewan	3,233.5	"	1,016.1	31.42	--	--
Grande Prairie	22,277.6	"	3,493.3	15.68	5,674.0	25.46
Hanna	6,805.5	"	1,251.5	18.38	1,210.2	17,78
Hinton	5,753.7	"	1,609.5	27.97	895.1	15.55
Innisfail	5,815.4	"	1,046.2	17.99	865.0	14.87
Lacombe	6,727.8	"	1,693.4	25.17	--	--
Leduc	5,935.4	"	971.9	16.37	--	--
Lethbridge	67,398.1	"	14,198.1	21.06	9,828.8	14.58
Lloydminster						
Medicine Hat	41,037.2	"	8,367.1	20.38	7,344.8	17.89
Olds	6,397.5	"	1,277.5	19.96	1,467.0	22.93
Peace River	9,904.8	"	2,069.2	20.89	1,697.2	17.13
Pincher Creek	4,860.1	"	1,035.4	21.30	977.3	20.10
Ponoka	8,317.9	"	1,938.2	23.30	1,237.4	14.87
Red Deer	51,586.7	"	7,227.4	14.01	9,810.1	19.01
Rocky Mtn.House	5,472.2	"	1,183.8	21.63	--	--
St. Albert	5,341.7	"	2,694.7	50.45	0	0
St. Paul	10,712.6	"	283.3	2.64	4,474.6	41.76
Stettler	11,487.3	"	2,513.7	21.88	1,250.5	10.88
Taber	10,577.4	"	2,423.2	22.90	1,063.9	10.05
Vegreville	7,885.5	"	1,344.6	17.05	1,779.7	22.56
Vermilion	8,221.8	"	576.7	7.01	2,515.4	30.59
Wainwright	7,683.5	"	1,075.0	13.99	1,795.8	23.37
Westlock	7,713.3	"	1,412.0	18.31	--	--
Wetaskiwin	18,021.1	"	2,336.9	12.96	3,289.7	18.25
Whitecourt	4,954.6	"	740.4	14.94	--	--
TOTAL - Alberta	1,435,726.3	100	293,420.4	20.44	321,316.0	22.38
GRAND TOTAL						

TABLE IV.1 cont'd

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

	Retail Trade Categories - Value to Thousands of Dollars					
	AUTOMOTIVE SALES	%	APPAREL SALES	%	HARDWARE SALES	%
Manitoba						
Brandon	17,176.3	34.87	5,061.4	10.28	2,796.5	5.68
Dauphin	4,984.1	31.31	1,630.7	10.25	1,577.9	9.91
Flin Flon	2,785.0	23.36	758.4	6.36	791.4	6.64
Lynn Lake						
Morden	3,431.8	49.22	465.2	6.67	429.2	6.15
Neepawa	4,206.3	48.17	557.1	6.38	296.8	3.40
Portage la Prairie	9,158.6	41.69	1,524.0	6.94	957.1	4.36
Selkirk	3,199.1	29.13	1,064.5	9.69	--	--
Steinbach	8,886.7	59.82	919.8	6.19	1,120.0	7.54
Swan River	3,736.1	34.40	528.8	4.87	585.5	5.39
The Pas	2,461.3	32.08	834.4	10.87	367.8	4.79
Thompson						
Virden	2,582.2	34.79	619.9	8.35	454.8	6.13
Winkler	1,041.4	30.04	--	--	265.4	7.66
Winnipeg	172,553.3	27.63	30,668.6	4.91	23,305.7	3.73
TOTAL	236,202.2	29.73	45,289.0	5.70	33,826.4	4.26
Saskatchewan						
Assiniboia	2,521.0	34.80	357.8	4.94	624.9	8.63
Biggar	1,767.9	30.05	--	--	--	--
Canora	2,329.8	36.93	279.4	4.43	376.9	5.97
Esterhazy	1,765.2	34.69	413.8	8.13	833.7	16.38
Estevan	8,058.1	41.12	934.1	4.76	1,053.6	5.38
Humboldt	3,217.0	36.76	858.7	9.81	433.6	4.96
Kamsack	1,215.5	24.82	303.4	6.19	403.1	8.23
Kindersley	5,909.7	49.13	695.6	5.78	666.6	5.54
Lloydminster	4,995.7	31.37	1,133.2	7.12	1,022.6	6.42
Meadow Lake	2,309.2	34.03	355.3	5.24	324.1	4.78
Melfort	6,278.2	46.88	949.4	7.09	475.4	3.55
Melville	1,945.3	22.64	495.6	5.77	670.3	7.80
Moose Jaw	10,021.7	35.70	3,298.5	5.88	2,716.4	4.84
Nipawin	3,581.3	41.81	576.2	6.73	420.4	4.91
Battleford	10,866.1	39.03	2,474.1	8.89	1,070.6	3.85
Prince Albert	3,348.3	34.30	3,1722	8.15	4,242.7	10.90
Regina	58,070.8	30.86	12,646.7	6.72	7,994.0	4.25
Rosetown	2,695.8	35,73	696.6	9.23	704.6	9.34
Saskatoon	60,564.5	36.62	13,435.4	8.12	7,161.1	4.32
Swift Current	13,502.5	42.05	2,220.9	6.92	2,437.5	7.59
Tisdale	3,553.3	41.95	402.4	4.75	677.4	7.99
Weyburn	9,700.5	44.94	1,391.7	6.45	669.2	3.10
Yorkton	10,100.4	36.78	2,071.3	7.54	2,365.4	8.61
TOTAL	248,317.8	35.68	49,442.0	7.11	37,580.0	5.40
Alberta						
Barrhead	3,503.6	45.72	799.1	10.43	633.4	8.27
Brooks	4,274.3	47.51	444.4	4.94	711.7	7.91
Calgary	133,228.0	28.87	24,862.3	5.39	22,627.6	4.90
Camrose	5,671.6	32.62	1,898.3	10.92	1,679.6	9.66
Cardston	2,480.0	43.84	486.2	8.60	257.8	4.56
Claresholm	1,517.9	37.86	--	--	358.9	8.95
Coaldale	349.2	22.04	--	--	--	--
Drayton Valley	2,079.0	32.07	209.5	3.23	160.8	2.48
Drumheller	4,876.5	46.35	984.0	9.35	485.7	4.62

TABLE IV.1 cont'd

Retail Trade Categories - Value to Thousands of Dollars

	AUTOMOTIVE SALES	%	APPAREL SALES	%	HARDWARE SALES	%
Alberta - (Continued)						
Edmonton	171,771.5	31.17	32,337.2	5.87	27,265.5	4.95
Edson	3,402.3	41.14	472.2	5.71	--	--
Ft. Macleod	1,563.3	33.79	197.1	4.26	426.5	9.22
Ft. McMurray	673.4	17.69	361.2	9.49	289.3	7.60
Ft. Saskatchewan	961.1	29.72	--	--	299.3	9.26
Grande Prairie	7,615.9	34.17	1,130.5	5.07	1,236.4	5.55
Hanna	2,629.1	38.63	616.7	9.06	400.8	5.88
Hinton	1,779.6	30.92	265.1	4.60	460.2	7.99
Innisfail	2,549.6	43.84	356.6	6.13	327.6	5.63
Lacombe	2,229.7	33.14	696.0	10.35	--	--
Leduc	3,684.1	62.07	--	--	387.0	6.52
Lethbridge	20,462.9	30.36	6,528.1	9.68	5,931.4	8.80
Lloydminster						
Medicine Hat	14,292.4	34.82	2,888.1	7.03	2,812.5	6.85
Olds	1,816.3	28.39	525.5	8.21	502.2	7.84
Peace River	3,835.8	38.72	806.2	8.13	619.1	6.25
Pincher Creek	1,569.5	32.29	193.6	3.98	576.8	11.86
Ponoka	3,020.0	36.30	803.0	9.65	560.9	6.74
Red Deer	22,275.9	43.18	2,393.6	4.63	3,031.0	5.87
Rocky Mtn.House	2,126.6	38.86	241.1	4.41	--	--
St. Albert	865.0	16.19	--	--	--	--
St. Paul	4,328.0	40.40	574.4	5.36	352.0	3.28
Stettler	4,631.3	40.31	1,222.4	10.64	863.9	7.52
Taber	4,477.0	42.32	558.9	5.28	858.6	8.11
Vegreville	2,794.5	35.44	609.6	7.73	504.5	6.39
Vermilion	3,646.3	44.34	276.1	3.35	507.5	6.17
Wainwright	3,187.2	41.48	--	--	--	--
Westlock	3,637.6	47.16	--	--	509.3	6.60
Wetaskiwin	9,529.6	52.88	571.3	3.17	914.2	5.07
Whitecourt	3,053.9	61.70	127.7	2.58	--	--
TOTAL	466,389.5	32.48	86,875.5	6.05	78,962.5	5.50

TABLE IV. 1 cont'd

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

Retail Trade Categories - Value in Thousands of Dollars

	OTHER SALES	%	COEFFICIENT OF SPECIALIZATION (X 100)
Manitoba			
Brandon	5,986.1	12.15	6.98
Dauphin	2,612.5	16.41	12.59
Flin Flon	1,273.1	10.68	11.09
Lynn Lake			D
Morden	571.9	8.20	18.20
Neepawa	684.9	7.84	15.84
Portage la Prairie	2,311.6	10.52	10.89
Selkirk	1,392.0	12.68	18.85
Steinbach	471.4	3.17	29.72
Swan River	1,144.8	10.54	19.36
The Pas	896.8	11.69	8.80
Thompson			D
Virden	642.6	8.66	6.83
Winkler	217.5	6.27	20.23
Winnipeg	74,184.9	11.88	8.33
TOTAL	92,390.1	11.63	
Saskatchewan			
Assiniboia	828.1	11.43	8.89
Biggar	595.5	11.80	4.03
Canora	607.7	9.63	13.23
Esterhazy	830.0	16.31	19.03
Estevan	2,648.1	13.51	9.74
Humboldt	1,158.3	13.24	8.48
Kamsack	528.8	10.80	9.54
Kindersley	950.4	7.90	17.03
Lloydminster	1,761.9	11.06	6.21
Meadow Lake	713.7	10.52	9.03
Melfort	1,098.8	8.20	15.26
Melville	942.5	10.97	11.97
Moose Jaw	6,589.5	11.75	4.40
Nipawin	837.8	9.78	9.83
Battleford	3,138.5	11.27	9.21
Prince Albert	4,744.4	12.19	9.50
Regina	26,890.1	14.29	3.19
Rosetown	1,056.5	14.00	11.82
Saskatoon	22,934.0	13.86	7.26
Swift Current	3,656.1	11.39	12.70
Tisdale	769.2	9.08	14.25
Weyburn	2,622.0	12.15	12.67
Yorkton	2,435.5	8.87	10.32
TOTAL	88,337.4	12.70	4.41
Alberta			
Barrhead	617.1	8.05	20.57
Brooks	745.1	8.28	17.79
Calgary	64,232.8	13.92	4.69
Camrose	1,459.3	8.39	12.81
Cardston	303.4	5.36	17.37
Claresholm	624.7	15.58	13.97
Coaldale	104.3	6.58	34.34
Drayton Valley	1,146.3	17.68	6.74
Drumheller	685.7	6.52	17.00

TABLE IV.1 cont'd

Retail Trade Categories - Value in Thousands of Dollars 1966

Alberta - (Continued)	OTHER SALES	%	COEFFICIENT OF SPECIALIZATION (X 100)
Edmonton	73,175.7	13.28	1.87
Edson	859.4	10.39	18.59
Ft. Macleod	567.4	12.26	14.68
Ft. McMurray	1,197.9	31.47	26.88
Ft. Saskatchewan	674.0	20.84	23.31
Grande Prairie	3,127.5	14.04	5.90
Hanna	697.2	10.24	9.73
Hinton	744.2	12.93	10.67
Innisfail	670.4	11.52	11.84
Lacombe	1,161.4	17.26	16.32
Leduc	598.0	10.08	30.95
Lethbridge	10,448.8	15.50	10.62
Lloydminster			
Medicine Hat	5,332.3	12.99	5.23
Olds	809.0	12.64	4.73
Peace River	877.3	8.85	9.71
Pincher Creek	507.5	10.44	7.58
Ponoka	758.4	9.11	11.71
Red Deer	6,848.7	13.27	12.06
Rocky Mtn.House	714.7	13.06	9.21
St. Albert	873.7	16.36	39.79
St. Paul	700.3	6.53	26.60
Stettler	1,005.5	8.75	16.06
Taber	1,195.8	11.30	15.26
Vegreville	852.6	10.81	5.72
Vermilion	699.8	8.51	20.41
Wainwright	889.1	11.57	11.13
Westlock	1,011.4	13.11	20.61
Wetaskiwin	1,379.4	7.65	20.38
Whitecourt	466.3	9.41	29.17
TOTAL	188,762.4	13.15	0.87

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

Retail Trade Categories - Value in Thousands of Dollars

	TOTAL SALES	%	FOOD SALES	%	GENERAL SALES	%
Manitoba						
Brandon	49,250.0	100	8,979.2	18.23	9,250.5	18.78
Dauphin	15,916.8	"	3,000.1	18.84	2,111.5	13.27
Flin Flon	11,920.7	"	2,828.4	23.73	3,484.4	29.23
Lynn Lake	D*					
Morden	6,971.7	"	929.9	13.34	1,143.7	16.40
Neepawa	8,733.0	"	1,500.1	17.18	1,487.8	17.04
Portage la Prairie	21,966.6	"	4,704.8	21.42	3,310.5	15.07
Selkirk	10,981.7	"	3,614.0	32.91	--	--
Steinbach	14,856.3	"	1,915.6	12.89	1,542.8	10.38
Swan River	10,859.9	"	491.1	4.52	4,373.6	40.27
The Pas	7,673.2	"	1,886.1	24.58	1,226.8	15.99
Thompson	D					
Virden	7,421.6	"	1,622.4	21.86	1,499.7	20.21
Winkler	3,466.8	"	822.2	25.45	--	--
Winnipeg	624,472.5	"	148,054.3	23.71	175,705.7	28.14
TOTAL	794,490.8	"	180,408.2	22.71	206,374.9	25.98
Saskatchewan						
Assiniboia	7,244.9	"	1,016.8	14.03	1,896.3	26.17
Biggar	5,044.5	"	1,106.5	21.93	1,059.0	20.99
Canora	6,308.1	"	756.5	11.99	1,957.8	31.04
Esterhazy	5,088.7	"	824.4	16.20	421.6	8.29
Estevan	19,597.3	"	2,484.4	12.67	4,419.0	22.55
Humboldt	8,750.1	"	1,509.4	17.25	1,573.1	17.98
Kamsack	4,898.2	"	1,075.6	21.96	1,371.8	28.01
Kindersley	12,029.0	"	1,159.5	9.64	2,647.2	22.01
Lloydminster	15,923.0	"	2,695.8	16.93	4,313.8	27.09
Meadow Lake	6,785.2	"	1,008.9	14.87	2,074.0	30.57
Melfort	13,392.1	"	1,546.0	11.54	3,044.3	22.73
Melville	8,593.8	"	2,203.9	25.65	2,336.2	27.18
Moose Jaw	56,087.8	"	9,846.6	17.56	13,615.1	24.27
Nipawin	8,564.8	"	1,178.8	13.76	1,970.3	23.00
Battleford	27,839.8	"	4,093.0	14.70	6,197.5	22.26
Prince Albert	38,915.3	"	6,484.1	16.66	6,923.6	17.79
Regina	188,199.2	"	40,406.4	21.47	42,191.2	22.42
Rosetown	7,545.3	"	1,163.2	15.42	1,228.6	16.28
Saskatoon	165,401.4	"	31,555.3	19.08	29,751.1	17.99
Swift Current	32,112.3	"	4,331.6	13.49	5,963.7	18.57
Tisdale	8,470.5	"	949.2	11.21	2,119.0	25.02
Weyburn	21,587.4	"	3,548.7	16.44	3,655.3	16.93
Yorkton	27,458.3	"	3,813.1	13.89	6,672.6	24.30
TOTAL	695,837.0	"	124,757.7	17.93	147,402.1	21.18
Alberta						
Barrhead	7,662.6	100	853.3	11.14	1,256.1	16.39
Brooks	8,996.0	"	1,600.7	17.79	1,219.8	13.56
Calgary	461,444.2	"	95,699.8	20.74	120,793.7	26.18
Camrose	17,385.6	"	4,156.5	23.1	2,520.3	14.50
Cardston	5,656.7	"	1,363.0	24.10	766.3	13.55
Claresholm	4,009.4	"	762.7	19.02	--	--
Coaldale	1,584.2	"	868.0	54.79	--	--
Drayton Valley	6,482.2	"	1,281.9	19.78	1,604.7	24.76
Drumheller	10,520.0	"	1,696.9	16.13	1,791.2	17.03

*D Indicates data not available

TABLE IV.2 cont'd

Retail Trade Categories - Value in Thousands of Dollars

	TOTAL SALES	%	FOOD SALES	%	GENERAL SALES	%
Alberta - (Continued)						
Edmonton	388,236.7	100	84,153.1	21.67	90,935.4	23.42
Edson	5,572.8	"	1,753.4	31.46	374.9	6.72
Ft. Macleod	3,660.3	"	812.1	23.55	542.8	14.82
Ft. McMurray	D					
Ft. Saskatchewan	2,222.5	"	533.7	24.01	476.3	21.43
Grande Prairie	13,878.1	"	2,708.0	19.51	3,299.8	23.77
Hanna	4,869.2	"	909.8	18.68	706.5	14.50
Hinton	3,411.9	"	1,222.8	35.83	420.2	12.31
Innisfail	4,222.9	"	1,024.9	24.27	352.4	8.34
Lacombe	5,283.3	"	1,117.5	21.15	370.4	7.01
Leduc	3,782.3	"	827.5	21.87	--	--
Lethbridge	55,148.5	"	12,812.3	23.23	7,871.1	14.27
Lloydminster	See Saskatchewan					
Medicine Hat	32,092.2	"	6,722.0	20.94	5,954.7	18.55
Olds	4,708.6	"	716.7	15.22	861.0	18.28
Peace River	6,499.5	"	715.7	11.01	920.7	14.16
Pincher Creek	4,086.1	"	362.9	8.88	1,313.3	32.14
Ponoka	6,795.8	"	1,681.1	24.73	907.5	13.35
Red Deer	33,826.2	"	6,213.2	18.36	4,761.9	14.07
Rocky Mtn.House	4,064.8	"	512.0	12.59	1,218.7	29.98
St. Albert	681.5	"	295.7	43.38	0	0
St. Paul	6,689.9	"	344.2	5.14	1,587.9	23.73
Stettler	7,820.4	"	1,213.1	15.51	1,271.2	16.25
Taber	5,751.6	"	1,571.3	27.31	660.8	11.48
Vegreville	5,162.0	"	1,068.4	20.69	933.1	18.07
Vermilion	6,164.5	"	586.2	9.50	1,477.7	23.97
Wainwright	5,078.4	"	864.5	17.02	1,136.6	22.38
Westlock	D					
Wetaskiwin	12,345.0	"	1,712.1	13.86	2,121.2	17.18
Whitecourt	D					
TOTAL	990,950.2	100	213,763.3	21.57	213,265.6	21.52

TABLE IV.2 cont'd

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION- RETAIL TRADE 1961

Retail Trade Categories - Value in Thousands of Dollars

	AUTOMOTIVE SALES	%	APPAREL SALES	%	HARDWARE SALES	%
Manitoba						
Brandon	11,818	33.59	3,087.3	8.77	2,529.2	7.19
Dauphin	3,743.2	32.01	--	--	--	--
Flin Flon	--	--	864.4	7.53	761.1	6.63
Lynn Lake						
Morden	1,901.8	45.63	231.8	5.56	467.8	11.22
Neepawa	2,688.3	45.68	344.7	5.85	251.5	4.27
Portage la Prairie	3,628.3	27.97	1,457.6	11.23	1,004.7	7.74
Selkirk	2,490.1	31.79	--	--	696.0	8.88
Steinbach	6,763.3	62.96	603.0	5.61	995.8	9.27
Swan River	1,839.1	31.97	--	--	442.8	7.69
The Pas	1,737.0	29.34	593.4	10.02	551.6	9.31
Thompson						
Virden	2,020.2	41.31	408.6	8.35	317.7	6.49
Winkler	800.6	26.71	--	--	271.0	9.04
Winnipeg	125,362.7	25.42	24,016.6	4.87	23,836.6	4.83
TOTAL	155,919.9	27.21	30,743.0	5.36	29,954.9	5.22
Saskatchewan						
Assiniboia	1,706.0	36.75	293.4	6.32	298.2	6.42
Biggar	1,236.6	33.03	508.1	13.57	318.5	8.50
Canora	947.6	32.49	124.1	4.25	200.8	6.88
Esterhazy						
Estevan	4,718.0	37.81	644.5	5.16	828.8	6.64
Humboldt	1,874.5	34.09	277.6	5.04	498.4	9.06
Kamsack	583.9	19.77	90.6	3.06	276.0	9.34
Kindersley	3,122.2	45.49	402.7	5.86	381.3	5.55
Lloydminster	3,223.2	30.86	692.2	6.62	653.6	6.25
Meadow Lake	986.5	24.17	171.8	4.21	213.3	5.22
Melfort	2,636.8	37.27	313.9	4.43	437.6	6.18
Melville	1,534.1	24.80	793.1	12.82	210.7	3.40
Moose Jaw	13,018.6	25.77	--	--	3,087.5	6.11
Nipawin	2,914.5	46.51	363.9	5.80	297.0	4.74
Battleford	7,201.5	39.47	1,415.2	7.75	1,044.7	5.72
Prince Albert	9,362.9	33.27	2,171.0	7.71	1,940.8	6.89
Regina	34,809.0	26.33	9,965.6	7.53	8,458.3	6.39
Rosetown	2,489.5	41.46	--	--	--	--
Saskatoon	30,413.1	27.35	9,881.5	8.88	6,484.6	5.83
Swift Current	7,749.7	37.10	1,718.2	8.22	1,132.8	5.42
Tisdale	1,827.5	40.60	363.7	8.08	597.0	13.26
Weyburn	6,940.7	52.60	795.9	6.03	790.1	5.98
Yorkton	4,317.6	31.81	1,158.8	8.53	919.8	6.77
TOTAL	128,105.9	30.86	32,145.8	7.74	25,982.3	6.26
Alberta						
Barrhead	2,276.5	39.21	415.9	7.16	609.4	10.49
Brooks	1,772.5	32.37	391.2	7.14	191.1	3.49
Calgary	100,609.6	30.48	20,267.5	6.14	20,704.4	6.27
Camrose	4,434.1	33.20	1,022.5	7.65	996.7	7.46
Cardston	2,069.7	46.51	388.6	7.60	302.5	6.79
Claresholm	1,232.0	42.91	215.2	7.49	112.2	3.90
Coaldale	394.4	27.59	--	--	--	--
Drayton Valley	--	--	195.8	5.24	--	--
Drumheller	2,704.2	33.42	756.9	9.35	217.8	2.69

TABLE IV.2 cont'd

Retail Trade Categories - Value in Thousands of Dollars

	AUTOMOTIVE SALES	%	APPAREL SALES	%	HARDWARE SALES	%
Alberta - (Continued)						
Edmonton	117,658.7	30.30	26,127.5	6.72	22,393.3	5.76
Edson	1,882.9	33.78	285.2	5.11	714.5	12.82
Ft. Macleod	1,298.1	35.46	156.6	4.27	325.2	8.88
Ft. McMurray						
Ft. Saskatchewan	579.4	26.06	--	--	--	--
Grande Prairie	4,326.6	31.17	706.2	5.08	829.1	5.97
Hanna	1,970.9	40.47	426.9	8.76	325.0	6.67
Hinton	883.9	25.90	199.1	5.83	262.9	7.70
Innisfail	1,694.2	40.11	339.3	8.03	362.5	8.58
Lacombe	2,028.1	38.38	483.7	9.15	401.6	7.60
Leduc	1,919.2	40.74	--	--	290.8	7.68
Lethbridge	19,101.6	34.63	5,122.4	9.28	4,562.6	8.27
Lloydminster						
Medicine Hat	10,963.3	34.16	2,424.2	7.55	2,614.6	8.14
Olds	1,706.8	36.24	471.9	10.02	379.2	8.05
Peace River	2,946.3	45.33	221.2	3.40	355.8	5.47
Pincher Creek	1,214.1	29.71	333.4	8.15	425.8	10.42
Ponoka	2,468.2	36.31	539.1	7.93	613.0	9.02
Red Deer	13,589.7	40.17	2,336.4	6.90	2,557.9	7.56
Rocky Mtn.House	1,366.8	33.62	114.0	2.80	479.6	11.79
St. Albert	--	--	--	--	56.3	8.26
St. Paul	3,689.1	55.14	445.7	6.66	281.1	4.20
Stettler	3,089.8	39.40	845.2	10.80	612.6	7.83
Taber	2,006.3	34.88	363.8	6.32	577.9	10.04
Vegreville	1,682.6	32.59	571.8	11.07	340.1	6.58
Vermilion	2,851.8	46.26	275.0	4.46	319.3	5.17
Wainwright	1,573.5	30.98	256.6	5.05	643.5	12.67
Westlock						
Wetaskiwin	6,738.3	54.58	389.5	3.15	498.4	4.03
Whitecourt						
TOTAL	319,760.5	32.26	66,503.9	6.71	63,707.1	6.42

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1961

	Retail Trade Categories - Value in Thousands of Dollars		
	OTHER SALES	%	COEFFICIENT OF SPECIALIZATION (X 100)
Manitoba			
Brandon	3,725.8	10.59	10.59
Dauphin	1,491.4	12.75	*
Flin Flon	--	--	*
Lynn Lake			
Morden	431.6	10.35	20.31
Neepawa	479.4	8.14	15.81
Portage la Prairie	1,328.8	10.24	11.93
Selkirk	941.4	12.01	*
Steinbach	215.1	2.0	35.68
Swan River	530.6	9.22	*
The Pas	1,053.1	17.78	16.47
Thompson			
Virden	500.7	10.24	13.08
Winkler	--	--	*
Winnipeg	63,371.3	12.85	7.96
TOTAL	71,105.8	12.41	5.29
Saskatchewan			
Assiniboia	654.0	14.09	17.18
Biggar	466.9	12.47	12.56
Canora	422.4	14.48	5.37
Esterhazy			
Estevan	2,356.8	18.89	14.86
Humboldt	627.1	11.40	7.62
Kamsack	424.5	14.37	14.20
Kindersley	542.3	7.90	17.52
Lloydminster	1,237.4	11.84	5.72
Meadow Lake	682.3	16.72	14.42
Melfort	705.1	9.96	8.84
Melville	679.9	10.99	9.29
Moose Jaw	--	--	*
Nipawin	561.5	8.96	16.00
Battleford	1,876.1	10.28	10.19
Prince Albert	3,157.8	11.22	4.80
Regina	16,865.9	12.75	6.67
Rosetown	820.1	13.65	*
Saskatoon	13,884.6	12.48	3.37
Swift Current	2,580.4	12.35	8.70
Tisdale	437.6	9.72	18.86
Weyburn	1,307.3	9.90	22.10
Yorkton	1,574.1	11.59	4.04
TOTAL	51,044.0	12.29	2.89
Alberta			
Barrhead	470.8	8.11	13.79
Brooks	572.3	10.45	4.91
Calgary	36,001.5	10.91	1.45
Camrose	1,915.9	14.34	7.63
Cardston	--	--	*
Claresholm	233.5	7.78	14.48
Coaldale	--	--	*
Drayton Valley	586.4	15.70	*
Drumheller	1,286.0	15.89	16.16

TABLE IV.2 cont'd

Retail Trade Categories - Value in Thousands of Dollars

	OTHER SALES	%	COEFFICIENT OF SPECIALIZATION (X 100)
Alberta - (Continued)			
Edmonton	46,968.7	12.09	0.86
Edson	561.9	10.08	19.47
Ft. Macleod	475.5	12.99	10.35
Ft. McMurray			
Ft. Saskatchewan	--	--	*
Grande Prairie	2,008.4	14.47	4.05
Hanna	530.1	10.88	12.83
Hinton	423.0	12.39	15.91
Innisfail	449.6	10.64	15.87
Lacombe	882.0	16.69	16.80
Leduc	423.7	11.20	*
Lethbridge	5,678.5	10.29	10.29
Lloydminster			
Medicine Hat	3,413.4	10.63	6.78
Olds	573.0	12.16	16.46
Peace River	1,339.8	20.61	23.49
Pincher Creek	436.6	10.68	15.23
Ponoka	586.9	8.63	12.87
Red Deer	4,367.1	12.91	12.53
Rocky Mtn.House	373.7	9.19	15.93
St. Albert	--	--	*
St. Paul	341.9	5.11	25.57
Stettler	788.5	10.08	15.06
Taber	571.5	9.93	13.64
Vegreville	566.0	10.96	7.17
Vermilion	654.5	10.61	16.81
Wainwright	603.7	11.88	7.10
Westlock			
Wetaskiwin	885.5	7.17	24.08
Whitecourt			
TOTAL	113,949.8	11.49	2.31

TABLE IV.3

NUMBER OF RETAIL OUTLETS

Manitoba	1961	1966
Brandon	209	221
Dauphin	78	77
Flin Flon	75	65
Lynn Lake	-	-
Morden	43	47
Neepawa	51	51
Portage la Prairie	117	117
Selkirk	68	80
Steinbach	47	55
Swan River	56	58
The Pas	59	59
Thompson	-	-
Virden	42	47
Winkler	32	27
Winnipeg	2870	2801
TOTAL		

Saskatchewan	1961	1966
Assiniboia	37	46
Biggar	38	36
Canora	41	46
Esterhazy	21	31
Estevan	81	81
Humboldt	45	54
Kamsack	42	43
Kindersley	42	49
Lloydminster	72	69
Meadow Lake	49	49
Melfort	53	60
Melville	70	61
Moose Jaw	272	261
Nipawin	55	62
Battleford	123	114
Prince Albert	181	178
Regina	656	708
Rosetown	44	41
Saskatoon	628	684
Swift Current	120	124
Tisdale	40	44
Weyburn	75	88
Yorkton	90	115
TOTAL		

Alberta	1961	1966
Barrhead	40	39
Brooks	37	43
Calgary	1778	1899
Camrose	91	97
Cardston	40	40
Claresholm	40	41
Coaldale	18	17
Drayton Valley	34	41
Drumheller	52	69

TABLE IV.3 cont'd

Alberta - (Continued)	1961	1966
Edmonton	1917	2148
Edson	49	49
Ft. Macleod	43	43
Ft. McMurray	-	30
Ft. Saskatchewan	26	32
Grande Prairie	102	93
Hanna	44	45
Hinton	38	41
Innisfail	41	37
Lacombe	51	47
Leduc	40	36
Lethbridge	329	340
Lloydminster	-	-
Medicine Hat	231	216
Olds	47	49
Peace River	49	54
Pincher Creek	31	34
Ponoka	59	54
Red Deer	174	186
Rocky Mtn. House	36	40
St. Albert	12	33
St. Paul	44	49
Stettler	56	57
Taber	65	68
Vegreville	52	52
Vermilion	44	47
Wainwright	51	48
Westlock	34	44
Wetaskiwin	68	65
Whitecourt	11	29
TOTAL		

TABLE IV.4

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENTRE. 1966

	POPULATION	RETAIL TRADE SALES	VALUE SERVICE TRADES	TOTAL RETAIL TRADE AND SERVICES
Manitoba				
Brandon	29,981	49,250.0	7,985.9	57,235.9
Dauphin	8,655	15,916.8	2,002.5	17,919.3
Flin Flon	10,201	12,735.6	2,020.7	14,756.3
Lynn Lake	-	-	-	-
Morden	3,097	6,971.7	561.9	7,533.6
Neepawa	3,229	8,733.0	1,342.9	10,075.9
Portage la Prairie	13,012	21,966.6	3,502.1	25,468.7
Selkirk	9,157	10,981.7	2,017.5	12,999.2
Steinbach	4,648	14,856.3	906.7	15,763.0
Swan River	3,470	10,859.9	952.9	11,812.8
The Pas	5,031	7,673.2	1,544.0	9,217.2
Thompson	-	-	-	-
Virden	2,933	7,421.6	822.3	8,243.9
Winkler	2,570	3,466.8	331.2	3,798.0
Winnipeg	508,759	624,472.5	110,059.6	734,532.1
TOTAL	963,066	1,006,479.8	216,718.3	1,223,198.1
Saskatchewan				
Assiniboia	2,872	7,244.9	1,073.5	8,318.4
Biggar	2,775	5,044.5	655.1	5,699.6
Canora	2,734	6,308.1	624.0	4,932.1
Esterhazy	3,190	5,088.7	1,579.8	6,668.5
Estevan	9,062	19,597.3	2,676.2	22,273.5
Humboldt	3,979	8,750.1	1,185.4	9,935.5
Kamsack	2,982	4,898.2	600.9	5,499.1
Kindersley	3,534	12,029.0	1,041.0	13,070.0
Lloydminster	7,071	15,923.0	2,182.0	18,105.0
Meadow Lake	3,375	6,785.2	723.8	7,509.0
Melfort	4,386	13,392.1	1,110.2	14,502.3
Melville	5,690	8,593.8	1,090.6	9,684.4
Moose Jaw	33,417	56,087.8	7,476.2	63,564.0
Nipawin	3,963	8,564.8	882.5	9,447.3
Battleford	12,262	27,839.8	2,881.7	30,721.5
Prince Albert	26,269	38,915.3	5,618.1	44,533.4
Regina	131,127	188,199.2	36,378.9	224,578.1
Rosetown	2,658	7,545.3	878.6	8,423.9
Saskatoon	115,892	165,401.4	30,068.5	195,469.9
Swift Current	14,485	32,112.3	4,879.6	36,991.9
Tisdale	2,914	8,470.5	780.1	9,250.6
Weyburn	9,000	21,587.4	2,317.7	23,905.1
Yorkton	12,645	27,458.3	3,184.1	30,642.4
SASKATCHEWAN AS A WHOLE	955,344	1,046,646.8	165,003.1	1,211,649.9
Alberta				
Barrhead	2,592	7,662.6	948.6	8,611.2
Brooks	3,354	8,996.0	912.3	9,908.3
Calgary	330,575	461,444.2	108,621.1	570,065.3
Camrose	8,362	17,385.6	1,863.1	19,248.7
Cardston	2,721	5,656.7	505.4	6,162.1
Claresholm	2,569	4,009.4	727.0	4,736.4
Coaldale	2,541	1,584.2	322.7	1,906.9
Drayton Valley	3,352	6,482.2	1,019.6	7,501.8
Drumheller	3,574	10,520.0	1,630.0	12,150.0

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENTRE. 1966

	POPULATION	RETAIL TRADE SALES	VALUE SERVICE TRADES	TOTAL RETAIL TRADE AND SERVICES
Alberta - (Continued)				
Edmonton	401,299	551,160.7	115,513.8	666,674.5
Edson	3,788	8,269.5	1,648.9	9,918.4
Ft. Macleod	2,709	4,626.2	881.5	5,507.7
Ft. McMurray	2,614	3,806.8	2,513.6	6,320.4
Ft. Saskatchewan	4,152	3,233.5	632.2	3,865.7
Grande Prairie	11,417	22,277.6	2,799.4	25,077.0
Hanna	2,633	6,805.5	682.8	7,488.3
Hinton	4,307	5,753.7	1,423.8	7,177.5
Innisfail	2,531	5,815.4	503.9	6,319.3
Lacombe	3,035	6,727.8	779.9	7,507.7
Leduc	2,856	5,935.4	718.2	6,653.6
Lethbridge	37,186	67,398.1	9,006.3	76,404.4
Lloydminster	See Sask			
Medicine Hat	25,574	41,037.2	5,247.2	46,284.4
Olds	2,999	6,397.5	896.5	7,294.0
Peace River	4,087	9,904.8	4,124.7	14,029.5
Pincher Creek	2,882	4,860.1	562.2	5,422.3
Ponoka	4,421	8,317.9	1,085.9	9,403.8
Red Deer	26,171	51,586.7	6,990.2	58,576.9
Rocky Mtn.House	2,446	5,472.2	746.6	6,218.8
St. Albert	9,736	5,341.7	686.6	6,028.3
St. Paul	3,543	10,712.6	1,101.8	11,814.4
Stettler	3,988	11,487.3	1,231.5	12,718.8
Taber	4,584	10,577.4	1,054.1	11,631.5
Vegreville	3,598	7,885.5	1,085.0	8,970.5
Vermilion	2,685	8,221.8	838.8	9,060.6
Wainwright	3,867	7,683.5	1,063.3	8,746.8
Westlock	2,685	7,713.3	769.2	8,482.5
Wetaskiwin	6,008	18,021.1	1,348.8	19,369.9
Whitecourt	2,279	4,954.6	1,369.7	6,324.3
TOTAL ALBERTA AS A WHOLE	1,463,203	1,738,076.4	351,374.3	2,109,450.100
REGION AS A WHOLE	3,381,613	3,811,203.0	733,095.7	4,544,298.700

TABLE IV.4 cont'd

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENTRE. 1966

	PER CAPITA CONSUMPTION	SALES RATING REGION	SALES RATING PROVINCE	AVERAGE INCOME
Manitoba				
Brandon	1,909.07	1.421	1.503	3,783
Dauphin	2,070.40	1.541	1.630	3,769
Flin Flon	1,446.55	1.076	1.139	5,012
Lynn Lake				5,593
Morden	2,432.55	1.810	1.915	3,414
Neepawa	3,120.44	2.322	2.457	3,410
Portage la Prairie	1,957.32	1.457	1.541	3,516
Selkirk	1,419.59	1.056	1.118	3,733
Steinbach	3,391.35	2.524	2.670	3,600
Swan River	3,404.27	2.533	2.680	3,301
The Pas	1,832.08	1.363	1.442	3,727
Thompson				5,535
Virden	2,810.74	2.092	2.213	3,821
Winkler	1,477.82	1.100	1.164	2,882
Winnipeg	1,443.77	1.074	1.137	4,288
TOTAL	1,270.11	.945	1.000	3,989.5
Saskatchewan				
Assiniboia	2,896.38	2.155	2.284	4,145
Biggar	2,068.82	1.400	1.631	3,967
Canora	2,535.52	1.887	1.999	3,417
Esterhazy	2,090.44	1.556	1.648	4,891
Estevan	2,457.90	1.829	1.938	4,767
Humboldt	2,496.98	1.858	1.969	3,638
Kamsack	1,844.10	1.372	1.454	3,532
Kindersley	3,698.36	2.752	2.916	4,943
Lloydminster	2,560.46	1.905	2.019	3,850
Meadow Lake	2,224.89	1.656	1.754	3,198
Melfort	3,306.50	2.461	2.607	4,113
Melville	1,702.00	1.267	1.342	3,846
Moose Jaw	1,902.15	1.415	1.500	4,018
Nipawin	2,383.88	1.774	1.880	3,618
Battleford	2,505.42	1.864	1.975	3,886
Prince Albert	1,695.28	1.262	1.337	3,686
Regina	1,712.68	1.275	1.350	4,463
Rosetown	3,169.26	2.358	2.499	4,310
Saskatoon	1,686.66	1.255	1.330	4,357
Swift Current	2,553.81	1.900	2.014	4,321
Tisdale	3,174.54	2.362	2.503	3,553
Weyburn	2,656.12	1.977	2.094	4,274
Yorkton	2,423.28	1.803	1.911	3,948
TOTAL	1,268.3	.944	1.000	4,005.3
Alberta				
Barrhead	3,322.22	2.472	2.304	3,140
Brooks	2,954.17	2.199	2.049	3,652
Calgary	1,724.47	1.283	1.196	4,820
Camrose	2,301.93	1.713	1.597	3,874
Cardston	2,264.65	1.685	1.571	3,728
Claresholm	1,843.67	1.372	1.279	3,451
Coaldale	705.45	.558	.521	3,442
Drayton Valley	2,238.01	1.665	1.552	4,542
Drumheller	3,399.55	2.530	2.358	4,080

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENTRE, 1966

	PER CAPITA CONSUMPTION	SALES RATING REGION	SALES RATING PROVINCE	AVERAGE INCOME
Alberta - (Continued)				
Edmonton	1,661.29	1.236	1.152	4,501
Edson	2,618.37	1.948	1.816	4,150
Ft. Macleod	2,033.11	1.513	1.410	3,496
Ft. McMurray	2,417.90	1.799	1.677	5,402
Ft. Saskatchewan	931.05	.693	.646	4,700
Grande Prairie	2,196.46	1.635	1.524	3,959
Hanna	2,844.01	2.116	1.973	4,027
Hinton	1,666.47	1.240	1.156	4,991
Innisfail	2,496.76	1.858	1.732	3,743
Lacombe	2,473.71	1.841	1.716	3,807
Leduc	2,329.69	1.734	1.616	4,630
Lethbridge	2,054.65	1.529	1.425	4,084
Lloydminster				
Medicine Hat	1,809.82	1.347	1.255	3,954
Olds	2,432.14	1.810	1.687	4,354
Peace River	3,432.71	2.554	2.381	4,159
Pincher Creek	1,881.44	1.400	1.305	3,805
Ponoka	2,127.06	1.583	1.475	3,434
Red Deer	2,238.24	1.666	1.552	4,262
Rocky Mtn.House	2,542.44	1.892	1.763	3,426
St. Albert	619.18	.461	.429	4,491
St. Paul	3,334.58	2.481	2.313	3,383
Stettler	3,189.27	2.373	2.212	4,046
Taber	2,537.41	1.888	1.760	3,908
Vegreville	2,493.19	1.855	1.729	3,499
Vermilion	3,374.53	2.511	2.341	3,365
Wainwright	2,261.91	1.683	1.569	3,756
Westlock	3,159.22	2.351	2.191	3,509
Wetaskiwin	3,224.02	2.400	2.236	3,817
Whitecourt	2,775.03	2.065	1.925	4,225
TOTAL	1,441.66	1.073	1.000	4,258.7
	1,343.8	1.000		4,112.26

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENTRE. 1966

	INCOME RATING REGION	INCOME RATING PROVINCE	SR/IR REGION	SR/IR PROVINCE
Manitoba				
Brandon	.920	.948	1.54	1.59
Dauphin	.917	.945	1.68	1.73
Flin Flon	1.219	1.256	.88	.91
Lynn Lake				
Morden	.830	.856	2.18	2.24
Neepawa	.829	.855	2.80	2.87
Portage la Prairie	.855	.881	1.70	1.75
Selkirk	.908	.936	1.16	1.19
Steinbach	.875	.902	2.88	2.96
Swan River	.803	.827	3.16	3.24
The Pas	.906	.934	1.50	1.54
Thompson				
Virden	.929	.958	2.25	2.31
Winkler	.701	.722	1.57	1.61
Winnipeg	1.043	1.075	1.03	1.06
TOTAL	.970	1.000	.97	1.00
Saskatchewan				
Assiniboia	1.008	1.035	2.14	2.21
Biggar	.965	.991	1.60	1.65
Canora	.831	.853	2.27	2.34
Esterhazy	1.189	1.221	1.31	1.35
Estevan	1.160	1.190	1.58	1.63
Humboldt	.885	.908	2.10	2.17
Kamsack	.859	.882	1.60	1.65
Kindersley	1.202	1.234	2.29	2.36
Lloydminster	.936	.961	2.04	2.10
Meadow Lake	.778	.798	2.13	2.20
Melfort	1.000	1.027	2.46	2.54
Melville	.935	.960	1.35	1.40
Moose Jaw	.977	1.003	1.45	1.50
Nipawin	.880	.903	2.02	2.08
Battleford	.945	.970	1.97	2.04
Prince Albert	.897	.920	1.41	1.45
Regina	1.085	1.114	1.17	1.21
Rosetown	1.048	1.076	2.25	2.32
Saskatoon	1.060	1.088	1.18	1.22
Swift Current	1.051	1.079	1.81	1.87
Tisdale	.864	.887	2.73	2.82
Weyburn	1.039	1.067	1.90	1.96
Yorkton	.960	.986	1.88	1.94
TOTAL	.974	1.00	.969	1.00
Alberta				
Barrhead	.764	.737	3.24	3.13
Brooks	.888	.858	2.48	2.39
Calgary	1.172	1.132	1.09	1.05
Camrose	.942	.910	1.82	1.76
Cardston	.907	.875	1.86	1.70
Claresholm	.839	.810	1.63	1.58
Coaldale	.837	.808	.67	.64
Drayton Valley	1.104	1.067	1.51	1.46
Drumheller	.992	.958	2.55	2.46

TABLE IV.4 cont'd

Alberta - (Continued)	INCOME REGION	RATING PROVINCE	SR/IR REGION	SR/IR PROVINCE
Edmonton	1.095	1.057	1.13	1.09
Edson	1.009	.974	1.93	1.86
Ft. Macleod	.850	.821	1.78	1.72
Ft. McMurray	1.315	1.268	1.37	1.32
Ft. Saskatchewan	1.143	1.104	.61	.59
Grande Prairie	.963	.930	1.70	1.64
Hanna	.979	.946	2.16	2.09
Hinton	1.214	1.172	1.02	.99
Innisfail	.910	.879	2.04	1.97
Lacombe	.926	.894	1.99	1.92
Leduc	1.256	1.087	1.54	1.49
Lethbridge	.993	.959	1.54	1.49
Lloydminster				
Medicine Hat	.962	.928	1.40	1.35
Olds	1.059	1.022	1.71	1.65
Peace River	1.011	.977	2.53	2.44
Pincher Creek	.925	.893	1.51	1.46
Ponoka	.835	.806	1.90	1.83
Red Deer	1.036	1.000	1.61	1.55
Rocky Mtn.House	.833	.804	2.27	2.19
St. Albert	1.092	1.055	.42	.41
St. Paul	.823	.794	3.02	2.91
Stettler	.984	.950	2.41	2.33
Taber	.950	.918	1.99	1.92
Vegreville	.851	.822	2.18	2.10
Vermilion	.818	.790	3.07	2.96
Wainwright	.913	.882	1.84	1.78
Westlock	.853	.824	2.76	2.66
Wetaskiwin	.928	.896	2.58	2.50
Whitecourt	1.027	.992	2.01	1.94
TOTAL	1.036	1.000	1.036	1.000
REGION AS A WHOLE	1.000		1.000	

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENSUS DIVISION 1966

	POPULATION	RETAIL TRADE SALES	VALUE SERVICE TRADES	TOTAL RETAIL TRADE AND SERVICES
CENSUS DIVISIONS				
MANITOBA				
1.	29,870	24,860.1	2,370.5	27,230.6
2.	34,931	29,957.8	2,930.1	32,887.9
3.	20,718	14,712.6	2,219.7	16,932.3
4.	13,743	11,165.5	1,752.5	12,918.0
5.	32,284	21,358.2	4,895.7	26,253.9
6.	30,648	29,160.8	4,703.0	33,863.8
7.	52,526	66,077.8	11,242.7	77,320.5
8.	21,810	18,180.6	2,767.4	20,948.0
9.	11,752	6,200.1	784.7	6,984.8
10.	18,820	21,294.9	3,161.1	24,456.0
11.	12,643	7,240.7	1,713.9	8,954.6
12.	29,436	14,992.9	2,701.7	17,694.6
13.	12,602	8,330.0	1,636.1	9,966.1
14.	6,455	5,273.7	758.9	6,032.6
15.	14,542	14,426.8	1,891.2	16,318.0
16.	54,389	44,796.2	9,294.6	54,090.8
17.	21,611	22,670.1	3,410.8	26,080.9
18.	15,011	7,199.9	1,125.0	8,324.9
19.	20,516	14,108.6	3,546.8	17,655.4
20.	508,759	624,472.5	153,811.9	778,284.4
	963,066	1,006,479.8	216,71	
TOTAL	963,066	1,006,479.8	216,718.3	1,223,198.1
SASKATCHEWAN				
1.	39,441	40,436.2	6,188.2	46,624.4
2.	32,489	34,144.9	4,145.6	38,290.5
3.	26,622	25,603.3	3,182.3	28,785.6
4.	17,511	16,912.3	2,734.3	19,646.6
5.	49,120	43,612.1	7,357.9	50,970.0
6.	170,819	216,136.0	41,249.4	257,385.4
7.	59,481	70,027.9	9,681.5	79,709.4
8.	41,717	54,191.1	7,731.5	61,922.6
9.	50,303	54,718.2	6,661.1	61,379.3
10.	32,291	26,132.5	3,616.5	29,749.0
11.	145,133	191,127.5	36,397.7	227,525.2
12.	26,842	22,497.1	3,048.5	25,545.6
13.	33,260	35,255.5	4,101.6	39,357.1
14.	52,477	54,207.8	6,393.1	60,600.9
15.	84,027	77,300.3	10,703.1	88,003.4
16.	43,550	44,021.2	5,076.3	49,097.5
17.	29,135	29,219.3	3,302.2	32,521.5
18.	21,126	11,103.6	3,432.3	14,535.9
TOTAL	955,344	1,046,646.8	165,003.1	1,211,649.9
ALBERTA				
1.	38,858	47,580.6	6,186.7	53,767.3
2.	82,719	105,478.8	14,136.0	119,614.8
3.	29,592	25,462.1	3,478.8	28,940.9
4.	14,224	16,106.2	1,843.1	17,949.3
5.	35,987	34,558.9	4,669.7	39,228.6
6.	369,140	492,373.8	113,002.4	605,376.2
7.	40,833	42,233.2	5,974.1	48,207.3
8.	83,912	96,656.0	14,173.6	110,829.6
9.	18,195	24,423.4	20,352.1	44,775.5
10.	70,211	75,544.5	9,144.6	84,689.1
11.	476,053	608,604.3	123,687.7	732,292.0
12.	50,635	43,424.7	7,120.9	50,545.6
13.	44,142	37,627.2	4,773.8	42,401.0
14.	20,358	22,730.3	5,157.9	27,888.2
15.	88,344	85,272.4	17,672.9	102,945.3
TOTAL	1,463,203	1,758,076.4	351,374.3	2,109,450.7
GRAND TOTAL	3,381,613	3,811,203.0	733,095.7	

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENSUS DIVISION 1966

CENSUS DIVISIONS	PER CAPITA CONSUMPTION	SALES RATING REGION	SALES RATING PROVINCE	INCOME	PER CAPITA INCOME*
MANITOBA					
1.	911.65	.678	.717	35,294	1,181.59
2.	941.51	.701	.741	47,950	1,372.71
3.	817.31	.608	.643	27,613	1,332.80
4.	940.04	.700	.740	23,459	1,706.98
5.	813.22	.605	.640	39,141	1,212.40
6.	1,101.64	.820	.867	45,498	1,484.53
7.	1,472.05	1.095	1.159	91,410	1,740.28
8.	960.48	.715	.756	34,405	1,577.49
9.	594.35	.442	.468	14,489	1,232.90
10.	1,299.47	.967	1.023	26,566	1,411.58
11.	708.27	.527	.558	14,260	1,127.90
12.	601.12	.447	.473	27,359	929.44
13.	790.83	.589	.623	18,024	1,430.25
14.	934.56	.695	.736	7,783	1,205.73
15.	1,122.13	.835	.883	17,091	1,175.29
16.	994.52	.740	.783	83,215	1,530.00
17.	1,206.83	.898	.950	28,841	1,334.55
18.	554.59	.413	.437	11,674	777.70
19.	860.57	.640	.678	23,724	1,156.37
20.	1,529.77	1.138	1.204	1,067,628	2,098.49
TOTAL	1,270.11	.945	1.000	1,685,424	1,750.06
SASKATCHEWAN					
1.	1,182.13	.880	.932	72,311	1,833.40
2.	1,178.57	.877	.929	66,617	2,050.45
3.	1,081.27	.805	.853	49,998	1,878.07
4.	1,121.96	.835	.885	31,316	1,788.36
5.	1,037.66	.772	.818	80,289	1,634.55
6.	1,506.77	1.121	1.188	369,133	2,160.96
7.	1,340.08	.997	1.057	107,337	1,804.56
8.	1,484.35	1.105	1.170	87,618	2,100.29
9.	1,220.19	.908	.962	69,738	1,386.36
10.	921.28	.686	.726	39,804	1,232.67
11.	1,567.70	1.167	1.236	310,631	2,140.32
12.	951.70	.708	.750	46,192	1,720.89
13.	1,183.32	.881	.933	60,589	1,821.68
14.	1,154.81	.859	.911	72,164	1,375.15
15.	1,047.32	.779	.826	115,885	1,379.14
16.	1,127.38	.839	.889	53,691	1,232.86
17.	1,116.23	.831	.880	36,946	1,268.10
18.	688.06	.512	.543	15,857	750.59
TOTAL	1,268.29	.944	1.000	1,686,116	1,764.93
ALBERTA					
1.	1,383.69	1.030	.960	75,701	1,948.14
2.	1,446.04	1.076	1.003	148,354	1,793.47
3.	978.00	.728	.678	46,708	1,578.40
4.	1,261.90	.939	.875	26,087	1,834.01
5.	1,090.08	.811	.756	70,467	1,958.12
6.	1,639.96	1.220	1.138	836,566	2,266.26
7.	1,180.60	.879	.819	65,948	1,615.07
8.	1,320.78	.983	.916	136,052	1,621.37
9.	2,460.87	1.831	1.707	31,387	1,725.03
10.	1,206.21	.898	.837	99,073	1,411.08
11.	1,538.26	1.145	1.067	960,700	2,018.05
12.	998.23	.743	.692	55,868	1,103.35
13.	960.56	.715	.666	52,129	1,180.94
14.	1,369.89	1.019	.950	30,254	1,486.10
15.	1,165.28	.867	.808	107,122	1,212.56
TOTAL	1,441.67	1.073	1.000	2,742,416	1,874.26
GRAND TOTAL				6,113,956	1,808.00

TABLE IV.5 cont'd

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS BY CENSUS DIVISION 1966

CENSUS DIVISIONS	INCOME RATING REGION	INCOME RATING PROVINCE	SR/IR REGION	SR/IR PROVINCE
MANITOBA				
1.	.654	.675	1.04	1.06
2.	.759	.784	.92	.95
3.	.737	.762	.83	.84
4.	.944	.975	.74	.76
5.	.671	.693	.90	.92
6.	.821	.848	1.00	1.02
7.	.963	.994	1.14	1.17
8.	.873	.901	.82	.84
9.	.682	.704	.65	.66
10.	.781	.807	1.24	1.27
11.	.624	.644	.84	.87
12.	.514	.531	.87	.89
13.	.791	.817	.74	.76
14.	.667	.687	1.04	1.07
15.	.650	.672	1.28	1.32
16.	.846	.874	.87	.90
17.	.738	.763	1.22	1.25
18.	.430	.444	.96	.98
19.	.640	.661	1.00	1.03
20.	1.161	1.199	.98	1.00
TOTAL	.968	1.000	.98	1.00
SASKATCHEWAN				
1.	1.014	1.039	.87	.90
2.	1.134	1.162	.77	.80
3.	1.039	1.064	.77	.80
4.	.989	1.013	.84	.87
5.	.904	.926	.85	.88
6.	1.195	1.224	.94	.97
7.	.998	1.022	1.00	1.03
8.	1.167	1.190	.95	.98
9.	.767	.786	1.18	1.22
10.	.682	.698	1.01	1.04
11.	1.184	1.213	.99	1.02
12.	.952	.975	.74	.77
13.	1.008	1.032	.87	.90
14.	.761	.779	1.13	1.17
15.	.763	.781	1.02	1.06
16.	.682	.699	1.23	1.27
17.	.701	.718	1.18	1.22
18.	.415	.425	1.23	1.28
TOTAL	.976	1.000	.97	1.00
ALBERTA				
1.	1.078	1.039	.96	.92
2.	.992	.957	1.08	1.05
3.	.873	.842	.83	.81
4.	1.014	.978	.93	.89
5.	1.083	1.045	.75	.72
6.	1.253	1.209	.97	.94
7.	.893	.862	.98	.95
8.	.897	.865	1.10	1.06
9.	.954	.920	1.92	1.85
10.	.780	.753	1.15	1.11
11.	1.116	1.077	1.03	.99
12.	.610	.589	1.22	1.18
13.	.653	.630	1.09	1.06
14.	.822	.793	1.24	1.20
15.	.671	.647	1.29	1.25
TOTAL	1.037	1.00	1.03	1.00

TABLE IV.11

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1961

Retail Trade Categories - Value in Thousands of Dollars

	TOTAL SALES	%	FOOD SALES	%	GENERAL SALES	%
Québec						
Alma	14,271.3	100	3,487.8	24.44	1,359.8	9.53
Amos	8,087.3	"	2,160.7	26.72	621.7	7.69
Arvida	9,523.9	"	4,284.1	44.98	1,667.8	17.51
Asbestos	9,339.9	"	3,780.4	40.48	294.5	3.15
Aylmer	3,183.8	"	1,872.2	58.80	--	--
Bagotville	4,908.8	"	1,580.3	32.19	1,382.8	28.17
Baie-Comeau	11,049.7	"	2,096.0	18.97	2,518.6	22.79
Beauharnois	7,712.4	"	2,734.6	35.46	--	--
Bécancour	D					
Beloeil	6,928.7	"	2,631.2	37.98	307.0	4.43
Buckingham	7,260.2	"	2,296.2	31.63	529.4	7.29
Cap-de-la-Madeleine	15,898.1	"	7,851.9	49.39	350.6	2.21
Chambly	4,631.4	"	1,300.3	28.08	--	--
Chibougamau	4,811.8	"	1,611.1	33.48	--	--
Chicoutimi	45,326.4	"	10,626.7	23.44	2,696.9	5.95
Chicoutimi N.	3,400.2	"	1,361.8	40.05	0	0
Coaticook	8,529.2	"	1,929.3	22.62	820.7	9.62
Cowansville	10,413.6	"	2,578.3	24.76	--	--
Dolbeau	8,221.5	"	1,786.3	21.73	--	--
Drummondville	31,565.9	"	8,611.6	27.28	1,167.0	3.70
Drummondville S.	D					
Farnham	4,879.8	"	1,619.1	33.18	329.7	6.76
Gatineau	8,138.9	"	3,398.2	41.75	288.8	3.55
Granby	28,904.4	"	9,569.0	33.11	1,416.7	4.90
Grand'Mère	13,074.6	"	3,984.6	30.48	537.0	4.11
Hauterive	4,455.7	"	1,198.6	26.90	--	--
Hull	45,020.1	"	18,042.4	40.08	1,815.3	4.03
Iberville	4,881.3	"	1,139.7	23.35	174.8	3.58
Joliette	25,614.4	"	5,208.1	20.33	1,458.2	5.69
Jonquière	22,967.0	"	9,195.0	40.04	2,671.1	11.63
Kénogami	6,464.5	"	2,189.7	33.87	552.2	8.54
Lachute	13,751.2	"	4,218.3	30.68	501.1	3.64
Laç-Mégantic	6,306.2	"	2,137.7	33.90	228.4	3.62
La Tuque	10,407.6	"	3,836.6	36.86	1,275.8	12.26
Magog	13,863.6	"	4,170.0	30.08	780.2	5.63
Malartic	4,996.8	"	1,996.8	39.96	398.7	7.98
Maniwaki	7,213.1	"	1,511.6	20.96	1,824.4	25.29
Matane	13,735.6	"	2,800.7	20.39	773.8	5.63
Mont-Joli	7,465.8	"	1,666.4	22.32	--	--
Mont-Laurier	8,399.3	"	1,955.8	23.29	860.9	10.25
Montmagny	7,828.3	"	2,395.0	30.59	480.9	6.14
Montréal	2,028,557.4	"	649,094.1	32.00	276,387.2	13.62
Noranda	7,045.6	"	2,568.3	36.45	632.3	8.97
Plessisville	5,546.1	"	1,854.6	33.44	364.4	6.57
Pointe-Gatineau	2,794.1	"	1,306.3	46.75	--	--
Port-Alfred	5,387.5	"	2,330.8	43.26	432.4	8.03
Québec	346,440.1	"	99,876.5	28.83	47,925.5	13.83
Rimouski	21,516.2	"	3,977.2	18.48	1,721.3	8.00
Rivière-du-Loup	12,550.6	100	2,996.6	23.88	1,044.4	8.32

TABLE IV.11 cont'd

Retail Trade Categories - Value in Thousands of Dollars

	TOTAL SALES	%	FOOD SALES	%	GENERAL SALES	%
Québec - (Continued)						
Roberval	6,219.4	100	1,979.4	31.83	--	--
Rouyn	22,771.9	"	6,766.3	29.71	1,706.2	7.49
Ste-Agathe	7,140.7	"	2,575.6	36.07	247.9	3.47
St-Félicien	6,903.6	"	1,372.7	19.88	273.2	3.96
St-Georges	9,406.0	"	1,378.8	14.66	--	--
St-Georges O.	1,588.1	"	862.7	54.32	--	--
St-Hyacinthe	32,966.1	"	10,592.3	32.13	1,897.5	5.76
St-Jean	29,346.2	"	9,223.3	31.43	2,794.5	9.52
St-Jérôme	21,855.3	"	5,993.1	27.42	1,386.9	6.35
Ste-Thérèse						
Sept-Îles	21,916.0	"	2,482.7	11.33	6,658.2	30.38
Shawinigan	28,918.7	"	9,769.8	33.78	1,770.0	6.12
Shawinigan S.	5,364.0	"	2,333.3	43.50	--	--
Sherbrooke	78,574.6	"	18,956.6	24.13	--	--
Sorel	18,386.3	"	7,327.2	39.85	2,039.6	11.09
Terrebonne	5,700.4	"	2,209.5	38.76	--	--
Thetford Mines	22,689.1	"	6,641.5	29.27	1,704.6	7.51
Tracy	3,088.6	"	654.9	21.20	--	--
Trois-Rivières	59,157.3	"	16,552.5	27.98	7,382.5	12.48
Val-d'Or	15,827.9	"	4,835.6	30.55	2,247.4	14.20
Valleyfield	26,122.7	"	9,303.6	35.62	1,761.2	6.74
Victoriaville	20,045.8	"	4,636.2	23.13	1,286.5	6.42
Windsor	4,296.0	"	1,703.4	39.65	--	--
TOTAL	3,146,142.3	100	980,215.3	31.16	388,665.2	12.35

TABLE IV.11 cont'd

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1961

	Retail Trade Categories - Value to Thousands of Dollars					
	AUTOMOTIVE		APPAREL		HARDWARE	
Québec	SALES	%	SALES	%	SALES	%
Alma	2,883.7	20.21	2,673.0	18.73	2,056.4	14.41
Amos	2,234.6	27.63	1,178.8	14.58	1,227.4	15.18
Arvida	887.6	9.32	667.3	7.01	1,041.1	10.93
Asbestos	2,462.6	26.37	1,053.9	11.28	865.6	9.27
Aylmer	470.5	14.78	--	--	--	--
Bagotville	562.4	11.46	657.9	13.20	203.9	4.15
Baie-Comeau	3,032.3	27.44	887.5	8.03	1,112.1	10.06
Beauharnois	2,052.8	26.62	837.6	10.86	--	--
Bécancour						
Beloeil	2,161.8	31.20	473.2	6.83	477.2	6.89
Buckingham	2,091.3	28.80	639.8	8.81	920.9	12.68
Cap-de-la-Madeleine	3,178.7	19.99	877.9	5.52	1,831.8	11.52
Chambly	2,681.1	57.89	67.2	1.45	--	--
Chibougamau	836.2	17.38	437.4	9.09	--	--
Chicoutimi	14,345.7	31.65	8,164.1	18.01	3,737.7	8.25
Chicoutimi N.	1,288.3	37.89	177.5	5.22	53.9	1.59
Coaticook	3,668.6	43.01	587.3	6.89	870.5	10.21
Cowansville	4,982.3	47.84	1,239.7	11.90	--	--
Dolbeau	3,382.0	41.14	1,228.8	14.95	1,193.4	14.52
Drummondville	11,381.7	36.06	3,590.5	11.37	3,763.0	11.92
Drummondville S.	D					
Farnham	978.7	20.06	542.0	11.11	563.0	11.54
Gatineau	2,466.0	30.30	--	--	713.9	8.77
Granby	7,560.7	26.16	4,028.1	13.94	3,269.0	11.31
Grand'Mère	3,319.4	25.39	2,050.6	15.68	1,354.0	10.36
Hauterive	984.2	22.09	--	--	654.7	14.69
Hull	14,281.6	31.72	2,171.5	4.82	3,757.3	8.35
Iberville	2,180.2	44.66	214.6	4.40	307.1	6.29
Joliette	8,960.7	34.98	4,397.9	17.17	2,396.2	9.35
Jonquière	4,469.9	19.46	2,409.1	10.49	2,289.7	9.97
Kénogami	1,524.3	23.58	858.0	13.27	974.9	15.08
Lachute	4,851.4	35.28	1,001.8	7.29	1,267.7	9.22
Laç-Mégantic	1,885.1	29.89	875.0	13.88	675.3	10.71
La Tuque	1,500.7	14.42	1,097.8	10.55	1,419.8	13.64
Magog	4,508.0	32.52	1,665.1	12.01	1,290.3	9.31
Malartic	1,156.0	23.13	530.3	10.61	541.5	10.84
Maniwaki	2,687.2	37.25	253.6	3.52	441.6	6.12
Matane	6,064.8	44.15	1,416.3	10.31	1,468.1	10.69
Mont-Joli	2,950.7	39.52	658.1	8.81	683.1	9.15
Mont-Laurier	3,330.6	39.65	821.0	9.77	847.8	10.09
Montmagny	1,371.2	17.52	1,055.4	13.48	1,185.1	15.14
Montréal	446,470.4	22.01	198,839.0	9.80	166,880.1	8.23
Noranda	1,523.9	21.63	436.0	6.19	721.3	10.24
Plessisville	1,846.7	33.30	569.0	10.26	371.6	6.70
Pointe-Gatineau	708.5	25.36	--	--	325.3	11.64
Port-Alfred	892.1	16.56	977.8	18.15	522.9	9.71
Québec	84,090.7	24.27	36,824.5	10.63	27,242.9	7.86
Rimouski	7,593.0	35.29	2,902.5	13.49	3,032.0	14.09
Rivière-du-Loup	3,863.0	30.78	1,300.3	10.36	1,346.3	10.73

TABLE IV.11 cont'd

Retail Trade Categories - Value to Thousands of Dollars

	AUTOMOTIVE SALES	%	APPAREL SALES	%	HARDWARE SALES	%
Québec - (Continued)						
Roberval	2,138.8	34.39	1,102,4	17.73	488.3	7.85
Rouyn	7,447.2	32.70	2,691.4	11.82	1,371.1	6.02
Ste-Agathe	969.2	13.57	781.9	10.95	825.0	11.55
St-Félicien	2,332.3	33.78	898.3	13.01	1,162.8	16.84
St-Georges	3,834.1	40.76	1,813.5	19.28	--	--
St-Georges O.	174.8	11.01	153.9	9.69	--	--
St-Hyacinthe	9,363.3	28.40	4,834.4	14.66	2,581.2	7.83
St-Jean	7,034.4	23.97	--	--	2,761.0	8.39
St-Jérôme	5,067.8	23.19	2,927.2	13.39	2,880.8	13.18
Ste-Thérèse						
Sept-Îles	7,362.5	33.59	1,534.5	7.00	1,313.4	5.99
Shawinigan	6,467.2	22.36	4,317.1	14.93	2,880.1	9.96
Shawinigan S.	1,607.5	29.97	491.9	9.17	401.8	7.49
Sherbrooke	22,631.6	28.80	--	--	6,121.4	7.79
Sorel	2,613.8	14.22	2,856.0	15.53	1,701.8	9.26
Terrebonne	1,976.7	34.68	362.8	6.36	588.5	10.32
Thetford Mines	6,107.5	26.92	3,475.1	15.32	2,716.2	11.97
Tracy	1,694.9	54.88	59.5	1.93	223.1	7.22
Trois-Rivières	16,194.8	27.38	8,129.3	13.47	4,150.9	7.02
Val-d'Or	4,246.2	26.83	1,716.8	10.85	1,346.1	8.50
Valleyfield	5,313.7	20.34	2,959.4	11.33	3,802.6	14.56
Victoriaville	8,477.0	42.29	2,195.3	10.95	1,264.9	6.31
Windsor	1,426.6	33.21	442.6	10.30	425.4	9.90
TOTAL	749,052.1	23.81	328,182.6	10.43	270,323.9	8.59

PERCENTAGE DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1961

	Retail Trade Categories - Value in Thousands of Dollars		
	OTHER SALES	%	COEFFICIENT OF SPECIALIZATION
Québec			
Alma	1,810.6	12.69	14.12
Amos	664.1	8.21	14.55
Arvida	976.0	10.25	21.32
Asbestos	882.9	9.45	13.41
Aylmer	699.2	21.96	*
Bagotville	521.5	10.62	19.72
Baie-Comeau	1,403.2	12.70	15.55
Beauharnois	1,070.7	13.88	*
Bécancour	D		
Beloeil	878.3	12.68	14.21
Buckingham	782.6	10.78	9.56
Cap-de-la-Madeleine	1,807.2	11.37	21.16
Chambly	423.6	9.14	*
Chibougamau	492.4	10.23	*
Chicoutimi	5,755.3	12.70	15.42
Chicoutimi N.	518.7	15.25	24.57
Coaticook	652.8	7.65	20.82
Cowansville	923.2	8.87	*
Dolbeau	--	--	*
Drummondville	3,052.1	9.67	16.52
Drummondville S.	D		
Farnham	847.3	17.36	9.35
Gatineau	--	--	*
Granby	3,060.9	10.59	10.52
Grand'Mère	1,829.0	13.99	8.93
Hauterive	537.7	12.07	*
Hull	4,952.0	11.00	16.83
Iberville	864.9	17.72	24.92
Joliette	3,193.3	12.47	18.68
Jonquière	1,932.2	8.41	10.32
Kénogami	365.4	5.65	12.05
Lachute	1,910.9	13.90	12.34
Laç-Mégantic	504.7	8.00	14.39
La Tuque	1,276.9	12.27	10.87
Magog	1,450.0	10.46	11.00
Malartic	373.5	7.47	11.23
Maniwaki	494.7	6.85	26.38
Matane	1,211.9	8.82	22.44
Mont-Joli	--	--	*
Mont-Laurier	583.2	6.94	17.35
Montmagny	1,340.7	17.13	13.07
Montréal	290,886.6	14.34	2.79
Noranda	1,163.8	16.52	9.80
Plessisville	539.8	9.73	11.77
Pointe-Gatineau	364.3	13.04	*
Port-Alfred	231.5	4.30	20.94
Québec	50,480.0	14.57	3.05
Rimouski	2,290.2	10.64	20.04
Rivière-du-Loup	2,000.0	15.94	11.38

TABLE IV.11 cont'd

Retail Trade Categories - Value in Thousands of Dollars

	OTHER SALES	%	COEFFICIENT OF SPECIALIZATION
Québec - (Continued)			
Roberval	--	--	*
Rouyn	2,789.7	12.25	10.28
Ste-Agathe	1,741.1	24.38	19.12
St-Félicien	864.3	12.52	20.81
St-Georges	1,152.9	12.26	*
St-Georges O.	87.2	5.49	*
St-Hyacinthe	3,697.4	11.22	9.80
St-Jean	--	--	*
St-Jérôme	3,599.5	16.47	10.36
Ste-Thérèse			
Sept-Îles	2,564.7	11.70	27.81
Shawinigan	3,714.5	12.84	30.18
Shawinigan S.	--	--	*
Sherbrooke	--	--	*
Sorel	1,847.9	10.05	14.46
Terrebonne	--	--	*
Thetford Mines	2,044.2	9.01	11.37
Tracy	--	--	*
Trois-Rivières	6,747.3	11.41	7.00
Val-d'Or	1,435.8	9.07	5.28
Valleyfield	2,982.2	11.42	11.32
Victoriaville	2,185.9	10.90	19.00
Windsor	--	--	*
TOTAL	429,703.2	13.66	

TABLE IV.12

PERCENT DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

	Retail Trade Categories - Value in Thousands of Dollars						
Québec	TOTAL	FOOD	PERCENT	GENERAL	PER-CENT	AUTOMOTIVE	PER-CENT
Alma	34,434.2	6,964.8	20.23	2,240.3	6.51	6,583.3	19.12
Amos	15,506.3	2,645.3	17.06	1,328.6	8.57	6,450.1	41.60
Arvida	11,170.1	4,549.7	40.73	2,035.4	18.22	1,121.8	10.04
Asbestos	13,583.7	4,378.8	32.24	1,109.5	8.17	3,938.7	29.00
Aylmer	2,594.3	1,050.4	40.48	0.0	0.00	688.9	26.55
Bagotville	5,766.4	1,924.5	33.37	807.1	14.00	587.0	10.18
Baie-Comeau	17,833.3	3,016.8	16.92	3,373.8	18.92	7,136.8	40.02
Beauharnois	9,537.5	4,149.2	43.50	--	--	2,149.6	22.54
Bécancour	5,656.8	2,067.7	36.55	--	--	2,544.6	44.98
Beloeil	12,278.2	5,215.2	42.48	--	--	2,893.4	47.99
Buckingham	8,762.1	3,127.5	35.69	--	--	2,404.8	27.45
Cap-de-la-Madeleine	21,401.0	9,482.3	44.31	--	--	3,384.8	15.82
Chambly	7,446.5	3,394.5	45.59	--	--	2,297.1	30.85
Chibougamau	8,813.0	2,634.1	29.89	--	--	1,787.6	20.28
Chicoutimi	54,570.0	12,663.1	23.21	4,230.0	7.75	17,437.2	31.95
Chicoutimi N.	4,764.9	2,709.8	56.87	0.0	0.00	756.3	15.87
Coaticook	10,220.8	2,960.8	28.97	436.1	4.27	3,830.6	37.47
Cowansville	16,089.5	3,805.6	23.65	--	--	7,272.6	45.20
Dolbeau	11,216.6	1,930.3	17.21	--	--	5,098.3	45.45
Drummondville	45,764.1	9,306.7	20.34	--	--	17,765.1	38.82
Drummondville S.	4,555.9	2,475.1	54.33	0.0	0.00	1,035.8	22.74
Farnham	6,412.6	2,354.6	36.72	--	--	1,929.2	30.08
Gatineau	12,600.6	5,267.2	41.80	--	--	3,450.2	27.38
Granby	41,746.4	12,118.5	29.03	3,515.4	8.42	11,875.7	28.45
Grand'Mère	17,375.0	5,414.2	31.16	--	--	5,035.8	28.98
Hauterive	16,674.1	4,313.4	25.87	--	--	5,061.6	30.36
Hull	66,566.4	22,470.5	33.76	--	--	21,838.9	5.13
Iberville	10,632.3	3,867.8	36.38	--	--	3,123.2	29.37
Joliette	37,325.7	7,813.7	20.93	2,787.3	7.47	13,722.4	36.76
Jonquière	31,353.2	10,847.9	34.60	2,582.7	8.24	8,707.6	27.77
Kénogami	8,278.7	3,396.7	41.03	--	--	1,329.5	16.06
Lachute	16,529.3	5,458.9	33.03	1,040.2	6.29	3,776.5	22.85
Lac-Mégantic	12,339.8	3,518.1	28.51	--	--	4,774.4	38.69
La Tuque	16,353.4	5,368.2	32.83	2,271.0	13.89	3,407.7	20.84
Magog	16,502.7	5,081.1	30.79	1,041.7	6.31	4,949.5	29.99
Malartic	8,968.2	2,544.7	28.37	566.9	6.32	3,861.4	43.06
Maniwaki	12,816.2	2,602.9	20.31	2,702.1	21.08	5,506.9	42.97
Matane	17,152.5	3,897.0	22.72	--	--	7,862.9	45.84
Mont-Joli	10,397.6	1,513.5	14.56	1,478.6	14.22	3,859.6	37.12
Mont-Laurier	11,287.3	2,319.9	20.55	1,233.3	10.93	4,559.5	40.39
Montmagny	14,193.0	3,311.1	23.33	--	--	5,030.0	35.44
Montréal	2,890,431.9	875,035.8	30.27	363,703.8	12.58	753,050.2	26.05
Noranda	8,561.1	2,934.5	34.28	--	--	2,450.5	28.62
Plessisville	8,949.7	2,632.2	29.41	593.2	6.62	2,931.3	32.75
Pointe-Gatineau	4,187.3	1,967.1	46.98	0.0	0.00	1,417.4	33.85
Port-Alfred	5,932.0	2,961.5	49.92	--	--	968.9	16.33
Québec	497,206.7	136,273.3	27.41	68,440.9	13.77	136,922.8	27.54
Rimouski	33,816.3	7,995.2	23.64	4,463.1	13.20	11,710.0	34.63
Rivière-du-Loup	19,303.6	4,057.3	21.02	1,935.5	10.03	7,716.4	39.97

PERCENT DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

	TOTAL	FOOD	PERCENT	GENERAL	PER-CENT	AUTOMOTIVE	PER CENT
Québec - (Continued)							
Roberval	12,805.8	2,546.4	19.88	0.0	0.00	5,130.2	40.06
Rouyn	32,728.4	8,365.1	25.56	3,394.4	10.37	10,212.3	31.20
Ste-Agathe	9,280.9	3,063.0	33.00	--	--	1,884.2	20.30
St-Félicien	7,058.1	1,490.2	21.11	--	--	2,804.7	39.74
St-Georges	19,476.5	2,410.8	12.38	--	--	8,479.5	43.54
St-Georges O.	2,670.2	1,383.6	51.82	0.0	0.00	414.5	15.52
St-Hyacinthe	41,454.2	11,182.6	26.98	2,722.8	6.57	12,368.7	29.84
St-Jean	38,788.0	11,117.9	28.66	--	--	10,860.5	28.00
St-Jérôme	33,385.1	9,438.5	28.27	--	--	8,297.1	24.85
Ste-Thérèse							
Sept-Îles	29,566.1	6,505.3	22.00	6,116.0	20.69	10,104.8	34.18
Shawinigan	35,794.8	10,026.4	28.01	3,103.9	8.67	10,136.3	28.31
Shawinigan S.	8,979.0	2,886.4	32.15	--	--	4,336.7	48.30
Sherbrooke	98,179.8	24,789.5	25.25	--	--	31,565.8	32.15
Sorel	24,592.7	8,543.9	34.74	2,757.2	11.21	2,466.6	10.03
Terrebonne	8,114.0	2,887.7	35.59	--	--	3,150.4	38.83
Thetford Mines	24,856.6	7,819.8	31.46	2,808.1	11.30	4,920.7	19.80
Tracy	8,785.1	3,277.1	37.30	--	--	3,648.6	41.53
Trois-Rivières	71,870.0	19,094.9	26.57	7,934.4	11.04	20,281.6	28.22
Val-d'Or	23,323.5	5,122.2	21.96	2,823.4	12.11	7,645.9	32.78
Valleyfield	38,498.7	12,111.6	31.46	--	--	10,186.1	26.46
Victoriaville	28,090.2	6,929.4	24.67	2,116.2	7.53	9,750.4	34.71
Windsor	6,880.9	2,120.1	30.81	--	--	2,125.7	30.89
TOTAL	4,781,037.4	1,400,901.4	29.30	540,379.5	11.30	1,318,765.7	27.58

TABLE IV.12 cont'd

PERCENT DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

Québec	APPAREL & ACCESSORIES	PERCENT OF TOTAL	HARDWARE FURNISH-INGS	PERCENT OF TOTAL	OTHER RETAIL	PERCENT OF TOTAL
Alma	4,467.9	12.98	11,571.5	33.60	2,606.4	7.57
Amos	1,977.9	12.76	1,850.7	11.94	1,253.7	8.09
Arvida	998.0	8.93	998.4	8.94	1,466.8	13.13
Asbestos	1,320.7	9.72	1,101.0	8.11	1,735.0	12.77
Aylmer	63.6	2.45	104.3	4.02	687.1	26.48
Bagotville	783.2	13.58	615.4	10.67	1,049.2	18.20
Baie-Comeau	979.2	5.49	703.5	3.94	2,623.2	14.71
Beauharnois	1,138.0	11.93	1,005.9	10.55	--	--
Bécancour	407.1	7.20	--	--	169.0	2.99
Beloeil	814.1	6.63	--	--	1,861.5	15.16
Buckingham	778.3	8.88	641.3	7.32	--	--
Cap-de-la-Madeleine	--	--	3,157.8	14.76	3,211.1	15.00
Chambly	--	--	495.8	6.66	898.4	12.06
Chibougamau	678.9	7.70	--	--	1,360.1	15.43
Chicoutimi	9,725.7	17.82	4,121.7	7.55	6,392.3	11.71
Chicoutimi N.	195.8	4.11	153.5	3.22	949.5	19.93
Coaticook	551.9	5.40	1,368.9	13.39	1,072.5	10.49
Cowansville	--	--	1,271.9	7.91	2,248.6	13.98
Dolbeau	1,713.7	15.28	1,168.9	10.42	--	--
Drummondville	5,877.9	12.84	4,622.8	10.19	--	--
Drummondville S.	--	--	--	--	453.4	9.95
Farnham	--	--	444.3	6.98	1,027.9	16.03
Gatineau	1,069.4	8.49	--	--	1,529.4	12.14
Granby	6,193.8	14.84	3,133.0	7.50	4,910.0	11.76
Grand'Mère	2,884.6	16.60	--	--	2,269.2	13.06
Hauterive	2,574.0	15.44	--	--	1,538.0	9.22
Hull	--	--	5,571.6	8.37	7,138.4	10.72
Iberville	461.3	4.34	707.6	6.66	--	--
Joliette	6,441.7	17.26	2,214.0	5.93	4,346.6	11.65
Jonquière	3,511.8	11.20	2,342.2	7.47	3,361.0	10.72
Kénogami	1,555.2	18.79	--	--	685.1	8.28
Lachute	1,534.9	9.29	1,941.0	11.74	2,777.8	16.81
Lac-Mégantic	1,389.7	11.26	1,143.3	9.27	--	--
La Tuque	1,278.6	7.82	1,560.0	9.54	2,467.9	15.09
Magog	1,775.8	10.76	1,358.9	8.23	2,295.7	13.91
Malartic	779.3	8.69	681.8	7.60	534.1	5.96
Maniwaki	438.3	3.42	737.2	5.75	828.8	6.47
Matane	1,557.7	9.08	--	--	1,564.7	9.12
Mont-Joli	664.3	6.39	1,383.2	13.30	1,498.4	14.41
Mont-Laurier	959.7	8.50	1,034.1	9.16	1,180.8	10.46
Montmagny	--	--	1,641.5	11.57	2,192.9	15.45
Montréal	277,257.9	9.59	213,414.0	7.38	407,970.2	14.11
Noranda	--	--	864.6	10.10	1,719.4	20.08
Plessisville	834.9	9.33	827.6	9.25	1,130.5	12.63
Pointe-Gatineau	--	--	--	--	--	--
Port-Alfred	--	--	568.5	9.58	339.9	5.73
Québec	52,184.8	10.50	36,608.6	7.36	66,776.3	13.43
Rimouski	4,101.5	12.13	2,571.2	7.60	2,975.3	8.80
Rivière-du-Loup	1,965.1	10.18	1,435.0	7.43	2,194.3	11.37

TABLE IV.12 cont'd

PERCENT DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

	APPAREL & ACCESSORIES	PERCENT OF TOTAL	HARDWARE FURNISH-INGS	PERCENT OF TOTAL	OTHER RETAIL	PERCENT OF TOTAL
Québec - (Continued)						
Roberval	2,223.3	17.36	512.2	4.00	2,393.7	18.69
Rouyn	3,721.7	11.37	2,525.9	7.72	4,509.0	13.78
Ste-Agathe	--	--	967.3	10.42	1,883.3	20.29
St-Félicien	852.5	12.08	656.6	9.30	--	--
St-Georges	2,855.4	14.66	--	--	2,556.5	13.13
St-Georges O.	228.5	8.56	516.0	19.32	127.6	4.78
St-Hyacinthe	6,890.9	16.62	3,342.1	8.06	4,947.1	11.93
St-Jean	5,468.1	14.10	--	--	4,354.4	11.23
St-Jérôme	5,831.1	17.47	--	--	4,569.1	13.69
Ste-Thérèse						
Sept-Îles	2,114.5	7.15	1,750.2	5.92	2,975.3	10.06
Shawinigan	3,712.2	10.37	3,477.3	9.71	5,338.7	14.91
Shawinigan S.	606.0	6.75	--	--	527.4	5.87
Sherbrooke	--	--	8,215.6	8.37	15,336.4	15.62
Sorel	5,030.1	20.45	2,750.6	11.18	3,044.3	12.38
Terrebonne	--	--	718.5	8.86	695.3	8.57
Thetford Mines	4,388.2	17.65	1,425.4	5.73	3,494.4	14.06
Tracy	146.2	1.66	265.8	3.03	--	--
Trois-Rivières	11,706.4	16.29	3,887.9	5.41	8,964.8	12.47
Val-d'Or	2,611.7	11.20	1,726.7	7.40	3,393.6	14.55
Valleyfield	--	--	4,683.7	12.17	--	--
Victoriaville	3,478.7	12.38	1,647.1	5.86	4,168.4	14.84
Windsor	--	--	659.1	9.58	1,347.5	19.58
TOTAL	497,694.8	10.41	375,587.2	7.86	647,708.8	13.55

TABLE IV.12 cont'd

PERCENT DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

Québec	COEFFICIENT OF SPECIALIZATION
Alma	28.31
Amos	20.44
Arvida	19.43
Asbestos	4.60
Aylmer	38.29
Bagotville	17.40
Baie-Comeau	21.22
Beauharnois	18.41
Bécancour	24.66
Beloeil	23.44
Buckingham	6.39
Cap-de-la-Madeleine	23.36
Chambly	19.55
Chibougamau	11.96
Chicoutimi	11.79
Chicoutimi N.	33.95
Coaticook	15.43
Cowansville	18.09
Dolbeau	25.30
Drummondville	16.00
Drummondville S.	25.78
Farnham	12.40
Gatineau	12.50
Granby	5.30
Grand'Mère	10.22
Hauterive	10.42
Hull	10.19
Iberville	13.88
Joliette	16.03
Jonquière	6.28
Kénogami	26.36
Lachute	10.86
Lac-Mégantic	13.37
La Tuque	9.33
Magog	4.99
Malartic	15.48
Maniwaki	25.17
Matane	20.41
Mont-Joli	18.77
Mont-Laurier	14.12
Montmagny	13.47
Montréal	2.82
Noranda	14.79
Plessisville	6.67
Pointe-Gatineau	24.59
Port-Alfred	27.87
Québec	2.55
Rimouski	10.66
Rivière-du-Loup	12.40

PERCENT DISTRIBUTION AND COEFFICIENT OF SPECIALIZATION - RETAIL TRADE 1966

Québec - (Continued)	COEFFICIENT OF SPECIALIZATION
Roberval	24.58
Rouyn	4.81
Ste-Agathe	13.01
St-Félicien	15.27
St-Georges	25.55
St-Georges O.	33.98
St-Hyacinthe	8.67
St-Jean	6.33
St-Jérôme	9.06
Ste-Thérèse	
Sept-Îles	15.98
Shawinigan	3.96
Shawinigan S.	23.57
Sherbrooke	9.24
Sorel	18.81
Terrebonne	18.53
Thetford Mines	9.91
Tracy	24.03
Trois-Rivières	6.52
Val-d'Or	7.79
Valleyfield	8.45
Victoriaville	10.40
Windsor	12.58
TOTAL	0.00

TABLE IV.13

NUMBER OF RETAIL OUTLETS

Québec	1961	1966
Alma	134	180
Amos	81	87
Arvida	58	57
Asbestos	112	115
Aylmer	34	33
Bagotville	56	57
Baie-Comeau	38	58
Beauharnois	106	106
Bécancour	-	96
Beloeil	63	84
Buckingham	89	81
Cap-de-la-Madeleine	207	215
Chambly	34	67
Chibougamau	32	53
Chicoutimi	269	271
Chicoutimi N.	55	52
Coaticook	88	82
Cowansville	83	110
Dolbeau	60	66
Drummondville	356	343
Drummondville S.	-	75
Farnham	81	80
Gatineau	80	95
Granby	341	365
Grand'Mère	173	169
Hauterive	35	70
Hull	390	422
Iberville	77	82
Joliette	272	263
Jonquière	201	198
Kénogami	90	87
Lachute	116	147
Lac-Mégantic	101	103
La Tuque	113	120
Magog	173	172
Malartic	59	61
Maniwaki	74	90
Matane	136	148
Mont-Joli	70	75
Mont-Laurier	116	117
Montmagny	122	158
Montréal	15,191	16,359
Noranda	65	56
Plessisville	88	108
Pointe-Gatineau	49	61
Port-Alfred	77	67
Québec	2991	3049
Rimouski	193	225
Rivière-du-Loup	165	161

TABLE IV.13 cont'd

Québec - (Continued)	1961	1966
Roberval	68	81
Rouyn	188	197
Ste-Agathe	99	98
St-Félicien	74	71
St-Georges	98	152
St-Georges O.	47	45
St-Hyacinthe	337	352
St-Jean	298	306
St-Jérôme	317	332
Ste-Thérèse	—	—
Sept-Îles	125	142
Shawinigan	358	336
Shawinigan S.	73	75
Sherbrooke	622	648
Sorel	271	247
Terrebonne	77	69
Thetford Mines	242	237
Tracy	57	72
Trois-Rivières	521	527
Val-d'Or	131	131
Valleyfield	300	320
Victoriaville	251	253
Windsor	76	81
TOTAL		

TABLE IV.14

INCOME-CONSUMPTION RATING INDEX AND COMPONENTS 1966

	POPULATION	RETAIL TRADE SALES	VALUE SERVICE TRADES	TOTAL RETAIL TRADE AND SERVICES
Québec				
Alma	22,915	34,434.2	3,005.5	37,439.7
Amos	6,838	15,506.3	2,936.6	18,442.9
Arvida	15,342	11,170.1	1,563.2	12,733.3
Asbestos	10,534	13,583.7	1,430.6	15,014.3
Aylmer	7,231	2,594.3	1,092.0	3,686.3
Bagotville	5,876	5,766.4	760.1	6,526.5
Baie-Comeau	12,236	17,833.3	3,291.2	21,124.5
Beauharnois	8,810	9,537.5	1,084.9	10,622.4
Bécancour	8,336	5,656.8	805.3	6,462.1
Beloeil	10,152	12,278.2	1,576.3	13,854.4
Buckingham	7,227	8,761.2	939.6	9,700.8
Cap-de-la-Madeleine	29,433	21,401.0	4,516.8	25,917.8
Chambly	10,798	7,446.5	1,695.2	9,141.7
Chibougamau	8,902	8,813.0	1,399.6	10,212.6
Chicoutimi	45,340	59,334.9	6,088.2	65,423.1
Chicoutimi N.				
Coaticook	6,984	10,220.8	1,101.6	11,322.4
Cowansville	10,692	16,089.5	1,317.5	17,407.0
Dolbeau	6,630	11,216.6	1,197.1	12,413.7
Drummondville	37,941	50,320.0	6,168.2	56,488.2
Drummondville S.				
Farnham	6,752	6,412.6	822.1	7,234.7
Gatineau	Hull			
Granby	34,349	41,746.4	5,464.4	47,210.8
Grand'Mère	16,407	17,375.0	2,809.0	20,184.0
Hauterive	11,366	16,674.1	1,524.6	18,198.7
Hull	88,956	83,354.3	14,175.5	97,529.8
Iberville	8,400	5,230.4	949.20	6,179.6
Joliette	19,188	37,325.7	4,195.0	41,520.7
Jonquière	31,197	39,631.9	4,743.9	44,375.8
Kénogami				
Lachute	10,215	16,529.3	2,300.3	18,829.6
Laç-Mégantic	6,958	12,339.8	1,109.9	13,449.7
La Tuque	13,554	16,353.4	2,193.4	18,546.8
Magog	13,797	16,502.7	2,493.7	18,996.4
Malartic	6,606	8,968.2	776.6	9,744.8
Maniwaki	6,404	12,816.2	1,336.4	14,152.6
Matane	11,109	17,152.5	1,722.9	18,875.4
Mont-Joli	6,366	10,397.6	1,273.2	11,670.8
Mont-Laurier	6,140	11,287.3	1,825.3	13,112.6
Montmagny	12,241	14,193.0	1,791.1	15,984.1
Montréal	2,436,817	2,890,431.9	761,939.5	3,652,371.4
Noranda	11,521	8,561.1	1,191.1	9,752.2
Plessisville	7,238	8,949.7	858.9	9,808.6
Pointe-Gatineau	Hull			
Port-Alfred	9,551	5,932.0	928.4	6,860.4
Québec	413,397	497,206.7	101,990.0	599,197.7
Rimouski	20,330	33,816.3	3,312.4	37,128.7
Rivière-du-Loup	11,637	19,303.6	3,176.9	22,480.5

TABLE IV.14 cont'd

INCOME-CONSUMPTION RATING INDEX AND COMPONENTS 1966

Québec - (Continued)	POPULATION	RETAIL TRADE SALES	VALUE SERVICE TRADES	TOTAL RETAIL TRADE AND SERVICES
Roberval	8,552	12,805.8	1,370.5	14,176.3
Rouyn	18,581	32,728.4	5,318.3	38,046.7
Ste-Agathe	6,010	9,280.9	2,530.2	11,811.1
St-Félicien	5,104	7,058.1	899.0	7,957.1
St-Georges	6,680	19,476.5	2,401.9	21,878.4
St-Georges O.	5,538	2,670.2	366.1	3,036.3
St-Hyacinthe	23,781	41,454.2	4,584.2	46,038.4
St-Jean	27,784	38,788.0	5,065.3	43,853.3
St-Jérôme	26,511	33,385.1	4,377.3	37,762.4
Ste-Thérèse	Marked			
Sept-Îles	18,950	29,566.1	4,434.7	34,000.8
Shawinigan	30,777	35,794.8	5,052.2	40,847.0
Shawinigan S.	12,250	8,979.0	908.9	9,887.9
Sherbrooke	75,690	98,179.8	15,743.0	113,922.8
Sorel	19,021	24,592.7	3,606.2	28,198.9
Terrebonne	7,480	8,114.0	867.4	8,981.4
Thetford Mines	21,614	24,856.6	2,482.6	27,339.2
Tracy	10,918	8,785.1	1,880.5	10,665.6
Trois-Rivières	57,540	71,870.0	17,167.9	89,037.9
Val-d'Or	12,147	23,323.5	4,129.1	27,452.6
Valleyfield	29,111	38,498.7	4,944.4	43,443.1
Victoriaville	21,320	28,090.2	3,444.9	31,535.1
Windsor	6,496	6,880.9	880.0	7,760.9
TOTAL AS A WHOLE	5,780,845	5,882,110.8	1,252,882.1	7,134,992.9

TABLE IV.14 cont'd

Québec	PER CAPITA CONSUMPTION	SALES RATING	AVERAGE INCOME	INCOME RATING	INCOME-CONSUMPTION RATING INDEX
Alma	1,633.85	1.324	4,153	.946	1.40
Amos	2,697.12	2.185	3,958	.902	2.42
Arvida	829.96	.672	5,518	1.257	.53
Asbestos	1,425.32	1.155	4,435	1.011	1.14
Aylmer	509.79	.413	4,270	.973	.42
Bagotville	1,110.70	.900	2,689	.841	1.07
Baie-Comeau	1,726.42	1,399	5,985	1,364	1.03
Beauharnois	1,204.72	.977	4,159	.948	1.03
Bécancour	775.20	.628	3,349	.763	.82
Beloeil	1,364.70	1.106	5,424	1.236	.89
Buckingham	1,342.30	1.087	4,078	.929	1.17
Cap-de-la-Madeleine	880.57	.713	3,811	.868	.82
Chambly	846.61	.686	4,736	1.079	.64
Chibougamau	1,147.23	.929	4,831	1.101	.84
Chicoutimi	1,1442.94	1.169	4,334	.988	1.18
Chicoutimi N.	Incl. with Chicoutimi				
Coaticook	1,621.19	1.313	3,509	.800	1.64
Cowansville	1,628.04	1.319	3,824	.871	1.51
Dolbeau	1,872.35	1.517	4,209	.959	1.58
Drummondville	1,488.84	1.206	3,800	.866	1.39
Drummondville S.	Incl. with Drummondville				
Farnham	1,071.49	.868	3,722	.848	1.02
Gatineau	Incl. with Hull				
Granby	1,374.44	1.114	3,638	.829	1.34
Grand'Mère	1,230.21	.997	4,734	1.079	.92
Hauterive	1,601.15	1.297	5,208	1.187	1.09
Hull	1,096.38	.888	4,341	.989	.90
Iberville	735.67	.596	3,753	.855	.70
Joliette	2,163.89	1.753	3,863	.880	1.99
Jonquière	1,077.16	.873	4,465	1.018	.86
Kénogami	Incl. with Jonquière				
Lachute	1,843.33	1.493	3,943	.899	1.66
Laç-Mégantic	1,932.98	1,566	3,253	.741	2.11
La Tuque	1,368.36	1.109	4,382	.999	1.11
Magog	1,376.85	1.115	3,270	.745	1.50
Malartic	1,475.14	1.195	4,052	.923	1.29
Maniwaki	2,209.96	1.790	3,542	.807	2.22
Matane	1,699.11	1.377	3,603	.821	1.68
Mont-Joli	1,833.30	1.485	3,717	.847	1.75
Mont-Laurier	2,135.60	1.730	3,588	.818	2.12
Montmagny	1,305.78	1.058	3,691	.841	1.26
Montréal	1,498.83	1.214	4,800	1.094	1.11
Noranda	846.47	.686	4,323	.985	.70
Plessisville	1,355.15	1.098	3,693	.842	1.30
Pointe-Gatineau	Incl. with Hull				
Port-Alfred	718.29	.582	4,478	1.020	.57
Québec	1,449.45	1.174	4,404	1.004	1.17
Rimouski	1,826.30	1.480	3,840	.875	1.69
Rivière-du-Loup	1,931.81	1.565	3,749	.854	1.83

TABLE IV.14 cont'd

	PER CAPITA CONSUMPTION	SALES RATING	AVERAGE INCOME	INCOME RATING	
Québec - (Continued)					
Roberval	1,657.66	1.343	3,551	.809	1.66
Rouyn	2,047.61	1.659	4,136	.943	1.76
Ste-Agathe	1,965.24	1.592	3,658	.834	1.91
St-Félicien	1,558.99	1.263	3,431	.782	1.62
St-Georges	3,275.21	2.653	4,230	.964	2.75
St-Georges O.	548.27	.444	3,201	.729	.61
St-Hyacinthe	1,935.93	1.568	3,850	.877	1.79
St-Jean	1,578.37	1.279	4,033	.919	1.39
St-Jérôme	1,424.40	1.154	3,522	.803	1.44
Ste-Thérèse					
Sept-Îles	1,794.24	1.454	5,816	1.325	1.10
Shawinigan	1,327.19	1.075	4,199	.957	1.12
Shawinigan S.	807.18	.654	4,442	1.021	.65
Sherbrooke	1,505.12	1.219	4,041	.921	1.32
Sorel	1,482.51	1.201	4,642	1.058	1.14
Terrebonne	1,200.72	.973	4,120	.939	1.04
Thetford Mines	1,264.88	1.025	3,871	.882	1.16
Tracy	976.88	.791	5,252	1.197	.66
Trois-Rivières	1,547.41	1.254	4,092	.933	1.34
Val-d'Or	2,260.03	1.831	4,032	.919	1.99
Valleyfield	1,492.33	1.209	4,170	.950	1.27
Victoriaville	1,479.13	1.198	3,949	.900	1.33
Windsor	1,194.72	.968	3,850	.877	1.10
TOTAL AS A WHOLE	1,234.25	1.00	4,388.2	1.00	1.00

TABLE IV.15

INCOME CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS COUNTIES, - PROVINCE OF QUEBEC

1966

QUEBEC COUNTIES	POPULATION	RETAIL TRADE SALES	VALUE OF SERVICE TRADES	RETAIL TRADE & SERVICES
1. Abitibi	114,725	101,320.7	17,859.0	119,179.7
2. Argenteuil	31,200	29,618.7	6,117.8	35,736.5
3. Arthabaska	49,567	45,468.0	5,263.3	50,731.3
4. Bagot	22,968	17,701.6	1,492.4	19,194.0
5. Beauce	64,275	54,588.4	6,693.7	61,282.1
6. Beauharnois	51,942	55,124.3	7,779.8	62,904.1
7. Bellechasse	24,045	12,701.0	1,275.9	13,976.9
8. Berthier	27,035	20,130.9	3,438.5	23,569.4
9. Bonaventure	43,624	30,803.7	4,961.2	35,764.9
10. Brome	14,190	6,864.2	2,141.1	9,005.3
11. Chambly	190,464	176,641.8	22,915.6	195,557.4
12. Champlain	112,341	81,234.3	13,421.9	94,656.2
13. Charlevoix-Est	31,049	21,112.8	4,091.4	25,204.2
14. Charlevoix-Ouest				
15. Châteauguay	46,698	37,686.1	4,442.3	42,128.4
16. Chicoutimi	161,773	134,756.9	17,983.9	152,740.8
17. Compton	22,459	11,216.3	1,551.0	12,767.3
18. Deux-Montagnes	39,125	32,881.8	4,259.2	37,141.0
19. Dorchester	33,669	21,304.9	2,285.9	23,590.8
20. Drummond	63,281	65,679.9	7,513.6	73,193.5
21. Frontenac	28,848	23,429.1	2,263.1	25,692.2
22. Gaspé-Est	72,955	51,509.1	6,752.0	58,216.1
23. Gaspé-Ouest				
24. Gatineau	146,394	115,431.8	22,117.2	137,549.0
25. Hull				
26. Huntingdon	15,421	11,730.4	1,487.9	13,218.3
27. Iberville	19,538	10,632.3	1,854.6	12,486.9
28. Ile-de-Montréal	2,119,266	2,576,355.2	723,247.7	3,299,602.9
28A. Ile-Jésus	Incl. with Gaspé			
29. Iles-de-la-Madeleine	48,920	50,933.1	5,931.2	56,864.3
30. Joliette	26,593	17,237.4	2,365.2	19,602.6
31. Kamouraska	30,167	25,795.6	4,596.3	30,391.9
32. Labelle	105,909	96,804.8	10,036.8	106,841.6
33. Lac-St-Jean-Est				
34. Lac-St.-Jean-Ouest	44,980	53,669.5	5,818.6	59,488.1
35. Laprairie	49,839	37,484.6	4,671.9	42,156.5
36. L'Assomption	58,375	67,504.0	8,441.6	75,945.6
37. Lévis	24,382	15,517.0	1,763.7	17,280.7
38. L'Islet	28,765	16,938.8	2,002.5	18,941.3
39. Lotbinière	21,466	19,352.1	2,128.9	21,481.0
40. Maskinongé	63,227	39,002.0	4,229.5	43,231.5
41. Matane				
42. Matapédia	57,504	51,522.7	5,199.7	56,722.4
43. Mégantic	32,609	31,775.1	4,041.4	35,816.5
44. Missisquoi	19,260	15,867.5	4,062.4	19,929.9
45. Montcalm	26,751	19,570.0	2,778.0	22,348.0
46. Montmagny				
47. Montmorency No.1	25,948	13,973.8	1,700.7	15,674.5
48. Montmorency No.2				
49. Napierville	11,822	12,112.5	1,099.6	13,212.1
50. Nicolet	30,829	18,418.0	2,865.5	21,283.5

INCOME CONSUMPTION INDEX SHOWING SALES AND INCOME RATINGS COUNTIES - PROVINCE OF QUEBEC

1966

	POPULATION	RETAIL TRADE SALES	VALUE OF SERVICE TRADES	RETAIL TRADE & SERVICES
QUEBEC COUNTIES (Continued)				
51.Papineau	31,952	24,758.5	4,251.4	29,009.9
52.Pontiac	20,113	13,750.7	3,894.6	17,645.3
53.Portneuf	51,749	32,538.9	4,130.3	36,669.2
54.Québec	383,092	441,564.8	97,363.6	538,928.4
55.Richelieu	44,835	40,454.9	6,072.6	46,527.5
56.Richmond	41,426	33,913.0	4,524.8	28,437.8
57.Rimouski	65,629	59,633.2	7,007.3	66,640.5
58.Rivière-du-Loup	66,136	49,149.0	6,700.3	55,849.3
59.Rouville	29,171	19,449.8	2,927.8	22,377.6
60.Saguenay	107,663	104,290.0	19,428.0	123,718.0
61.St. Hyacinthe	48,842	56,271.6	6,105.6	62,377.2
62.St.-Jean	41,621	47,450.6	6,857.0	54,307.6
63.St.-Maurice	112,695	124,706.5	24,968.7	149,675.2
64.Shefford	60,161	65,048.9	7,927.3	72,976.2
65.Sherbrooke	93,199	107,072.3	18,064.0	125,136.3
66.Soulanges	10,757	8,989.1	1,840.0	10,829.1
67.Stanstead	37,247	34,885.9	5,713.7	40,599.6
68.Témiscamingue	60,312	58,427.9	10,079.0	68,506.9
69.Témiscouata	Incl. with R.-du-Loup			
70.Terrebonne	122,781	133,436.5	36,708.5	170,145.0
71.Vaudreuil	34,053	30,099.6	4,934.8	35,034.4
72.Verchères	30,885	28,568.8	3,237.9	31,806.7
73.Wolfe	16,793	9,130.4	1,327.9	10,458.3
74.Yamaska	15,535	8,937.4	873.5	9,810.9
TOTAL	5,780,845	5,882,110.8	1,252,882.1	7,134,992.9

INCOME-CONSUMPTION INDEX SHOWING SALES AND INCOME TATINGS COUNTIES - PROVINCE OF QUEBEC

QUEBEC COUNTIES	PER CAPITA CONSUMPTION	SALES RATING	INCOME	PER CAPITA INCOME	INCOME RATING	INCOME CONSUMPTION RATING INDEX
1. Abitibi	1,038.83-	.842	143,877	1,254.10	.722	1.17
2. Argenteuil	1,145.40	.928	46,185	1,480.29	.852	1.09
3. Arthabaska	1,023.49	.829	65,891	1,329.33	.765	1.08
4. Bagot	835,68	.677	25,978	1,131.05	.651	1.04
5. Beauce	953.44	.772	68,962	1,072.92	.617	1.25
6. Beauharnois	1,211.05	.981	84,524	1,627.28	.936	1.05
7. Bellechasse	581.28	.471	22,793	947.93	.545	.86
8. Berthier	871.81	.706	34,074	1,260.37	.725	.97
9. Bonaventure	891.84	.664	40,368	925.36	.532	1.25
10. Brome	634.62	.514	17,242	1,227.91	.707	.73
11. Chambly	1,047.74	.849	363,550	1,908.76	1,098	.77
12. Champlain	842.58	.683	167,329	1,489.47	.857	.80
13. Charlevoix-Est	811.75	.658	33,341	1,073.82	.618	1.06
14. Charlevoix-Ouest						
15. Châteauguay	902.15	.731	79,972	1,712.54	.985	.74
16. Chicoutimi	944,17	.765	217,461	1,343.96	.773	.99
17. Compton	658.47	.461	24,256	1,080.01	.621	.74
18. Deux-Montagnes	949.29	.769	56,875	1,453.67	.837	.92
19. Dorchester	700.67	.568	28,995	861.18	.496	1.15
20. Drummond	1,156.64	.937	82,600	1,305.29	.751	1.25
21. Frontenac	890.61	.722	26,167	907.06	.522	1.38
22. Gaspé-Est	798.59	.647	62,862	861.65	.496	1.30
23. Gaspé-Ouest						
24. Gatineau	939.58	.761	235,635	1,609.59	.926	.82
25. Hull						
26. Huntingdon	857.16	.694	18,720	1,213.93	.699	.99
27. Iberville	639.11	.518	23,516	1,203.60	.693	.75
28. Ile-de-Montréal	1,556.96	1.261	4859,372	2,292.95	1.319	.96
28A. Ile-Jésus						
29. Iles-de-la-Madeleine	1,162.39	.942	61,201	1,251.04	.720	1.31
30. Joliette	737.13	.597	25,478	958.07	.551	1.08
31. Kamouraska	1,007.46	.816	24,839	823.38	.474	1.72
32. Labelle	1,008.81	.817	113,389	1,070.63	.616	1.33
33. Lac-St-Jean-Est						
34. Lac-St.-Jean-Ouest	1,322.55	1.072	77,135	1,714.87	.987	1.09
35. Laprairie	845.85	.685	69,328	1,391.04	.800	.86
36. L'Assomption	1,301.00	1.054	92,595	1,586.21	.913	1.15
37. Lévis	708.75	.574	22,513	923.35	.531	1.08
38. L'Islet	658.48	.534	29,376	1,021.24	.588	.91
39. Lotbinière	1,000.70	.811	22,591	1,052.41	.606	1.34
40. Maskinongé	683.75	.554	58,207	920.60	.530	1.05
41. Matane						
42. Matapédia	986.41	.799	75,451	1,312.10	.755	1.06
43. Mégantic	1,098.36	.890	50,079	1,535.74	.884	1.01
44. Missisquoi	1,034.78	.838	18,579	964.64	.555	1.51
45. Montcalm	835.41	.677	30,260	1,131.17	.651	1.04
46. Montmagny						
47. Montmorency No.1	604.07	.489	32.847	1,265.88	.728	.67
48. Montmorency No.2						
49. Napierville	1,117.59	.905	13,536	1,144.98	.659	1.37
50. Nicolet	690,37	.559	31,839	1,032.76	.594	.94

TABLE IV.15 cont'd

	CAPITA CONSUMPTION	SALES RATING	INCOME	PER CAPITA INCOME	INCOME RATING	INCOME CONSUMPTION RATING INDEX
QUEBEC COUNTIES (Continued)						
51.Papineau	907.92	.736	41,276	1,291.81	.743	.99
52.Pontiac	877.31	.711	23,561	1,171.43	.674	1.05
53.Portneuf	708.60	.574	61,729	1,192.85	.686	.84
54.Québec	1,406.79	1.140	710,266	1,854.04	1.067	1.07
55.Richelieu	1,037.75	.841	74,501	1,661.67	.956	.88
56.Richmond	927.87	.752	55,830	1,347.70	.776	.97
57.Rimouski	1,015.41	.823	73,348	1,117.62	.643	1.28
58.Rivière-du-Loup	844.46	.684	56,606	855.90	.491	1.39
59.Rouville	767.12	.622	40,534	1,389.53	.800	.78
60.Saguenay	1,149.12	.931	175,762	1,632.19	.939	.99
61.St. Hyacinthe	1,277.12	1.035	71,419	1,462.25	.841	1.23
62.St.-Jean	1,304.81	1.057	70,485	1,693.50	.975	1.08
63.St.-Maurice	1,328.14	1.077	179,044	1,588.75	.914	1.18
64.Shefford	1,213.02	.983	88,374	1,468.96	.845	1.16
65.Sherbrooke	1,342.68	1.087	155,366	1,667.04	.959	1.13
66.Soulanges	1,006.70	.816	14,450	1,343.31	.773	1.06
67.Stanstead	1,090.01	.883	51,830	1,391.52	.801	1.10
68.Témiscamingue	1,135.88	.920	86,443	1,433.26	.825	1.12
69.Témiscouata						
70.Terrebonne	1,385.76	1.123	187,402	1,526.31	.878	1.28
71.Vaudreuil	1,028.82	.834	63,432	1,862.74	1.072	.78
72.Verchères	1,029.84	.834	48,798	1,579.99	.909	.92
73.Wolfe	622.78	.505	19,078	1,136.07	.654	.77
74.Yamaska	631.54	.512	16,378	1,054.26	.607	.84
TOTAL	1,234.25	1.000	10,945,882	1,737.8	1.000	1.00

CHAPTER FIVE

RETAIL TRADE HINTERLANDS

Introduction

Every centre, whether an isolated hamlet or a thriving metropolis, provides retail services to its inhabitants. These services may only involve the selling of goods displayed at one central general store or they may include the provision of a whole spectrum of goods that satisfy the needs of all segments of society. Not only are the services consumed by the local residents, but many rural residents also purchase goods from the centre. In many instances, the rural population is able to choose among several centres for shopping. In other cases, the element of distance may prohibit people travelling to other centres, thereby compelling them to shop in the nearest town. In either event, every urban area will attract people to it, and it therefore stands to reason that those offering a wider variety of goods will attract a larger number of shoppers.

When discussing the level of attraction that a city has, a question that arises is:"How far away do people travel to a particular centre for shopping?" To fully answer this question, one has to know a variety of facts. Amongst the more important are the mobility of the non-urban population, the nature and the variety of goods sold in the urban centre, the income level and personal taste of the consumer, the proximity of other centres offering the same level of service, and so on. In short, trade hinterlands are conditioned by an extremely complex set of forces.

The delineation of trade hinterlands has been at the forefront of economic and geographic research. What were once theories debated in academic circles, today are accepted and practiced by commercial institutions. In fact, special boards within many institutions have been assigned the sole task of determining the limits of trading areas. The unprecedented interest shown in

recent years in attempting to come to grips with the problem of defining the hinterland, has led to the proliferation of an immense amount of literature on this topic. Academic textbooks and many trade and commerce journals have constructed various theories on measuring hinterlands. Some of these are founded on sound economic principles and embody a high level of expertise. Others, which are hardly worthy of criticism, adopt an overly naive and idealistic approach and usually reflect the personal bias of the researcher. There are still other theories whose overpowering mathematical intricaces tend to confuse rather than enlighten those who attempt to decipher them.

When deciding to calculate hinterland boundaries, the major problem that arises is the degree of "sophistication" that should be introduced. Theories or models are invariably criticized either because they are oversimplified or because they adopt such advanced econometric principles that one has to be a statistician to comprehend their significance. A compromise has to be reached. The pages that follow include the application of a gravity model which, while being based upon accepted statistical theories, maintains a sufficiently high level of rationality. The model does not purport to be all-embracing. Nor is it suggested that it is the "best" for the exercise that follows. Rather, it has been included to demonstrate that, under a given set of assumptions, problems must be approached in a consistent fashion.

Purpose

The purpose of this section was basically to establish the boundaries of trade hinterlands surrounding those centres selected for examination. Having determined these limits, a subsidiary purpose was to construct a functional hierarchy of centres using area of hinterland as the major variable. Each centre falling within a particular class was then ranked according to size of hinterland. This system of ranking enabled one to identify those centres having common functional characteristics which had the highest (or conversely, the lowest) hinterland capture potential.

Method of Approach

The gravity model was only applied to hinterland delineations of Prairie centres. Hinterland boundaries have already been calculated for Québec centres by that province's Department of Industry and Commerce. Consequently, these values have been used in this section. It should be noted at this juncture, that the results presented by Québec's Department of Industry and Commerce were calculated from the return of a very extensive questionnaire circulated to local Chamber of Commerce presidents. Because the survey considered a much wider variety of personal variables than those used in the contraction of the gravity law, it was decided to use the already compiled Québec data, rather than apply the simplified gravity model. Such a decision will obviously condition the method of presentation for the two regions. As the result a discussion of both the methodology as well as the findings and analyses will be treated in two separate sections.

PRAIRIES

Methodology for Delineating Hinterlands

An empirical method involving the results of a questionnaire survey, is probably the most realistic method of delineating market hinterland boundaries between centres. Only in this way can the actual "pole" of a centre on the surrounding population be calculated. In the Canadian context, surveys of this nature have only been carried out in the province of Québec by the Department of Industry and Commerce. Due to the time constraints, it was not possible to conduct a similar survey for centres located in the Prairies. Instead, a method was devised which incorporated the physical law that interaction between two masses varies inversely with their distance. If A and B are two centres, the market hinterland boundary between the two can be determined by the following formula.

$$\text{Hinterland} = \frac{\text{Distance A - B}}{\frac{\text{Mass A}}{\text{Mass B}}}$$

A modification of this basic formula was used for calculating the hinterlands of prairie centres. The modification consisted of including two components. The first of these was the adoption of population to represent the "mass". Reilly's original formula was therefore formulated as follows:-

$$\text{Hinterland} = \frac{\text{Distance A - B}}{\frac{\text{Population of A}}{\text{Population of B}}}$$

Second, the hinterland boundaries were further modified by using a measurement of mass which had three components. These were: 1. Population, 2. Retail Trade Expenditures, and 3. Coefficient of Specialization for Retail Trade Activities. The final formula adopted in this study reads as follows:

$$\text{Hinterland} = \frac{\text{Distance A - B}}{\frac{\text{Population of A X Retail Trade Expenditure X Coefficient of Specialization}}{\text{Population of B X Retail Trade Expenditure X Coefficient of Specialization}}}$$

The criteria for choosing the components distance and mass are as follows:

A) Distance: The two factors that can be used to indicate distance are mileage and travel time. In view of the township characteristics and section road systems in the rairies it was assumed that actual mileage is directly related to straight line distances. Moreover, since this section is involved in an interurban study, it has been further assumed that the time component will remain uniform throughout the rairies.

B) The components of Mass (or the force of attraction of a centre) are: 1. Population, 2. Retail Expenditures, and 3. The level of Specialization of Retail Activities.

1. Population: Population has been used as the component of mass on the assumption that the services offered to a centre are directly related to the population of that centre. It stands to reason that a small hamlet will offer a far smaller variety of goods and services than a large metropolitan area. It is fully acknowledged that this is not always necessarily the case. However, for the purpose of this section, retail trade activities are considered to be a function of population. Before applying the modified formula, it is first necessary to group populations into class size so that the hinterland boundaries between centres of a given class may be determined. The aggregation of centres according to size was adopted in favor of a functional classification. It is fully recognized that the construction of the class system based upon function is more desirable and that such a system would reflect a more meaningful classification of centres. For example, the delineation of hinterlands of centres having a common function as opposed to centres having equal populations would provide more pertinent information. To obtain information on the functions of various centres one would either have to conduct extensive surveys in these centres, or rely upon the information provided by the publication Dunn and Bradstreet. Concerning the former, time did not permit such surveys. As for using Dunn and Bradstreet, it was felt that the information presented in this publication was inadequate to reflect the total functions of the centre. It should be noted that Dunn and Bradstreet only lists those enterprises which

required credit evaluation. Because of these limitations, the classification of centres was based upon population. The following classes were constructed:

LEVEL	POPULATION
4	3500 - 5000
3	5000 - 10000
2	10000 - 50000
1	Greater than 50,000

2. Retail Expenditure: This component has been included on the assumption that it represents the expenditure activities of the population of the centre as well as its immediate hinterland. It was further assumed that a centre having a high rate of retail expenditure would offer a far higher level of service than one in which the total amount expended in retail activities was very low. Retail expenditure or "Realized Spending" figures were used rather than income or "Potential Spending" figures. The reason for not including income as a component in the modified formula was due to the simple fact that it was very difficult to assess and determine the income elasticities, the propensities to consume, the potential to save, and the nature of total disposal incomes, for the individual selected centre.

3. The Coefficient of Specialization: As mentioned in the introductory chapter, specialization coefficients are measures of the degree of specialization (or diversification) of a centre compared with that of the Prairie region. As the coefficient value approaches 0,the retail activities will be evenly distributed throughout all sectors. On the other hand, as the value approaches unity, it would indicate a high level of specialization in one sector of retail activities. The assumption was made that of two given size centres, the one having a more diversified retail base would generate a greater market potential (and hence would therefore have a larger hinterland) than a centre which is specialized in only one activity. To determine the effects of retail trade specialization upon the drawing power of a particular centre the "mass" was obtained by multiplying the retail trade expenditure by the component; 1 - the Coefficient of Specialization.

The computation of the above-mentioned equation took into account the following considerations. Of two centres having the same level of retail expenditure the one which experienced a high level of specialization would provide a lower order of goods and services than one in which the specialization was very low. Because specialization indices varied between .02 and .7, the subtraction of these values from the figure 1 and the subsequent multiplication of this computed value against total retail expenditures would not drastically effect the final value used in determining the hinterland of a given centre. In the formula adopted in this section, population and retail trade expenditures were intentionally assigned equal rates. The Coefficient of Specialization was the independent factor designed to modify only the latter. Since Coefficient values varied significantly between centres, the multiplication of its absolute value would markedly alter the retail trade component. It was felt that the subtraction of the Coefficient value from unity would result in a figure whose multiplication with trade expenditures would retain a degree of relativity, while not over-emphasizing the magnitude of the trade component.

The inclusion of specialization values permits the differentiation of market boundaries between centres of similar size. If these values were not included in the formula, the market hinterland of a specialized centre would appear larger than it is in reality.

The over-riding assumptions on which the gravity model are based include the following: -

i) A homogeneous, uniformly dispersed rural population. This homogenity discounts demographic characteristics such as age-sex ratio, ethnic compositions, migration characteristics, and the nature of the existing labour force. The model therefore does not take into account such aspects as taste, habits, attitudes, and mobility. It should be emphasized that the technique adopted in this section is not a behavioral model, and therefore its main function is not to determine "why" people move, but "where" they move.

ii) A uniform and unbounded plain with equal access in all directions

within the existing transportation system.

iii) The presence of "economic man" - that is, a population consisting of members who will travel to the nearest centres offering the greatest variety of the particular commodity required.

iv) Mail-order purchases do not represent a significant portion of total retail trade expenditures. It was assumed that the practice of using mail-order purchases was employed to the same extent for all centres.

v) The direct relationship between population of the centre and the services provided by it. The assumption that these two variables are directly related does not acknowledge "external" and "internal" expenditure aspects.

vi) Trip purposes were considered to be primarily uni-functional. That is, it was assumed that people undertook trips for the sole purpose of buying goods and services.

Trade Hinterlands

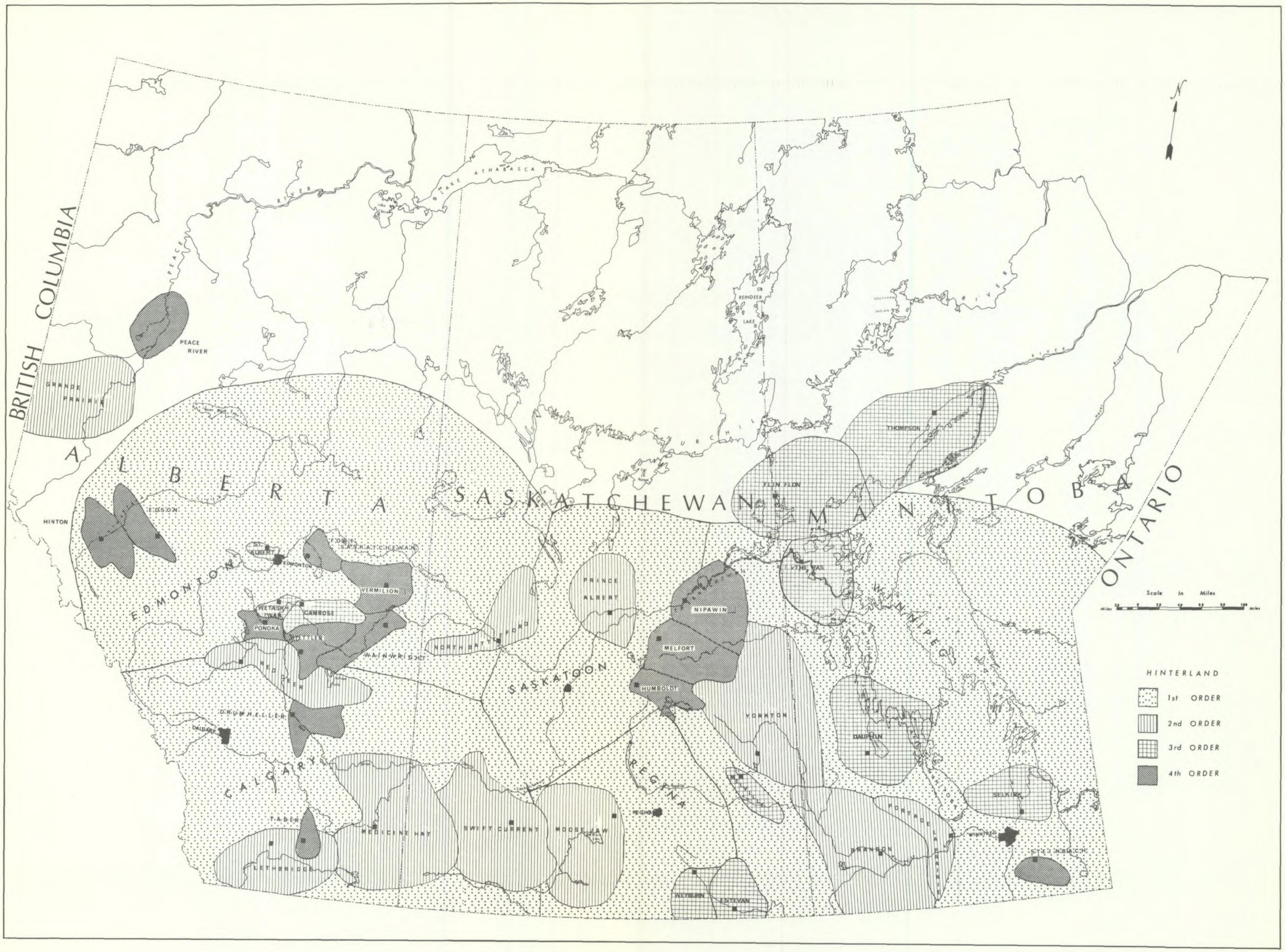
The previously mentioned model was then applied to each urban centre using the "nearest neighbour" principle. For example, when calculating the trade boundaries of Biggar, every centre which was located nearest to it was considered. The model therefore included information on the following centres: Wainwright, Lloydminster, Meadow Lake, North Battleford, Saskatoon, Rosetown, Kindersley and Hanna. By applying the nearest neighbour principle trading areas were calculated.

Delineations began with the largest category of centre and progressed downward to the smallest. The reasons for not including centres having less than 3500 persons were twofold. The first, relating to the actual mechanics of the model, was that the inclusion of these centres would have introduced a far greater level of complexity and would have called for added calculations. Lack of time did not allow for such a level of inquiry. The second reason was that it was felt that since the model contained several inherent limitations, any errors arising from its application would be of a far higher order of magnitude for smaller centres than they would for larger ones.

Map V.1 outlines hinterlands of the selected centres based upon the findings of the gravity model. The well-known proverb that a map is worth a thousand words obviously finds merit here as it would take as many words to discuss the configuration of each hinterland. Generalities can only be included, and in many cases these would appear obvious to any astute observer. The first general comment is that area of hinterland and size of centre are closely related. The larger centres obviously have the greater potential to capture a wider trade area. Such a phenomenon is confirmed in a subsequent graph.

A second observation is the absence of any hinterland areas in the northern part of the Prairies. In theory, trade hinterlands, especially of the first order centres, should cover the entire Prairie region. People living in a remote northern village, such as Southend (located at the southern extremity of Reindeer Lake, Saskatchewan) will no doubt purchase first order goods, albeit infrequently, from Saskatoon. By so doing, the residents of Southend would come under the hinterland of Saskatoon. Similarly, if the residents of this village desired to purchase a particular commodity that was only provided by third order centres and above, they would conduct their business in Flin Flon. On this basis, Southend would fall in the trade area of Flin Flon. If one would therefore delineate hinterlands for the whole Prairies, the trade areas for the most northern of the selected centres would cover an excedingly large amount of territory. The ensuing configurations might be such that Peace River for example (fourth order centre) would have a hinterland a great many times larger than Medicine Hat or Red Deer - both second order centres. To avoid this bias an arbitrary line was drawn depicting northern limits of hinterlands.

A third and final observation seen from Map V.1 relates to the ranking of trade areas according to different levels of orders. In many cases, the hinterland of a lower order centre is located entirely inside that of a larger order centre. In other cases one sees either partial overlapping or complete isolation of hinterlands. In examples in which hinterlands fall totally or partially inside larger hinterlands, it means that residents living in these hinterlands have a choice of shopping facilities. For example, the


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
N
PEACE RIVER
GRANDE PRAIRIE
PEACE RIVER
LAKE ATHABASCA
REINDEER LAKE
SOUTHERN INDIAN LAKE
CHURCHILL RIVER
THOMPSON
FLIN FLON
HINTON
EDSON
ST. ALBERT
EDMONTON
FORT SASKATCHEWAN
VERMILION
WETASKIWIN
CAMROSE
PONOKA
BUTTLER
NORTH BATTLEFORD
PRINCE ALBERT
NIPAWIN
MELFORT
HUMBOLDT
SASKATOON
REGINA
YORKTON
DAUPHIN
SELKIRK
WINNIPEG
BRANDON
PORTAGE LA PRAIRIE
ST. JAMES
WEYBURN
ESTEVAN
MOOSE JAW
SWIFT CURRENT
MEDICINE HAT
LETHBRIDGE
TABER
CALGARY
DRUMHELLER
RED DEER
EDMONTON
WINNIPEG
Scale In Miles
HINTERLAND
1st ORDER
2nd ORDER
3rd ORDER
4th ORDER

Map V. 1

TABLE V.1

TRADING AREAS OF PRAIRIE CENTRES
1966

Centre	Area ('ooo sq.m.)	Centre	Area ('ooo sq.m.)
Brandon	5.8	Dauphin	3.6
Flin Flon	4.8	Portage la Prairie	1.3
Selkirk	1.6	Steinbach	0.5
The Pas	2.4	Thompson	5.2
Winnipeg	67.5	Estevan	1.1
Humboldt	0.9	Melfort	2.0
Melville	0.7	Moose Jaw	3.0
Nipawin	2.1	N.Battleford	1.9
Prince Albert	2.1	Regina	14.6
Saskatoon	18.6	Swift Current	4.7
Weyburn	0.8	Yorkton	5.8
Calgary	35.4	Drumheller	0.8
Edmonton	50.7	Edson	0.8
Fort Saskatchewan	0.4	Grande Prairie	4.6
Hinton	1.8	Lethbridge	2.8
Medecine Hat	5.7	Peace River	2.7
Ponika	0.4	Red Deer	2.4
St.Albert	0.2	Stettler	0.9
Taber	0.4	Vermilion	1.2
Wainwright	1.5	Wetaskiwin	0.3

greater portion of the hinterland surrounding the town of Taber falls inside Calgary's hinterland. Residents therefore living in Taber's hinterland will visit this centre only if they desire to purchase goods that are offered by a fourth order centre. One can liken a fourth order centre to a "minimum convenience" centre as defined by Borchert[1]. Basic every day staples are offered by this centre. If the residents of Taber wish to purchase commodities that are not provided by stores in this town they will commute to Lethbridge. If these commodities are not available in this latter city, the consumer will have to make his purchase in Calgary. This inter-dependence between hinterlands does not mean that a resident of Taber will buy his bread and meat from Calgary or from Lethbridge. He will, in all probability buy his car from Lethbridge and, (if the need ever arises) his electronic computer from Calgary.

The results of Map V.1 together with the values contained in Table V.1 can also be used to present one further observation. It has already been stated that area of hinterland is related to size of centre. To substantiate this point, a graph has been constructed which plots area against size (see Graph V.1) and two features arise from this graph. The first is the overall trend that arises between the two variables and the second is the existence of two distinct configurations of points.

Concerning the former feature, one can state with a fair degree of assurance that as populations of centres increase, their surrounding trading areas will reflect similar increases. One need not have a high level of intelligence to note that Wetaskiwin has a far smaller hinterland than Winnipeg. A more significant aspect revealed in Graph V.1 is the presence of two distinct slopes. What one can deduce from this phenomenon is that there is a range of hinterland values for a given size urban centre. For example, both Thompson and Weyburn have approximately the same populations. Yet, the hinterland area of the former is over six times that of the latter. Similarly, The Pas and Fort Saskatchewan have similar populations but the trade area of the latter is only 1/5 the former.

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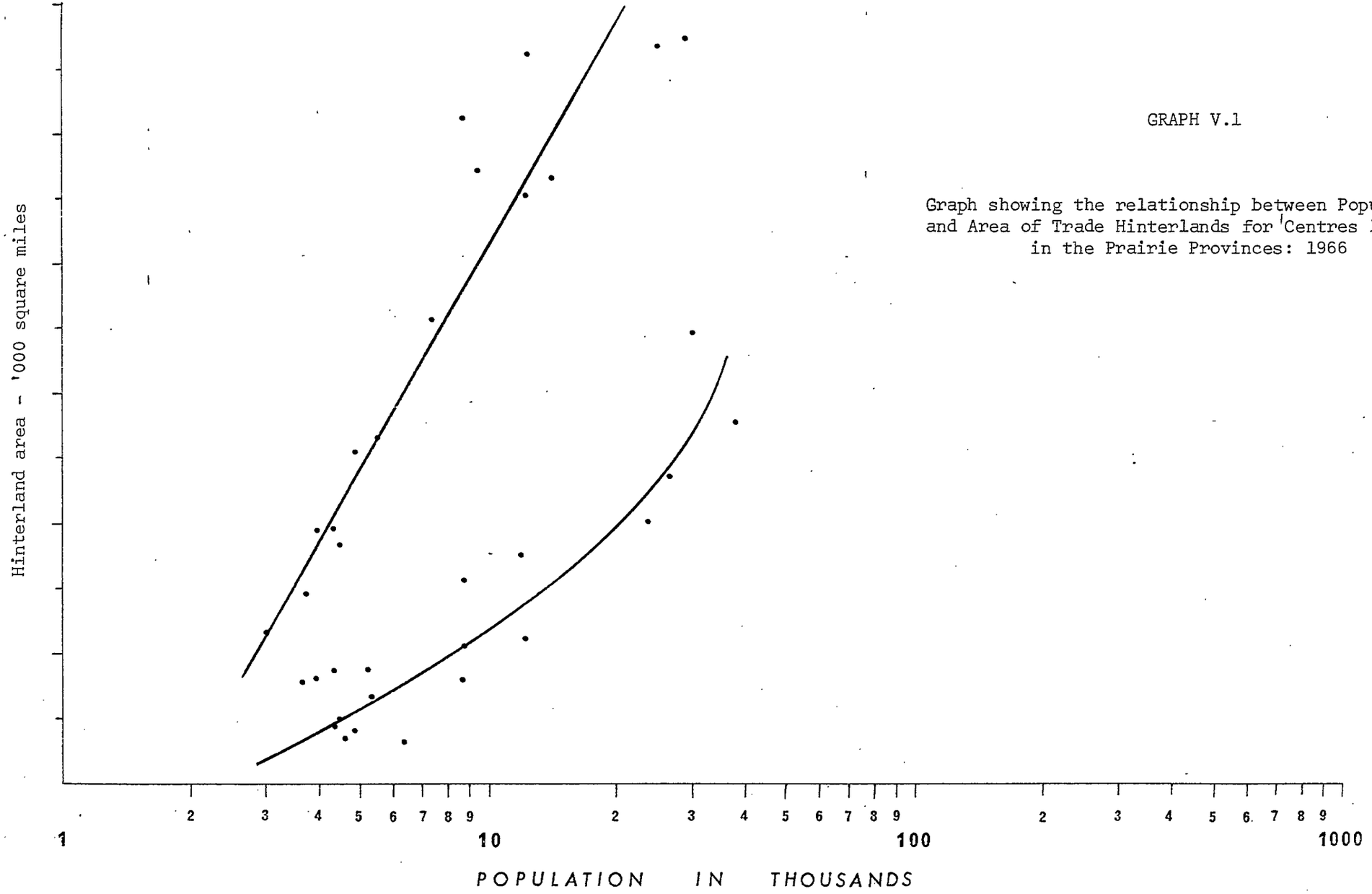
1. John R. Borchert, Trade Centres and Trade Areas of the Upper Midwest; Upper Midwest Economic Study, Series No. 3, September, 1963; p.39.

GRAPH V.1

Graph showing the relationship between Population and Area of Trade Hinterlands for Centres located in the Prairie Provinces: 1966



When viewing Graph V.1, the most obvious question that comes to the fore is "Why do such large variations of hinterlands arise for centres of equal size in the Prairies?". There is no one simple answer to this question. The introductory comments of this section have mentioned very briefly some of the major factors that effect the size of hinterlands. The amount of time and resources needed to first, identify and second, quantify these factors, greatly exceeds the resources of the present project. Only two considerations have been included at this juncture and these are: first to identify the variations within hinterlands, and second to comment upon one factor which plays an important role in shaping trade areas.

The identification of centres involved two elements. The first of these consists of ranking centres of a given population class according to hinterland, while the second groups into two categories those centres that have relatively large areas and those having relatively small areas (see Graph V.1).

Table V.2 outlines in descending order hinterland areas for the four orders of centres (see following page).

The contribution of the above-mentioned table lies in providing an inter-class comparison. For example, Nipawin is seen to have the largest trading area of the smallest class size and Taber the smallest. Yorkton and Medicine Hat, both classed as "large" centres have virtually the same size hinterland, while Weyburn and Edson also having the same size hinterlands are found in different categories - the former falling under a lower population size category than the latter.

TABLE V.2

TABLE RANKING IN DESCENDING ORDER AREA OF HINTERLAND FOR EACH OF THE FOUR POPULATION CATEGORIES

Centre	Area of Hinterland (thousands of sq.miles)
Fourth Order Centres (3,500 - 5,000)	
Neepawa	10.5
Peace River	10.3
Melfort	9.5
Hinton	9.2
Wainwright	7.5
Vermilion	6.0
Humboldt	4.4
Edson	4.1
Drumheller	3.9
Steinbach	2.6
Fort Saskatchewan	2.2
Ponoka	2.1
Taber	1.9
Third Order Centres (5,000 - 10,000)	
Thompson	25.9
Flin Flon	23.8
Dauphin	18.0
The Pas	12.1
Selkirk	8.1
Estevan	5.5
Weyburn	4.2
Camrose	4.1
Melville	3.1
Wetaskiwin	1.7
St.Albert	1.3
Second Order Centres (10,000 - 50,000)	
Yorkton	28.7
Medicine Hat	28.6
Brandon	26.0
Grande Prairie	23.0
Swift Current	22.0
Moose Jaw	19.0
Lethbridge	14.1
Red Deer	12.0
Prince Albert	10.5
North Battleford	9.3
Portage la Prairie	6.5
First Order Centres (greater than 50,000)	
Winnipeg	338
Edmonton	254
Calgary	178
Saskatoon	93
Regina	75

A second manner in which centres can be identified according to population size is by using information provided by Graph V.1. The upper of the two lines is drawn through points of centres which can be considered to have relatively large hinterlands, while the lower line is constructed from centres having relatively small hinterlands. The following list outlines centres falling within each of these general categories:

Large Hinterlands	Small Hinterlands
Brandon	
Dauphin	Portage la Prairie
Flin Flon	Selkirk
The Pas	Steinbach
Thompson	Estevan
Melfort	Humboldt
Nipawin	Melville
Swift Current	Moose Jaw
Yorkton	North Battleford
Grande Prairie	Prince Albert
Hinton	Weyburn
Medicine Hat	Camrose
Peace River	Drumheller
Vermilion	Edson
Wainwright	Fort Saskatchewan
	Lethbridge
	Ponoka
	Red Deer
	St. Albert
	Stettler
	Taber

Referring back to a point already raised, one of many reasons why a large variation of hinterlands arises for similar size centres could be locational characteristics. For example, one could find little criticism with the argument that the element of competition plays a significant part in establishing the trade limits between competing centres. If, for the sake of argument, one of these centres ceased to exist, then, the remaining centre would, by its very existence, capture a wider area. Proximity, therefore, to other urban areas is probably the most important single factor that affects the configuration of hinterlands. A centre located in the remote parts of the northern Prairies will generate a far greater hinterland area than a similar size centre situated close to a large metropolitan area. This is not

to say that the population of the former will be larger (in actual fact, in all probability it will be smaller) but rather its territory will be greater. In the same vein, an isolated centre in the central Prairies will also have a locational advantage.

Taking into account locational factors, the following comments can be made from Graph V.1. Centres having large hinterlands which may be attributed to their remoteness could include the following: - Flin Flon, The Pas, Thompson, Grande Prairie, and Peace River. Centres having relatively large trade areas due to their isolated nature from other urban areas include: Dauphin, Yorkton, Hinton, and Edson. Centres generating small hinterlands due to their close proximity to other major centres include Portage la Prairie, Taber, St.Albert and Wetaskiwin.

QUEBEC

The delineation of hinterlands for Québec centres differed from the procedure adopted for Prairie centres. The results of a survey undertaken by the Québec Department of Trade and Industry furnished the basic information for delineating hinterlands. For the purpose of clarification, a brief summary of the survey will be included.

In 1965 an extensive questionnaire was circulated to slightly less than 1,000 municipalities and involved over 3,000 respondents. The questionnaire was sent to offices of: 1.) town secretary, 2.) parish churches, 3.) major banks, 4.) postmaster. Seventeen questions were covered by the survey and these fell into three major categories. The categories required information on: 1.) work habits, 2.) commercial characteristics including food, clothing, furnishing, automobiles, and construction materials, 3.) personnel and general services. A scoring system was introduced to code the responses. For example, each time a particular municipality was mentioned in any one of the questions, it received a score of either 1 or 2, the value depending upon whether the centre represented the first or second choice for a particular activity (work, shop, recreation, etc.). Total points were then summated from which "zones of influence" were constructed.

Every centre was then placed in a certain zone of influence. In essence, what this really meant was that a method was devised to determine which municipality depended upon the existence (or came under the influence) of a larger central city. For example, a municipality in which over 50% of all responses to the questionnaire mentioned on particular centre, would be classed as coming under the immediate zone of influence of this centre. Other settlements in which 30 - 50% of their inhabitants either work, shop, or partook recreation activities in another given centre would fall under a zone of influence termed "secondary". "Tertiary" zones of influence comprise those settlements and municipalities in which 20 - 30% of all their activities are conducted in one major centre falling inside this zone. Every municipality therefore in Québec

fell within a certain zone of influence. Not every municipality represented a central city. To determine which municipality was classified as a principal trading centre, a hierarchy was constructed. Four criteria were used to arrive at this hierarchy. These were:

1.) number of points scored in each questionnaire

2.) population of centre

3.) population of centre and population of its zone of influence

4.) retail sale values

By applying complex mathematical formulae, trading centres were ranked according to level of activity. These levels were as follows: -

1. principal centres

These centres comprise the largest cities and contained more than 70,000 persons. The population of municipalities falling within the zone of influence of a principal centre exceeded 200,000.

2. secondary centres

These centres range between 10,000 and 70,000 while the populations of their hinterlands varied between 50 and 100,000 persons.

3. tertiary centres

The population of tertiary centres was around the 10,000 level and the hinterland served by these centres was approximately 20,000.

4. quarternary centres

The smallest trading areas having significant zones of influence were termed fourth order centres (quarternary). Their populations were around 5,000 persons while the number of inhabitants living in their hinterlands numbered 10,000. Table V.3 lists those municipalities which fall under a particular class of trading centre, and Map V.2 shows the hinterlands surrounding these centres. The contribution of Map V.2 should be self-evident. The purpose of this section is not to discuss the "whys"and "wherefores" of hinterlands but

Q U E B E C

B E A U C E

SCALE

MILES 20 0 20 40 60 80 100 MILES

LEGEND

HINTERLAND - 1 st ORDER

HINTERLAND - 2 nd ORDER

HINTERLAND - 3 rd ORDER

HINTERLAND - 4 th ORDER

Map V. 2

TABLE V.3

TRADING CENTRES IN QUEBEC: 1965

1. Principal Centres

Hull
Montréal
Sherbrooke
Trois Rivières
Québec
Chicoutimi

2. Secondary Centres

St-Jérôme
St-Hyacinthe
St-Jean
Iberville
Valleyfield
St-Georges
Alma
Drummondville
Thetford Mines
Victoriaville
Roun
Noranda
Rivière-du-Loup
Rimouski

3. Tertiary Centres

Baie-Comeau
Hauterive
Sept-Iles
Matane
Mont,agny
Mont-Laurier
Amos
Val-d'Or
Lachute
Magog
Dolbeau
Bagotville
Beloeil
Roberval
Cowansville
Mont-Joli
Asbestos
Maniwaki
Lac-Mégantic
Plessisville
La Tuque
Buckingham
Ste-Agathe
Coaticook

4. Quarternary Centres

St-Félicien
Windsor
Farnham

rather to identify them. The findings of Map V.2 should completely satisfy this objective. The only further comment that can be included concerns the relationship between area of hinterland and size of centre. Since the over-riding objective of this report is to provide an overview of function of structures, it would be expedient to examine hinterland areas in terms of a population hierarchy. For example, it would be useful to know which of two or more similar size centres has the greatest hinterland capture. The identification of those centres which appear highly atypical would provide a valid starting point for further research in trade hinterlands.

Graph V.2 shows the relationship between size of centre and area of hinterland for Québec centres. A unique phenomenon seen in this graph is the existence of two distinct lines. The configuration of the two lines is such that they both confirm that as population increases, area of hinterland also increases. However, it is the difference between the slopes of these lines that reveals an interesting feature. These slopes indicate that in the majority of cases, the hinterland area of two similar-size centres can vary considerably. For example, Joliette and Sept-Iles both have approximately the same population, yet the former has a trade hinterland that is nearly three times as large as the latter. The following table identifies two types of centres - those that have a relatively large hinterland in relation to their size and those having smaller trading areas.

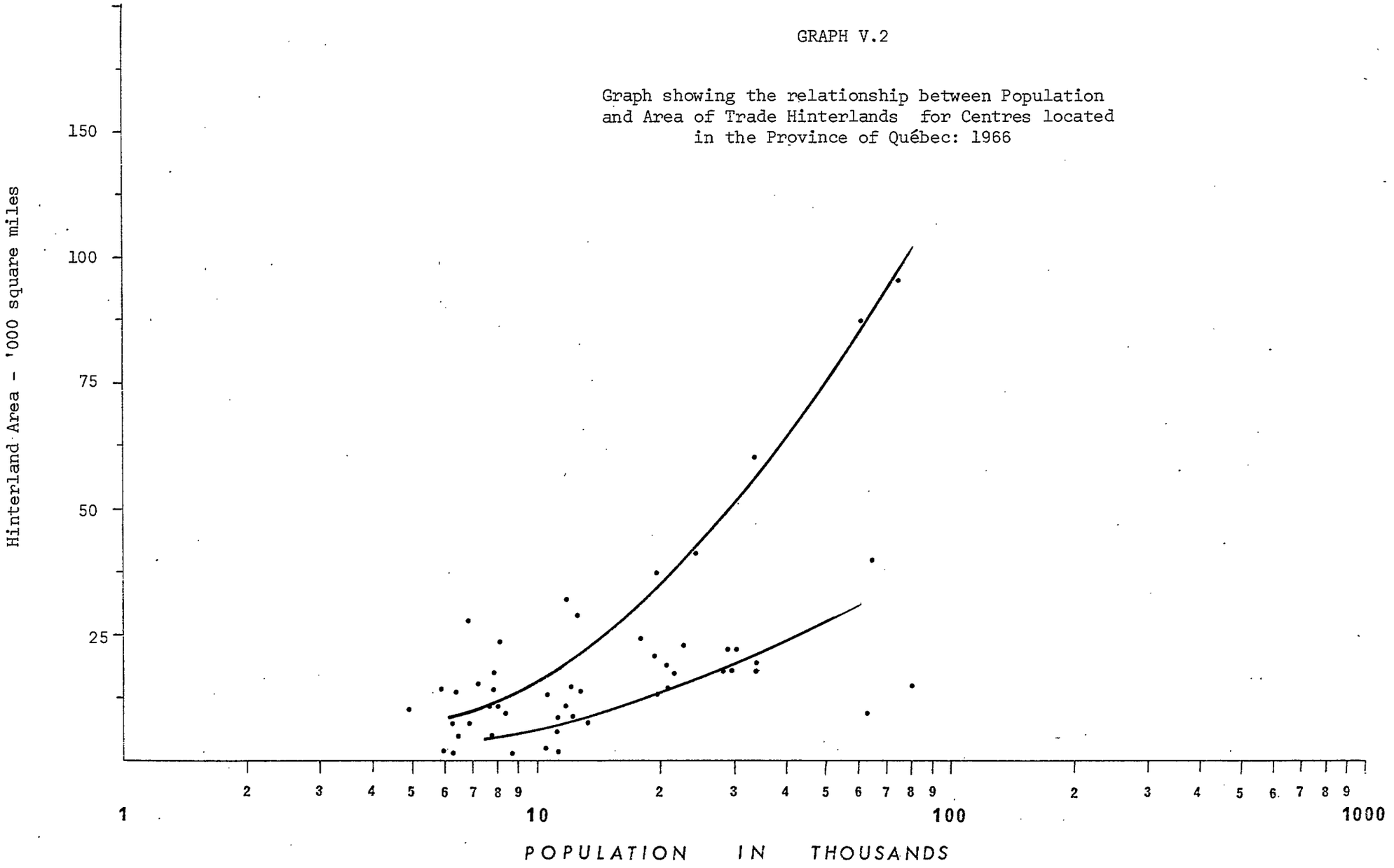
TABLE V.4

TABLE OUTLINING CENTRES WHICH HAVE RELATIVELY LARGE OR SMALL HINTERLANDS

Large	Small
Amos, Chicoutimi, Dolbeau, Hull, Joliette Lac-Mégantic, Maniwaki, Mont Laurier, Rimouski, Rivière-du-Loup, Ste-Agathe-des-Monts, St-Félicien, St-Georges, Sherbrooke, Val-d'Or.	Alma, Asbestos, Bagotville, Baie-Comeau, Beauharnois, Beloeil, Buckingham, Coaticook, Cowansville, Drummondville, Farnham, Granby, Lachute, La Tuque, Magog, Matane, Montmagny, Pointe-Gatineau, Roberval, St-Georges O., St-Jean, St-Jérôme, Sept-Iles, Shawinigan, Sorel, Thetford Mines, Trois-Rivières, Valleyfield, Victoriaville, Windsor.

GRAPH V.2

Graph showing the relationship between Population and Area of Trade Hinterlands for Centres located in the Province of Québec: 1966



Given time and resources, one could assess why such wide ranges of hinterland areas exist. Unfortunately, both time and resources were at a premium in this report. By way of a cursory observation, a similar hypothesis to that raised in the investigation of hinterlands of Prairie centres can be put forward at this point. It is suggested (and only suggested) that geographical location plays an important part in influencing the size of trade areas. A small centre located close to a large metropolis would, because of the competitive element, be less likely to generate a large hinterland. On the other hand, a similar size centre that is isolated will have a larger zone of influence. This of course assumes that both centres offer the same level of goods and services and that the densities of their surrounding areas will be similar.

Keeping in mind this rather generalized theory, one could postulate that the large hinterlands surrounding either Rivière-du-Loup, St-Félicien, Maniwaki, or Val-d'Or, are partially due to their isolation. It is fully acknowledged that one is skating on thin ice by making such blanket statements. However, to confirm their validity, it is necessary to carry out further research in determining which factors affect trade hinterlands. The inclusion of the previous comments are designed to serve as a stimulus for further research.