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Policy Review  
Urbanization  
In  
Western Canada

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## URBANIZATION IN WESTERN CANADA - POLICY REVIEW

### A. Introduction

It should be emphatically stated at the outset that the basic determinants of urbanization are economic development and the demographic responses to this development. Economic development results in and is supported by urbanization. From the birth of Canadian urban centres before the turn of the century stemming from opportunities in the primary resource sector to the self generating service sector phenomena of our mature metropolitan areas, economic development has been the *raison d'être* of the urbanization process. The following paper provides a brief sketch of how; economic forces have shaped the urban west,<sup>1</sup> the roles and relationships of the major centres and the implications of future growth.

### B. Urbanization in Western Canada - Past to Present

#### 1. Historical Perspectives: 1740-1940

The 1740 to 1867 period saw the establishment of various early forts and trading posts at Winnipeg, Edmonton and ultimately Vancouver and Victoria. These early settlements in the prairies (see Appendix 'A' for specific details) were direct responses to the fur trade and locations were determined by both defence and

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1 Urban in this paper will generally include those centres in excess of a 25,000 population figure as indicated by the 1971 census.

supply point considerations. Governmental type functions were for the large part carried out by the Hudson's Bay and the North-West trading companies under the authority of the Crown. Confederation in 1867 brought the first form of political organization within reach of the west. At approximately the same time, the building of the national railway reinforced the continuance or survival of the larger settlements en route, i.e. Winnipeg and Calgary.

The 1896-1914 period saw an extensive settlement of the west, due in part to immigration from European and Asian countries in search of agricultural opportunities. Wheat emerged as a major staple product and the supply and distribution points such as Calgary, Saskatoon and Regina subsequently became major service centres to the agricultural hinterland. At the same time Winnipeg gained prominence in its role as gateway to the west as the major supply and distribution point between the eastern and western provinces. The opening of the Panama Canal soon after the turn of the century provided further impetus for the development of Vancouver as a port for grain shipments westward and obviously weakened Winnipeg's position in the opposite direction.

The First World War created demands for manufactured products and in doing so provided a new stimulus for secondary activities, thus reinforcing the economies in the larger urban centres. The economic transformation of World War I induced techno-

logical changes in agriculture resulting in greater labour productivity and a decreasing need for farm labour. The flow of migrants to the urban areas thus began and has continued to the present.

Any significant urbanization was retarded during the depression followed by unprecedented industrialization and city growth during the Second World War as a result of defence production particularly in Vancouver and Victoria. Consequently, the great transformation of the western economy and with it the movement of population to the urban centres were well advanced by the end of the Second World War.

## 2. Urbanization - 1940 to Present

The postwar period has seen the development of new sources of economic opportunity in oil, natural gas, pulp and paper, mining, transportation, primary and secondary manufacturing, and the service sector. While these developments have acted as stimuli for urban growth and new frontiers in the north, the impact has varied greatly from province to province. Generally, urbanization has taken place at faster rate in provinces which have been able to diversify their economic bases as opposed to those which have a heavy dependency on agriculture. Table 1 below illustrates relative urban growth rates.

TABLE 1

RELATIVE URBAN GROWTH RATES

(000's)

<u>1901</u>	<u>1941</u>	<u>1966</u>	<u>1971</u>
Winnipeg (48.5)	Vancouver (338.3)	Vancouver (892.3)	Vancouver (1,082.0)
Vancouver (43.4)	Winnipeg (302.0)	Winnipeg (308.8)	Winnipeg (548.6)
Vicotira (23.5)	Edmonton (124.9)	Edmonton (401.3)	Edmonton (495.7)
	Calgary (111.6)	Calgary (330.6)	Calgary (403.3)
	Victoria (81.0)	Victoria (173.5)	Victoria (204.8)
	Regina (58.8)	Regina (131.1)	Regina (140.7)
		Saskatoon (115.9)	Saskatoon (126.4)

Source: Statistics Canada

a) Prairie Region

The transfer of labour from agriculture described in the preceding sections had led, in the absence of offsetting rural development, to a substantial decline in the region's rural population. In terms of absolute numbers there were approximately 400,000 fewer rural dwellers in the prairie region in 1971 than was the case in 1941. (see Appendix 'B' for inter-provincial migration patterns). Both the reduction of population and improved mobility have contributed to the decline of small rural trade centres and the concomitant expansion of the region's major cities.

The rural loss has been the urban centres' gain. During the recent past, i.e. between 1961 and 1971, the only census districts in the prairies to experience relative population gains were the five in which the region's major cities are located plus those in the far north. The vitality of the region has come largely

from the five urban centres. In each case, a substantial share of the growth has been based upon the drain from the country. As the pool of rural population dwindles, the consequences for the growth of urban centres could be significant.

The growth of urban concentration is traced from 1951 to 1971 in Table 2 below:

TABLE 2

PERCENT OF PROVINCIAL POPULATION ACCOUNTED FOR BY  
PROVINCE'S MAJOR URBAN<sup>1</sup> CENTRES, 1951-1971

<u>Province</u>	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>	<u>1971</u>
Manitoba					
Winnipeg	46.0	48.5	51.5	52.2	54.7
Saskatchewan					
Regina	8.6	10.2	12.1	13.7	15.2
Saskatoon	6.4	8.3	10.3	12.1	13.7
Total	15.0	18.5	22.4	25.8	28.9
Alberta					
Calgary	15.2	17.9	21.0	22.6	24.8
Edmonton	18.9	22.7	25.4	27.4	30.5
Total	34.1	40.6	46.4	50.0	55.3

1 The figures referred to are those for metropolitan areas. No adjustment has been made for boundary changes.

Source: Statistics Canada



During this interval the proportion of Alberta's population residing in its two major cities rose to more than 55 percent, thus between them surpassing the share of Manitoba's population resident in Winnipeg. In Saskatchewan, while the percent of the province's population living in Regina and Saskatoon nearly doubled, this still amounted to only about one-half the figure accounted for by major cities in the other two provinces.

Below the five major cities are six centres with 25,000 population or more, that serve as secondary wholesale-retail-service centres to more localized areas. While some manufacturing and other types of activity is conducted in them, their role is much more limited and their market area is much more circumscribed than is true of the major cities.

On a provincial by province basis, Manitoba with a wheat growing economy, has experienced very slow growth since 1921, coincidental with the start of the relative decline in importance of cereal crops as portion of the G.N.P. Outside of the City of Winnipeg there have been few, if any, new developments of a scale which could offset this trend. Winnipeg on the other hand, had become a transportation centre before the turn of the century and a manufacturing and wholesaling hub shortly thereafter. Thus while

its growth was heavily dependent on the provincial agricultural sector, its role as a manufacturing and distribution centre for the prairie region has provided a slow but constant growth impetus. By 1951, Winnipeg had grown to a population of 350,000 with 45% of the labour force engaged in manufacturing, transportation and wholesaling activities. With increased urbanization came the evolution of the service and trade industries which have largely been responsible for the growth of the city since 1950.

Since 1950, however, there has been a reduction in the rate at which manufacturing activities have grown in Winnipeg. One factor which has likely contributed to this has been the rapid growth of other urban areas of considerable size in the prairies and some market oriented manufacturing industries have tended to expand in these centres rather than in Winnipeg. Winnipeg's size in the prairie hierarchy is therefore no longer as effective as a stimulus to economic growth in the prairie context.

While, Brandon, a much smaller centre (31,150 population) has been influenced by a similar set of economic forces over the years as Winnipeg, its early economic raison d'être as a service centre to the agricultural hinterland has not changes over time and its slow growth has been dictated by adjustments in the agricultural sector. Agricultural processing and service functions however, have managed to sustain this centre.

Of all the western provinces, Saskatchewan's economy has been the most agriculturally based. Because of this factor and the relative decline in importance of wheat (the prime crop of the province) as a portion of the G.N.P. there has been less impetus for urbanization (55% of people in urban areas over 25,000 population). Apart from some capital intensive activity in potash and oil, there have been no significant developments in the provincial economy which would stimulate urbanization and thus catch the flow of rural-urban migration. With the exception of limited manufacturing activities, universities and public administration, the two major centres, Regina and Saskatoon continue to play their prime roles as service centres to the agricultural sector. The population movement as a result of agricultural adjustment, has continued to flow out of the rural areas and small centres to Regina and Saskatoon, but for the most part to Alberta and British Columbia. Thus, the provincial population total dwindles as the smaller Saskatchewan centres decline. Regina, Saskatoon and the second order centres, Moose Jaw and Prince Albert exhibit marginal growth. (Saskatchewan had 18,200 out-migrants between June 1971 and June 1971).<sup>1</sup>

While urbanization in Alberta was primarily supported by the agricultural sector in the first half of the century, the prime impetus for growth in the second half has been the oil and

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1 Family allowance data

gas industry. Edmonton, already a mixed farming town and administrative and transportation centre, rapidly became the service and access gateway to the north in the early 1900's. Since the discovery of oil at Leduc plus the petro-chemical industry resulting from gas and oil discoveries in the Peace River, Edmonton's population growth rate has been second only to that of Calgary (Edmonton and Calgary 1971 population - 495,702 and 403,319 respectively up from 124,900 and 111,600 respectively in 1941).

Calgary's rapid growth, in recent decades, has been largely due to its role as an administrative and technical centre for the western petroleum industry.

While the smaller cities of Alberta, namely Red Deer, Lethbridge and Medicine Hat, have experienced considerable growth in the last two decades, their heavy orientation toward service functions for the rural area have resulted in relatively small increases in population in the last five years. In summary, the rapid growth of Calgary and Edmonton have accounted for most of the province's population increase in the last five years.

b) British Columbia

Following British Columbia's rapid expansion up to 1940 due to an expanding pulp and paper industry, World War II forced improved technologies for transporting and handling goods through Vancouver resulting in a better integration of the city and its

hinterland. This plus new markets in the orient with responding migration from the East resulted in both rapidly growing interior and coastal areas.

The urban-rural breakdown of population for both British Columbia and Canada is shown below in Table 3.

TABLE 3

URBAN/RURAL POPULATION DISTRIBUTION - BRITISH COLUMBIA

	<u>Canada</u>		<u>British Columbia</u>	
	<u>Population</u>	<u>% Urban/Rural</u>	<u>Population</u>	<u>% Urban/Rural</u>
1951	14,009	62.9/37.1	1,165	70.8/29.2
1961	18,238	69.6/30.4	1,629	72.6/27.4
1971	21,568	78.2/21.8	2,185	73.4/26.6

Although the national trend to increased urbanization is also present in British Columbia urbanization has occurred at a slower pace in the province than it has nationally. Between 1961 and 1971, British Columbia's percentage of population in urban areas slipped below the national figure of 78.2% (B.C. was 73.4%). Of course, at the same time the province's percentage of population in rural locations rose above the comparable national figure.

At present, the population of British Columbia is very unevenly spread throughout the province. Historically, the Lower Mainland, Souther Vancouver Island, the Okanagan, Prince George and Kamloops areas have been the areas of most dense population. The first two contained approximately 72% of the province's population in 19691.

Metropolitan Vancouver has grown by 140,000 persons in the past five years (= to Regina's 1971 population) on a multi-functional economic base which includes head offices for major resource industries, some manufacturing and processing and large port facilities.

Victoria on the other hand, has had an bifunctional economy concentrated on tourism and public administration (population 204,803 in 1971). As the city's economy has not been diversified to include faster growth activities, the resultant urbanization process has been relatively slow.

Urban growth in the interior has been scattered amongst a number of resource/tourist centres with Prince George and Kamloops being the most active.

C. Hierarchy and Relationships in the Western Urban System

1. The Central Place Hierarchy

The principal role of an urban area is to act as a centre for its hinterland. The larger and more developed the urban area, the greater will be the type and extent of services provided. Such services include retail trade, commercial, banking, professional services, and leisure and cultural facilities, and so on. Based on these services, centres can be ranked into higher and lower orders depending upon the level of demand and the geographical limit to the market area.

Appendixes 'C' and 'D' present the extent of the area serviced by prairie centres of varying population sizes. Essentially, we are looking at second order (10,000 - 50,000 population) and first order (50,000 plus) centres.

It is of interest to note that Saskatoon serves a larger hinterland than Regina even though the population of Regina is the greater. Also, the hinterland of Grande Prairie is approximately four times as large as that of Portage la Prairie even though their populations are similar. This is likely due to the close proximity of Portage la Prairie to Winnipeg. Similarly, note the relatively low value for Moose Jaw particularly as it is the third largest centre in the province. In this case proximity to Regina is probably the cause of the low value.

Appendix 'E' is of interest as it indicates little interwestern readership of newspapers. Note the barriers between Edmonton and Calgary, and Saskatoon and Regina. Although this pattern may have altered since 1961, it does indicate some lack of communication between major prairie centres.

The central place hierarchy of British Columbia presents interesting contrasts to the other western provinces. In British Columbia, Vancouver has a prominence which is greater than its population would suggest. Vancouver and Victoria provide the bulk of the central place functions for the province.

In the north central region, Prince George has assumed a position of importance in the provision of regional services. Similarly, the City of Kamloops provides an analogous function in the Kamloops region. However, no similar intermediate sized cities have attained a dominant position in other regions of the province except for the emergence of Kelowna in the Okanagan region and Nanaimo on Vancouver Island.

## 2. Relationships

Interurban relationships are indicated by such factors as transportation and industrial interaction. The following paragraphs outline these particular relationships.



a) TRANSPORTATION

HIGHWAY SYSTEMS - The Trans-Canada Highway serves as the major arterial road facility linking the western cities of Winnipeg, Regina, Calgary and Vancouver. (see Appendix 'F' for interprovincial highway travel patterns). Two other significant centres, Medicine Hat and Kamloops, are also located on the Trans-Canada Highway as a high capacity divided highway within the hinterland of these cities. Highway improvements of this type tend to be orientated in a westward direction, i.e. Winnipeg to Portage la Prairie, Regina to Moose Jaw and Calgary to Banff. This westward orientation as expressed in the highway planning of the area is significant in determining the growth trends of western cities. Major highway linkages exist between Regina and Saskatoon, Saskatoon and Edmonton, and Edmonton and Calgary. This latter facility is a four lane divided highway and experiences heavy use. The existence of this facility emphasizes a strong commercial and social relationship between these two cities.

RAIL SERVICE - C.N. rail services link the cities of Winnipeg, Saskatoon, Edmonton and Vancouver. (see Appendix 'G2' for interprovincial travel patterns). C.P. rail service is provided, in a southern alignment between Winnipeg, Regina, Calgary and Vancouver. Present interprovincial passenger travel by rail is significant between the provinces of Saskatchewan, Alberta and British Columbia. In terms of rail linkages, Manitoba shows a greater orientation towards Ontario but little relationship with the three most westerly provinces.

AIR SERVICES - Because of the spatial distribution of major urban centres in Western Canada, air service plays an important role in maintaining inter-urban relationships, fostering commercial activity and strengthening political ties.

Scheduled airline service via Air Canada, CP Air or Pacific Western Airlines is provided to all major centres in the West. (Appendix 'G1' shows interprovincial travel flows in 1964). Appendix 'H' shows inter-urban air passenger flows for the year 1971. In decreasing magnitude the major passenger flows occur between the following city pairs:

Edmonton - Calgary  
Calgary - Vancouver  
Edmonton - Vancouver  
Vancouver - Winnipeg

While a significant relationship appears to exist between Edmonton, Calgary and Vancouver on the basis of air passenger travel demands, the Saskatchewan prairie cities display a relative isolation. Passenger flows between Vancouver, Kamloops and Prince George generally exceed those found between Regina, Saskatoon and any of the other western centres. Relative ease of auto travel on the prairies probably accounts for much of this difference in air travel.

Of the nine western airports handling significant volumes of air passenger traffic, Vancouver serves almost twice as many trips as Calgary or Edmonton. (see Appendix 'I'). Vancouver's position as the major western port of entry/exit for international air traffic partly accounts for this dominance. Air traffic statistics indicate a relationship between Vancouver and the cities of California which is almost as strong as that between Vancouver and Winnipeg.

b) INDUSTRIAL INTERACTION

Certain key factors appear relevant to the discussion of industrial interaction in Western Canada as it relates to urbanization. The following can be noted based on general experience and field investigation:

- a) In 1967 the prairie provinces accounted for eight per cent, and British Columbia an additional eight per cent, of Canadian manufacturing production.
- b) Approximately 71 percent of the prairies production remains within the prairies while seven per cent is shipped abroad. For British Columbia 49 per cent remains within the province and 36 per cent is exported to other countries. The prairies ship only seven per cent of manufactured products to B.C., and B.C. ships nine per cent to the prairies. This pattern suggests that the exchange of manufactured goods between the two areas (i.e., prairies and B.C.) is not very strong, given their geographical proximity.

- c) With respect to regional inter-relationships in Canada, Professor Wolfe has noted: "Meanwhile precise data is lacking, but indirect evidence suggests that these flows (i.e., inter-provincial) remain far below the level that would make them a source of national strength." And that the large degree of "external interaction" is partially due to "natural north-south routes" and the dependence of some provinces, such as the prairies and British Columbia, on wheat-oil-potash, and forest products - metals - fish, respectively.<sup>1</sup>
- d) The present structure of freight rates for commodity movement to or from the prairie provinces may be a major obstacle in furthering industrial interaction between centres in the west and between prairie cities and the rest of Canada.

D. Governmental Strategies Related to Urbanization

The economies of both the prairie provinces and British Columbia have been orientated toward natural resource exploitation and processing. In keeping with this the industrial strategies of all four provinces have concentrated on increasing the degree of processing of natural resources and expanding and diversifying

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1 R. Wolfe, Economic Development, Chapter 8, in Canada a Geographical Interpretation, edited by John Warkentin, Methuen Publications, 1968.

the secondary manufacturing industry base. In geographical terms, however, there has been little obvious selectivity or a 'growth centre' approach.

British Columbian stated policy is to create more secondary manufacturing industries. The present government appears prepared to use the province's well developed forest and minerals industry as a financial base to provide a source of funding to develop manufacturing industries. Part of the expansion of secondary manufacturing is predicated on the further processing of forest products. Expanded efforts to develop plywood markets in Western Europe represent developments in this area. As of this time the spatial implications of the government's industrial development plans are still unclear.

In Alberta the government strategy is to expand the petrochemical industry based upon the province's oil and gas resources, and to increase the degree of processing farm products. Part of this policy objective is to diffuse farm processing into the rural areas of the province.

The government has indicated that it is prepared to use its leverage with respect to oil and natural gas to provide "infant industry" protection to new manufacturing establishments and to attempt to rescue lower transportation rates for enhanced access to markets.

In Saskatchewan there have been minimal attempts to diversify the province's economy base into agricultural processing and manufacturing industries. Neither policy has proven very successful to date as the value of farm cash receipts is twice as large as the value of shipments of manufactured goods.

The spatial development policy of the present government is to maintain as many viable small communities as possible. To accomplish this goal the government is attempting to:

- maintaining as many small grain handling facilities as is feasible;
- develop labour intensive agricultural activities (such as livestock) that require further processing;
- establish high value to weight secondary manufacturing industries that can bear the cost of transportation to market.

The Province of Manitoba has announced a 'stay option' policy designed to provide job opportunities for people in southern Manitoba. What this means in a spatial context is yet to be clarified. Signs to date appear to indicate a possible diffusion of the province's economic development effort which would tend to further retard the growth of Winnipeg. It can be assumed that this policy option is motivated, in part, by the provincial election expected sometime this year.

E. The Urban Future in Canada

In order to background the relative magnitude of future urbanization in the west let us first examine the future urban system in a national setting. Lithwick<sup>1</sup> estimates that by the year 2001, maintaining present trends, 94% of Canada's population will be urban. Of the total for the same year, 73% will live in the 12 major urban centres (24.8M). More conservative estimates place the figure at 55%<sup>2</sup>. No matter which estimates are used they both point out the fact that these 12 centres will have become the focal points of national economic life. Toronto and Montreal together will have over one-half of this major urban area population. Western cities will have a 25% to 35% share of the total.

What trends points toward these massive concentrations of urban population? The more major trends are:

- the build up of general economic activity in the major urban centres, part of which is due to the expanding labour intensive service sector;
- continued increasing labour productivity in the rural areas resulting in the rural to urban population shift;
- the dominance of the larger centres is being reinforced by the inter-urban transportation networks.

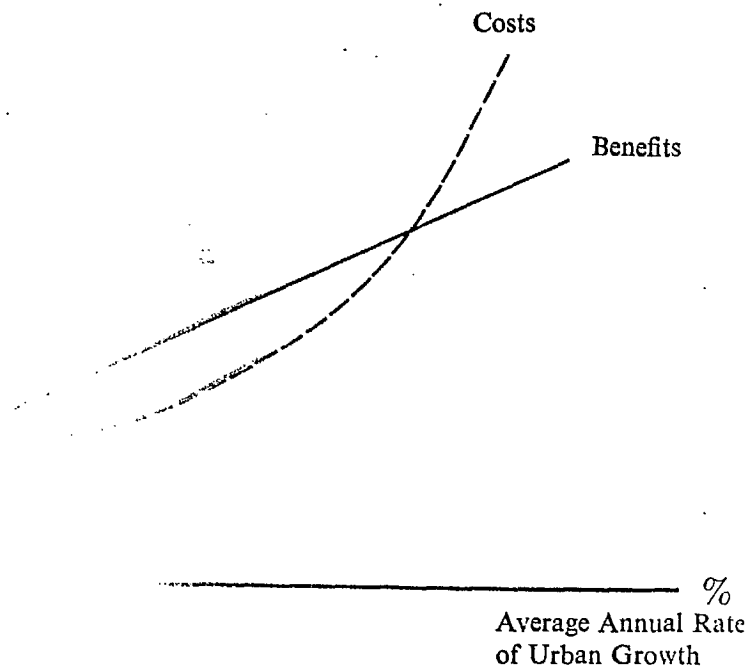
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1 Lithwick, N.H., Urban Canada, Problems and Prospects

2 Systems Research Group

Large concentrations of population will have obvious benefits (i.e. mass markets, industrial specializations, industrial linkages, diversified labour force etc) but the urbanization process (i.e. high land costs, urbanization congestion, pollution, finance problems, environmental quality) will no longer be proportional to population growth, but instead intensify disproportionately. The costs of urbanization as well as the benefits will grow simultaneously, but at different rates and will eventually cross as illustrated in figure 1.

FIGURE 1 - COSTS AND BENEFITS\*



\* Lithuanian Journal of Economics, Problems and Prospects



At some point, therefore, the economic benefits provided by increased urbanization start to be nullified by what one might term "social costs" associated with problems inherent in large agglomerations of population. Past approaches to solving urban problems have attacked the "symptoms" of these problems (i.e. expanded basic infrastructure systems) which has in turn compounded the problems by easing growth further. Few, if any, have tried to come to grips with "optimizing growth". Implicit in optimizing growth is the question of an optimum size of agglomeration and an optimum growth rate. Several thresholds have been identified in the urbanization process (not explicitly researched to date) which had led to the establishment of several rules of thumb which deal with desirable trade offs between economic development and social costs.

The first prescribes that a city economy (assuming a diverse economic base) becomes self-generating or mature<sup>1</sup> when it reaches a threshold population of half a million. Another maintains that growth, after reaching the half million mark, becomes exponentially more costly in terms of a centre's financial ability to cope with such problems as urban infrastructure (this again assumes a diversified tax base). It has been found, for example, that a change in mode of transportation facilities is required at or beyond this population figure and that given the investment in highway facilities, any centre is incapable of financing the change to new forms of mass transit. While this population threshold is purely hypothetical, it

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1 Lithwick, N.H., Urban Canada, Problems and Prospects

is the best measure we have to date and is based on the experience of many individuals and as such is worthy of consideration in examining the urban future of Western Canada.

It should be emphasized, however, that there are obvious exceptions to these rules of thumb, particularly in the urban centres below the threshold which are based on non-diversified economies which are slow growth and/or contribute little revenue in support of municipal services. Consideration of these factors must be given in the following review of future urbanization in the western provinces.

F. The Urban Future in the West

1. Projected Urbanization

In order to have some yardstick with which to discuss the urban future in western cities it is useful to approximate the distribution of urban population in individual cities to identify the degree to which polarization is likely to place given present trends, and consequently the problems which may occur. Projections, which are naturally open to much question, have been developed by both SRG<sup>1</sup> and Lithwick<sup>2</sup> (based on economic supply and demand estimates, respectively relative to the national economy) which provide distributions of population in western Canadian cities

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1 Systems Research Group

2 Lithwick, N.H., Urban Canada, Problems and Prospects

for the next three decades. The former estimate generally showed a lower performance than was indicated by the 1971 census and the latter exhibited levels which were overly optimistic. Averaging the two projections, while mainly subjective is thought to be more realistic in at least the short term (which crystal ball is better is anyone's guess).

TABLE 4

PROJECTED POPULATION<sup>\*1</sup> WESTERN MAJOR URBAN CENTRES (000's)

	<u>1971</u> (Actual)	<u>1981</u>	<u>1991</u>	<u>2001</u>
Winnipeg <sup>*2</sup>	548	724	964	1273
Regina	141	193	261	357
Saskatoon <sup>*1</sup>	126	171	234	321
Edmonton	496	571	776	1052
Calgary	403	457	611	821
Vancouver	1082	1238	1670	2254
Victoria <sup>*1</sup>	205	226	301	401

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\*1 An average of SRG and Lithwick estimates. As Saskatoon and Victoria figures were not included by the latter, growth rates similar to other C.M.A.'s in that province were applied.

\*2 Because of Lithwick's exceptionally optimistic outlook for Winnipeg, averaging failed to bring this estimate down to a more credible approximation.

The above figures illustrate that the populations of four of the seven western major urban areas will have passed or be close to the half million point within the present decade. Vancouver was well beyond the threshold by the early fifties and Winnipeg reached this point in the sixties. Edmonton and Calgary will have reached this figure in the seventies and eighties respectively. Regina and Saskatoon show little hope in reaching this point by the turn of the next century while Victoria will come within reach of it by the year 2001.

2. Implications of Growth and Related Policy Considerations

a) MANITOBA

Given these approximations of future growth in the major western urban centres, what are the implications.

Winnipeg has reached the threshold where, in order to cope with its urban problems it is now looking toward new forms of infrastructure (see Section G ) and cost sharing arrangements with senior levels of government (i.e. L.R.T. - light rapid transit, railway relocation, new major additions to water supply and tailor made housing programs for the increasingly larger segment of society which can ill afford conventional CMHC housing programs). A brief has recently been submitted by the city to the province which more advantageous cost-sharing arrangements for needed infrastructure are proposed.

Let us stop for a moment and examine the implications of these new demands relative to the future growth of the city and the province. In the past, Winnipeg has contributed a proportionally (population) greater share toward total provincial revenues than the remainder of the province<sup>1</sup>. In terms of allocation of provincial expenditures, Winnipeg received a proportionally smaller share than the rest of the province. In spite of these benefits to non-Winnipeg Manitoba, it is now questionable that the aggregate provincial economy can sustain itself relative to average Canadian indicators of income, etc. Adding to this the new demands by Winnipeg for a greater share of provincial revenues would seem to indicate a further weakening of the province's economic position.

Thus in spite of the self-generating effects of Winnipeg's economy finds itself no longer able to financially cope with future growth. Fortunately the city's expansion has been relatively slow and an effective administration has established a sound infrastructure base on which to build.

In spite of this administration, the city's tax base has been weakened in recent years by continuous expansion in the residential sector and a concomitant reduction in the rate in which manufacturing activities have been establishing in the area. The rapid growth of the other major prairie centres have resulted in large enough populations to warrant the expansion of market

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1 Metro-Corporation of Greater Winnipeg, The Place of Greater Winnipeg in the Economy of Manitoba; 1971

orientated industries in these areas. Winnipeg's prime role as the major centre of the prairie region has thus diminished and will likely continue unless new activities orientated toward outside markets can be established. Outside of the Winnipeg area, potentials in the provincial economy appear to be very marginal. Perhaps a no (or very slow) growth policy including a planned out-migration element would benefit both the province and the major urban area?

Acknowledging that the latter alternative will not be politically palatable, the main policy question which must be answered relative to the future growth of Winnipeg and possible intervention by senior level government appears to be (assuming that the aggregate provincial economy is not capable of adequately sustaining itself), to what extent should efforts to bolster the provincial economy, be directed toward Winnipeg knowing that supportive per capita infrastructure costs will be considerably higher (because of agglomeration effects) than in lower order centres such as Brandon. Perhaps gains in terms of optimum trade offs between economic stimulation benefits and social costs could be achieved by interventions in a number of centres. An assessment of the impact of specific types of intervention on various orders of centres are beyond the scope of this paper.

A very real factor which must be considered in viewing the future of development in the province, is the Manitoba Government's intentions for attempting to halt the current trend of rural-urban migration. These intentions (although not stated legislated) imply increased efforts toward improving the viability and quality of life in the provinces smaller urban centres. Such an approach obviously requires recognition or determination of the roles that the various urban centres of Manitoba's sub-regions should play and to relate these roles to the potential adjustments that can be made within the provincial space economy.

Policy makers must therefore address themselves to the consideration of size complications and agglomeration economies as against the possibility of improving the life-style quality and productive efficiency of concentrations of people throughout the various orders of centres in the provincial urban network. This is not only applicable to Manitoba's case, but is equally relevant to Saskatchewan and Alberta's situations.

b) SASKATCHEWAN

Recent analysis of Saskatchewan's performance indicates that, relative to Canadian averages, this province is facing economic difficulties. The heavy orientation toward agriculture in both the rural and urban economies show that future developments within the province will be largely dependent on this industry.

Failure, (if it can be called that) to diversify has resulted in a slow, if not retarded urbanization process. Neither Regina or Saskatoon are expected to reach a size, by the year 2001, which would enable them to develop a self-generating capability.

As few job opportunities are available in the larger urban centres, the rural-urban flow of labour finds its way to Alberta and British Columbia.

It is postulated that Saskatchewan's relatively poor performance in terms of job creation, participation rates, and income levels is closely associated with its failure to urbanize to the same extent as Manitoba and Alberta. Not only are Saskatchewan's major centres substantially smaller than the other prairie cities, and thus precluded from conducting some activities that require greater concentration of people, but, more importantly, the opportunity to participate in urban-based activities is not available on the same proportional basis in Saskatchewan as it is to residents in the other provinces. Given recent and anticipated development patterns, it is likely that substantial improvement of Saskatchewan's overall economic performance can only be achieved through the accelerated development of these two cities.

While growth or lack of it has had a negative affect on aggregate provincial performance, it had had certain positive implications for both Regina and Saskatoon. Slow growth to date,



has given the civic administration in each of the two centres adequate time to plan and implement programs for extending infrastructure as needed. Relative to future growth, however, a number of basic problems have arisen, each directly or indirectly associated with inadequate (poor industrial/commercial-residential mix) tax base. Regina's residential tax rates are rising beyond acceptable levels. Industrial development is not keeping pace with an expanding residential sector. Added to this will be abnormally large expenditures for expanding required sewerage treatment facilities.

Thus while the city is still below the threshold population of one half million, its tax base which is lacking in industrial assessment, will not provide adequate resources to finance even the conventional infrastructure of the smaller city. In addition, the commercial portion of the tax base lying at the core of the city is in jeopardy due to the establishment of two new large shopping centres on the outskirts of development. Downtown rehabilitation efforts must therefore be undertaken if this area is going to compete with new shopping centre developments.

In Saskatoon's case, with similarly slow growth, the economic base is slightly more diversified and a pioneering, but successful attempt at land banking has helped to reduce land costs for development purposes. This, plus an effective administration have managed to keep a more reasonable revenue/service cost balance in the city. However, conventional planning and development expenditures will be required to accommodate future growth (assuming past growth rates) which, when related to anticipated revenues, will place an increasingly heavier burden on the taxpayer. The city has submitted a brief to the provincial government outlining required future expenditures (see Section G for civic needs and opportunities).

Evidence to date, thus indicates, that if the future populations of both Regina and Saskatoon are going to attain the normal trended levels projected in section F.1, development must be supported by either efforts to diversify the municipal tax bases or by senior government assistance for infrastructure; or likely both.

Below the metropolitan level, Moose Jaw and Prince Albert are experiencing similar, but more pronounced, difficulties than Regina and Saskatoon. Each has had a heavy dependency on the agricultural service function and as such has performed

accordingly. Individually, Moose Jaw is in a more difficult location being in the urban shadow of Regina (approximately 40 miles distant). Regina tends to pick up whatever industrial/commercial development is wishing to locate in the area and Moose Jaw inherits retirement people and the cost of servicing them. (almost the central city/suburban municipality tax base problem). As a result of little new economic growth Moose Jaw's population has declined in the past five years. Prince Albert, on the other hand, in addition to its agricultural service centre role, has taken on new functions related to northern development (training centre, supplier, etc.) and the establishment of the pulp mill. In spite of these new stimuli the city faces a considerable revenue/cost of services problem. (the city is growing). Social costs tend to be high as Prince Albert acts as a sink or temporary home for northern migrants. As the main centre in the north-south flow of goods, services and people its continued role in serving the north could be an important factor within the overall provincial economy.

What then are the implications of Saskatchewan's future urban system relative to the provinces present and expected economic situation. If the major urban areas are to provide normal basic services to meet the needs of the population anticipated, given present trends, they will require a greater proportion of senior government revenues. The present provincial economy, at best, is merely surviving on the basis of present

revenues. If governments agree that the provincial economy must be improved, i.e. the economy diversified and stimulated, then the obvious place to do it is in the larger urban areas. But what is large to Saskatchewan? About 65% of the people live on farms or in centres of less than 25,000 population. Because of distances and the scatteredness of the population, people appear to relate to and identify with smaller centres -- there is less tendency (than in Manitoba) to go the extra distance to the two major centres or even Moose Jaw and Prince Albert. People interviewed for input to this paper stated that the majority of residents of the province are more concerned about maintaining what they have now (farms, smaller urban centres with no big city problems and a clean environment) than creating growth for growth's sake. Recent provincial policy tends to reflect these attitudes as shown by the government's intentions to reinforce the family farm concept.

These above factors are therefore important to a growth strategy for the province. How then, does the Saskatchewan urban system fit into such a strategy or vice versa. The development potential of the secondary centres is considerably less than Regina and Saskatoon (with the possible exception of Prince Albert relative to thenorthern development). Threshold consideration almost preclude an extensive development of professional service, and trade facilities in the number, variety and quality required to support extensive or sustained growth. While their importance as rural service centres and as locations for processing of certain

locally produced raw materials is unquestionable, their potential for substantially influencing the performance economy is extremely limited. This leads one to the obvious conclusion, considering previously discussed provincial concerns, that any attempt to optimize growth in Saskatchewan must include a balance between extensive efforts to concentrate new developments in Regina and Saskatoon and at the same time stabilize and ensure the viability of a small number of second order centres including at first glance, North Battleford, Yorkton, Swift Current and Weyburn. Any greater dispersal of major effort would tend to lessen the impact on diversifying the total provincial economy. Two exceptions to this general approach would have to be taken with regard to Prince Albert and Moose Jaw.

Assuming a new emphasis on the north, Prince Albert would obviously play an integral role in this process and thus would be supported by it. Moose Jaw on the other hand would not likely receive adequate spinoff benefits from Regina's new developments. Rather than weaken Regina's future position (i.e. encouraging some industrial activities to locate in Moose Jaw) an alternative approach might include acknowledging Moose Jaw's role as a dormitory centre or satellite (no competition for industrial uses) to Regina, ensuring a high level quality of life there through infrastructure assistance, etc. Moose Jaw's supporting (subsidizing)

the tax base through a sharing of Regina's industrial/commercial municipal revenues and the provision of the best possible transportation linkage between the cities. While at a first glance, this might appear politically undigestible at the provincial level, it might receive considerable consideration by both provincial and local levels if the federal commitment is large enough and conditioned on this kind of arrangement.

From a regional viewpoint, any strategy which may be formulated for economic development in the province, must out of necessity be supported by inter-urban or regional systems.

Inter-provincial air transport to the major urban centres in particular must improve to remove the relative isolation of Regina and Saskatoon.

c) ALBERTA

The rates of urbanization in Alberta's two major centres, Calgary and Edmonton have been second to none in Canada. Resource development and related expansion in the service sector of the province have been considerable and are expected to continue in at least the short term. The economies of both centres are generally accepted as having self-generated qualities and are expected to be capable of resultant populations of approximately a million persons each by the end of the century, given present trends and expectations in the provincial economy. While this forecast might be overly optimistic, it does, however, point out that the immediate or even medium problems are not those of Saskatchewan, i.e. stimulating economic growth.

As one might expect, discussions with senior planning officials in both cities, have indicated that serious strains are being placed on urban infrastructure to accommodate the influx due to these rates of growth. Both cities appear to be at or near the threshold whereby new types of infrastructure will be required to cope with future growth. Traffic congestion in particular, is becoming a major symptom of the basic problem - overconcentration of economic activity and people in one large unit. Both cities are giving serious consideration to light rapid transit systems but are moving very slowly as senior level government money would be required to finance them.

Edmonton planners, in particular, are concerned about the cost/benefit of threshold size and are hoping to direct more funds to exploring various development options. Evidence shows that residents in both cities are becoming more and more concerned with quality of the urban environment. This concern is being publically expressed in both cities as community groups have been successful in protesting and stopping a number of expressway proposals. Their concern is for preserving a sense of community in their city as opposed to allowing the usual 'plumbers' approach to development which results in the Los Angeles kind of self-defeating city surgery.

In both Edmonton and Calgary the phenomenally rapid rate of urban development in the last 25 years engendered a massive public and private investment in urban infrastructure. The relative strength of the urban tax base, financial assistance from the provincial government and city ownership of some public utilities enabled the major cities to maintain a heavy debt load and still retain a good credit rating in the municipal bond markets. However, the cities have had the natural advantage that they were moving through that part of the metropolitan growth cycle which enabled the rapid growth to be supported by relatively unsophisticated infrastructure systems. It has now reached a point in city development (with a population just approaching 500,000) where the spare capacity of the relatively unsophisticated infrastructure systems has been exhausted and the level of sophistication of the planning process which so far enabled city growth to take



place in a fairly orderly and economic fashion is not adequate to meet the different level of problems which the next phase of city development will pose.

Despite the recent shift of responsibility for funding education from local to provincial governments, the reform of the municipal taxation system results in very small net benefit to the major cities which are unable to cope with the financial demands implicit in the next phase of city development. If we accept that the major portion of future demands on public capital for infrastructure in a city with Edmonton's size and growth characteristics will come from transportation and major servicing systems, then the city should be examining some options for future development which will allow some measure of public controllability of costs of implementation. So far Edmonton and possibly Calgary have rejected the freeway concept, on the basis of financial incapacity and public rejection but has not come forward with a positive alternative for future transportation needs. The need for a transit system with mass delivery capability is obvious and has been accepted in principle by the councils for some years, but lack of capital availability has arrested implementation. Meanwhile, city planning efforts, which are basically an exercise in development trends, has been ineffectual enough to allow private developers to make the decisions on future directions of city growth without even being in a position to estimate financial

development options with accompanying financial implications. In Edmonton, the city plan embodies the option of multi-directional peripheral accretion with most of the new development beyond the effective operating range of a radial bus system. Road transportation is thus the only viable alternative but freeways solutions have already been rejected. If it can be confirmed that the solution to transportation problem is the highest ranking item of future expenditure, then it would seem to make sense to investigate the needs of a mass transit system and ensure that future characteristics of city expansion are compatible with those needs. Mass transit systems seem to operate most efficiently in a linear system which would suggest in Edmonton's case linear expansion along the river valley, or even planned decentralization. So far these options have not been explored, nor has staging of city development, owing to the high cost of the planning effort involved.

If the Department is considering funding of urban infrastructure, funding of some meaningful investigations into some of the basic issues relating to financial implications of future methods and directions of growth is a basic prerequisite. In Edmonton, at least, there would be some receptiveness for this approach at the senior management and political level and probably even some grudging appreciation from the line departments most affected, where most of the present staff resources are allocated to dealing with operational crises. At least, the exercise would relate development and financial needs to tolerable levels of

local taxation, and federal decision making on level of infrastructure assistance could be provided with a rational base.

In terms of policy implications in the provincial context, concern with urbanization must imply a degree of concern with ruralization, and recent statements from the province (as with other prairie provinces) indicate that there is growing concern at the provincial level with the problem of achieving a more equitable and perhaps a more efficient balance between the major cities and the resource regions in which they are located. At present, it is difficult to assess whether this apparently growing emphasis on ruralization is justified or even whether it is firstly a viable economic option, secondly a feasible option (i.e. is it capable of implementation in the face of existing urbanization forces) or lastly, if it is a wholly social option, what is the cost of maintaining it and who will pay? At the moment it is difficult to judge whether the provincial concerns for ruralization/urbanization are rooted in rural romanticism (the desire to maintain the rural vote).

In any case the most appropriate option in Alberta's case, relative to the disparities of the prairies might be to support the province's inherited role as employment producer for the region by attempting to optimize further economic development benefits through a spatially allocative urbanization strategy. Such an approach would provide overall long term gains

by achieving a better balance between economic benefits and social costs. Under such a scheme (which would require much study) optimum growth rates for Calgary and Edmonton would be established as fixed objectives (rates lower than presently being experienced) and specified forms of economic development in excess of these rates would be encouraged to locate in either other designated second order centres such as Red Deer, Lethbridge and Medicine Hat or entirely new planned communities satellite to Edmonton and Calgary. The land banking and new community development efforts of the Federal Ministry of State for Urban Affairs could be utilized to support such a scheme.

While it is understatement to say that such an approach would encounter a few political hurdles, it is by no means a new idea and untried experience. The growth impetus of the provincial and urban economies lends themselves to such an approach as does the current provincial concern for ruralization.

Separate but still apart of the future urbanization process in the province will be the planning and establishment of a new city based on the tar sands development in the Fort McMurray area. A new city of upwards to 100,000 population is anticipated.

While needed infrastructure can likely be provided by the province and private enterprise, a worthwhile DREE role could focus on social adjustment measures to ensure that the disadvantaged have access to employment opportunities.

d) BRITISH COLUMBIA

Urbanization in British Columbia has been somewhat different than in the other three western centres in that firstly the Greater Vancouver area is one of the three first order centres in the national context and secondly that considerable urban growth is taking place in other parts of the province. While primary and service sector activities are providing a positive impetus for and attracting growth in such subcentres as Prince George and Kamloops, the Greater Vancouver area is experiencing a population growth in a more negative sense. Because the latter has been a large source of employment in the past it is attracting an overabundance of migrants from the prairie region, particularly Manitoba and Saskatchewan. This rapid influx of migrants in the past few years has not been accompanied by a proportional increase in industrial growth resulting in exceptional high unemployment rates relative to the rest of the Western Region. Coming to grips with this problem has been difficult as past provincial development strategies have been heavily geared toward primary resource development with little emphasis on secondary manufacturing in the urban centres. The attitude has been that the Vancouver area can take care of itself.

Added to this population growth/employment problem are all of the urban growth strains being placed on the urban infrastructure of Vancouver. The city has long passed the half million population threshold whereby the economic benefits of agglomeration tend to conflict or be nullified by rising social costs. The Greater

Vancouver area has been fortunate however, in that it has grown from a number of smaller cities or modes of economic concentration around which living areas have formed. This pattern of urbanization has had advantages in the past as each mode has had its own work area in close proximity to the living area. The result of course has been less economic concentration in the central city. Development over the past few decades has tended to change this pattern as the expansion of each mode has grown together to form one continuous urban area. This in turn, along with a heavier concentration of activities around the inner city port facilities, has tended to centralize business development in the core of the city of Vancouver itself. This change in land use or daytime density has produced severe strains on transportation facilities as more and more people have to make the journey to the central city for work. At the same time the growing population is locating where new urban land is being developed, on the fringe of the metropolitan area, which is the furthest point from the central core.

Given the extensive growth postulated by the projections indicated in section F.1 , the urban problem faced by the Greater Vancouver area could be horrendous. A strong public concern over these problems is being voiced and civic decision makers have shown positive signs toward dealing with them. Residents are very much aware of the unique physical attributes of the area and have shown that they are not of a mind to allow conven-

tional planning approaches to carve up their cities with a maze of expressways. Recent protests have stopped various super highway proposals and the local administration has chosen to put a freeze on all major expressway construction. Various forms of mass transit are being considered as an alternative to freeway construction. Financing such a system has already been identified as a serious constraint relative to municipal revenue capabilities, thus placing the onus for implementation heavily on senior government assistance.

While a new rapid transit system might help to alleviate the short term inter area movement problem it is really only attacking one of the major symptoms of concentrated development in one large urban unit. Further concentrations of economic development in the central city will only magnify the urban problem further. Thus we have the classic dichotomy of conventional urbanization which is reinforced by remedial measures to improve transportation, etc. At the same time government is attempting to coming to grips with the unemployment problem and with it high welfare costs through economic expansion. Thus problems are feeding on the solutions.

What are the alternatives to this growth dilemma? Some possibilities for improvement may lie in the west coast<sup>s</sup> anticipated new pacific rim orientated port functions. It is postulated that new types of specialized port facilities will be required in future to handle the increased flow of raw materials to expanded

trade with China, Japan, etc. While one school of thought feels that these required facilities should be centralized in the main Vancouver port area, Urban Affairs, in discussions with another British Columbia group of thinkers believe it is worthwhile to look at the possibility of establishing specialized ports at various locations along the coast, i.e. coal ports, grain ports, oil ports, etc. If feasible, it might also be worthwhile to examine the potential for some form of initial processing at these locations as well. In any case, these activities might be extensive enough to support sizeable urban communities which in turn would relieve some of the long range growth complication for Vancouver.

It is acknowledged that this concept for population dispersal is purely academic at this point in time, but further investigation of its possibilities is warranted in view of the serious urban implication of allowing a multi-functional support in the central Vancouver area.

Dispersal of future population growth through decentralized special ports, however, will not be adequate to optimize economic development and social opportunities in the greater Vancouver area. An extensive planning exercise must be carried out to determine the best allocation of future urban space. This will likely mean the establishment of large satellite urban units with rapid transit linkages to the present metropolitan area. Senior government participation in the planning, development and financing



will be an obvious essential. Economic stimulation programs will be required to provide the impetus for the growth modes of the new communities concurrently with industrial diversification efforts to assist in maintaining the economic health of the central city.

Victoria's urban future appears to hold less problems of the big city nature with an anticipated population less than half a million by the year 2001 (see section F.1). Victoria, instead is faced with the difficulties of an inadequate and undiversified economic base. The city has been largely dependent on tourism, public administration and a marginal if not insignificant secondary sector. As a popular retirement centre a large portion of its population is the non-productive age group. As there are few opportunities for young people much of the city's vitality and enthusiasm is exported. While purely a speculative opinion, a visit to the city reveals to the outsider that vitality in the tourist industry is also dwindling. Many, if not most of the key attractions and facilities are 'lack lustre' and generally not the kind of tourist package that would have great appeal to any age group. Public transportation is sadly inadequate (the airport taxi service does not go directly to individual major hotels) as is the general visual appearance of the central area. The cities' general impression makes one feel that Victoria

had a role which caused it to prosper and the role was taken away sometime ago.

If the city's tax base is going to cope with expenditures to accommodate future residential development, and if tourism holds out the greatest possibility for economic growth, then large amounts of capital will be required to improve and develop the existing urban environment. As the municipal tax base is presently very weak, senior level government expenditures will be required. If not already in process, a major study should be carried out to determine what, how, where and when a total tourist development package can be delivered. Participation by the city from the very beginning of such a scheme would be essential.

e) SUMMARY

Lack of diversification of the economic base on which the cities of Winnipeg, Regina, Saskatoon, Calgary, Edmonton and even Vancouver rely appears to be a growing concern of the provincial governments of all western provinces. The movement away from exclusive concern with agricultural and resource development is pointing up the vulnerability of the western cities and is probably responsible for increasing sensitivity in the areas of national transportation, trade and tariff policies,

where opportunities exist for both lowering costs of primary production and increasing the possibilities for manufacturing and processing opportunities. The growing provincial concerns for diversification of products and markets could provide a basis for departmental involvement on the basis that an ounce of prevention may be worth a tone of cure. As a complementary measure, the growing concern with the reinforcement of the rural centres could be interpreted as a fail-safe measure to strengthen the economic base on which the cities are founded and have developed.

If we are prepared to expand our concerns to encompass spatial distribution of population (as opposed to concentration on a single facet, i.e., urbanization), the vulnerability of the western provincial economies and the extreme sub-regional differences which exist within the western region, not only can we move out of the area of direct competition with Urban Affairs, (and avoid complications at Treasury Board) but stand a chance of being able to enter into some meaningful discussions with the western provinces with the objective of hammering out by consensus guidelines for substantive economic expansion policies for Western Canada, on the basis of which jurisdictional policies can be negotiated and, if necessary, re-formulated. In this area there is an unquestionable role for this Department, but our success would probably be dependent on the degree of credibility which we could establish with the provincial governments, and this in turn would be dependent upon the degree of influence that the Department would be allowed to exert in the areas of

co-ordination of federal policies and programs. The difficulties of formulating national plans in a federal system would indicate that a federal agency with a co-ordinating and negotiating role might be more effective and appropriate than the more traditional and formal methods which are borrowed from nations with centralized governments.

In the absence of substantive national policy relating either to the western region or the urban areas within it, it would seem that we are only left (in the short term, at least) with the opportunity to investigate the reallocation of jurisdictional responsibilities with regard to urban development. Assuming no real appetite federally for renegotiation of taxation powers or provincially for reallocation of constitutional responsibilities for urban areas, it would appear that in substantive terms the only opportunity for the federal government is to exert an influence on physical planning and development, using the leverage of the financial incapacity of the municipal and provincial governments to tackle major urban problems. Our justification for attempting to exert this influence can really only be justified in the present context by a desire to effect a higher degree of functional efficiency of these cities. An interest in efficiency generated by a more rational pattern of development may in turn be justified by the argument that a unit increase in the productive efficiency of urban systems is an equally effective means of maintaining standards of living as a unit increase in per capita income. In view of the basic vulnerability

of urbanization in the west, pay-off in terms of obtaining maximum value for the urban investment dollar could be equally great in a context of attempted diversification of the urban economic base or a failure to achieve it.

G. Opportunities in the Western Urban System

1. General

At the outset it should be made abundantly clear that the author is cognizant of the fact that 'opportunities' are only such if they are found to be useful tools or things to be done in order to achieve or effect predetermined objectives. As the western review process is only in its preliminary stages, the formulation of overall objectives for the western region has not yet been possible. Subsequently the following discussion or listing of opportunities is completely without a particular focus. In other words some of the items discussed might fit into one strategy for the west while a different strategy may have no use for these items. This fact must be kept in mind when evaluating the following.

Opportunities for the purpose of this paper have been divided into two distinct categories: firstly, opportunities to optimize and improve the efficiency of the urban system and thus indirectly improve economies and, quality of life; secondly, opportunities to create new or expanded economic activity.

2. Opportunities to Optimize and Improve the Efficiency of the Urban System

a) MANITOBA

- Winnipeg - improvements to the highway system - five major radial freeways (19 miles) and one circumferential beltway facility (37 miles)

were planned for the period 1968-1991 at an estimated total cost of \$609 million. Major street improvements including new links were planned for completion by 1971 at a cost of \$53 million; freeway improvement in this time period were planned for completion at a cost of \$22 million. Some major street improvements have been completed but construction has not kept pace with recommended staging due to lack of financing. Issues: controversy over disruptive effects of freeways, excess capacity on perimeter road and problems of municipal financing of highway projects.

- establishment of mass transit facilities - inner city rapid transit line (5.4 miles) planned for completion by 1991 at an estimated cost of \$158 million. Project not yet committed due to lack of finance. Issues: cost
- water and sewer facilities - additional water supply by way of a second aqueduct from Shoal Lake which will require an estimated expenditure of approximately \$59 million (1969).

- Brandon - improvements to water sewer systems - extensions to existing systems are required to provide an adequate supply of preserviced industrial land. At present the industrial commission feels that prospective industries are not being offered an adequate selection of suitable sites.

- downtown redevelopment - the city in cooperation with the province has prepared a downtown redevelopment scheme which is required to protect the investment in the central commercial core. Included in the scheme is land assembly, parking facilities and general improvements in the traffic pattern. costs - undetermined.

b) SASKATCHEWAN

- Regina - improved highway facilities - widening of major facilities to four and six lanes, proposed 1972 to 1981. New construction of major arterial facilities in the northwest of the city planned for periods 1981 - 1991, 1991 - 2011. Highway costs are expected to be \$140 million between 1972 and 2011. Annual average per capita cost expected to be \$16,000 similar to present levels. Issues:



Whether or not urban arterials can suffice instead of freeways; environmental support of road widenings proposed, particularly a section of Abert Street; early start desired on rail relocations to allow better connectivity in the road system.

- mass transit facilities - extensions of 'Telebus' services to N.W. and establishment of a NW/SE bus service planned for 1972-1981. Existing telebus is successfully serving 32,000 people with people with substantially increased ridership in these areas (federal participation demonstration project through MOT). Bus service in reserved lanes planned in NW/SE and NE for 1981-1991. Rapid transit line proposed for 1991-2001 and to be considered for extension in the period 2001 to 2011. Capital cost for these transit plans are expected to be \$49 million. Issues: degree of transit ridership orientation attainable with proposed linear urban development concept; source of financing for proposed light rapid transit facility; earliest year in which such a facility could be economically justified, relationship of

linear concept and rapid transit to a revitalized, weather protected core area.

- water and sewer - All four urban development concepts studies in the 1971 Regina Environs Transportation Study can be serviced with water/sewer facilities at reasonable cost, with a 40-year capital expenditure of about \$25 million required to accommodate a possible increase of 175,000 persons in this period. No major restraints are expected; the city would continue to draw its water from Wascana Creek upstream of the experimental farm and discharge sewage after secondary treatment downstream, to the northwest of the urban area.
  
- apart from these normal extensions to existing services, the city has in the past been dumping relatively untreated waste into the local drainage systems resulting in the serious pollution of lakes located downstream from the city. The province has reacted to this problem by requiring that the city provide adequate treatment to stop this problem. Additional secondary and tertiary treatment facilities will be necessary to remedy the situation. Cost - unknown.

- Downtown Rehabilitation - the city planning department has recently completed a 'Downtown Regina' report which outlines the need for improving the downtown business core environment to protect existing investment in the area. It is generally felt that recently established outlying shopping centres will weaken the attractiveness of the city centre. The protection of the existing commercial revenue base is considered of great importance in view of intolerable high tax rates on residential property. The downtown scheme envisages a more compact downtown core, ease of pedestrian movement through covered walkways, improved parking facilities, etc. Cost - undetermined to date.

- Saskatoon - Highway Facilities - Major highways upgrading recommended by 1961 DeLeuw, Cather study. Study featured a one-way street system, reservation of sufficient right-of-way land for a future ring road and six grade separations on both CN and CP rail lines. Costs of improvements at 1961 dollars was estimated at \$24 million. Issues: Problems existing are due to a demand for traffic crossing railroad lines - currently located

north and west of the CBD, the demand for traffic crossing the South Saskatchewan River and congestion in the CBD. The recommendations of the 1961 Study have nearly all been implemented including a program of railway relocation. The city is currently negotiating the undertaking of an urban transportation study with the provincial government; to be similar in nature to the recently completed Regina study.

- Transit Facilities - Existing transit services are provided by bus at average levels of services. Consideration is being given to an express bus service on the expressway providing radial service to the downtown from the south end. Issues: Whether or not to introduce Telebus and tie it to improved express bus service.
- Water and Sewer - No known problems.

c) ALBERTA

- Edmonton - Highway Facilities - Proposed is an "outer ring road" to connect the inner city to regional highways; "penetrator" arterial roads to link the external road system to the inner city, an inner ring road and an improved major arterial street system. The costs of planned construction activity (including bus and

rail transit plans) amounts to \$185 million, or an annual expenditure of \$15 million over 12 to 15 years. Current Issues:

Traffic congestion on the approaches to the high level bridge, inadequate downtown access from suburban areas by automobile and the heavy through movement of trucks in the city centre and a general rejection of more expressways by the resident population.

- Transit Facilities - Transit improvements are planned for the existing bus system. Such improvements include exclusive bus lane operation and the implementation of a bus surveillance and control system. A light rapid transit system which will be integrated with the bus system is proposed for the city. The probable capital cost of the first phase of the L.R.T. system is between \$107 million and \$118 million. Issues: Inability of city to finance the L.R.T. system.

- Water and Sewer - Presently the city and private developers have not been able to agree on a satisfactory financial arrangement for servicing a large portion of new residential development in the completion of the southeast sector of the city (the Millwood site). This large area (4,000 acres) was acquired with provincial and federal financial assistance (the province acquired the land secretly at relatively low cost and turned it over to the city in return for an IOU) over two years ago and development was to have begun immediately. It has since been delayed because of the city's inability to finance the required trunk services (sewer and water) linking the area to the existing system.
- Calgary - Sewer and water facilities - no identified major problems.
- Highway Facilities - 1967 transportation plan recommended 125 miles of freeways and expressways to meet travel demands for 1986. Focal point of proposed highway network centres on the proposed road network in the downtown area - this consists of two distributors running

on the north and south sides of the downtown core respectively. Peripheral parking garages are proposed for the inner city area. Total cost of freeway and arterial construction including acquisition of right-of-way is expected to be \$400 million. Issues: congested major street and bridges; lack of adequate major transport routes linking downtown to outer city areas. Opposition by citizens and Council members to urban freeways has effectively halted this program.

- Transit Facilities - Plan recommended improvements to the municipal bus system and the construction of 12 miles of rapid transit line. Capital costs of constructing the rapid transit line were indicated as being between \$64 million and \$78 million. Recently, municipal reorganization has brought public and private transportation under the integrated control of one commissioner. Innovative steps are being taken, including a highly successful radial express bus service called Blue Arrow Bus Express Systems (BABES) which has been showing rapidly rising ridership levels (federal support through MOT Transportation Development Agency for demonstra-

tion project). Issues: degree of transit ridership which can be achieved by further innovations and whether or not this will solve the mounting road capacity problems caused by continuing growth and lack of freeway construction; financing of rapid transit facility could also be a problem if senior government assistance is not forthcoming.

- Industrial park facilities adjacent to airport - the city feels there is a need for an industrial park adjacent to the airport - cost unknown.

d) BRITISH COLUMBIA

- Vancouver - Improved Highway Facilities - an early study (N.D. Lea Associates) indicated a need for an east-west freeway, a waterfront freeway, freeways on the north shore, an upgrading of a number of major arterial facilities. Also identified was a need for another crossing of Burrard Inlet and improved crossings of the north arm of the Fraser River. The total cost of these projects was estimated at \$250 million over a fourteen-year period. This is approximately double the figure spent by Vancouver in the ten-year period



1956-1965. Issues: Crossing of Burrard Inlet, disruption of residential districts due to freeway plans and truck activity associated with the port facility.

- Transit Facilities - The Greater Vancouver Regional District plan (1971) proposed an expanded urban bus system incorporating express bus activities and local bus services in the entire Greater Vancouver area. The operating deficit of this expanded and upgraded transit system is expected to be \$6 million annually on implementation and this would increase to approximately \$11 million per annum some four years following implementation. The plan also proposed a light rapid transit system in Vancouver (Richmond - Vancouver - New Westminister). Capital cost activities vary for the L.R.T. system but are expected to lie between \$25 million and \$80 million depending on the type of system adopted. Issues: sources of capital funding for transit system; financial (deficit subsidies) basis for possible transfer to the Greater Vancouver Regional District (GVRD); allocation of transit costs and benefits among GVRD member municipalities.

The province is considering the possibility of allocating the capital held for a Third Narrows crossing toward the capital costs of 90 plus buses for an improved metro bus system perhaps on a "free ride" basis.

- Water and Sewer - Have been taken over by the GVRD. The need for improvement of sanitary sewage disposal facilities was identified with emphasis on tertiary treatment.
  
- Housing and Land - A shortage of all types of housing has been identified in the metro area linked to the extremely high cost of urban land (the agricultural land "freeze" in B.C. has driven up costs of available urban land), to over-regulation, to lack of capital, and to CMHC national policies which do not recognize regional distinctions and needs. The B.C. Department of Community Planning is currently purchasing land (land banking) for low cost housing in the Vancouver and Victoria regions with an initial \$10 million fund and utilizing NHA assistance.

- Victoria - Improved Highway Facilities - 1965 Capital Regional Transportation Study recommended construction of approximately 16 miles of freeway (Patricia Bay Freeway, Trans-Canada Freeway, West Victoria Island Freeway). Widening and reconstruction improvements to a number of arterial streets were recommended as a means of providing good east-west circumferential routes and improving access to Central Victoria. In addition, a one-way street plan consisting of four pairs of one-way streets was proposed as a means of increasing existing street capacity in the downtown area. The total cost of the recommended improvements was estimated at almost \$44 million over a five-year construction period. Issues: anti-freeway stand by citizens and Councillors have curtailed road construction; Capital Regional District (CRD) will probably take over regional roads, transit and possibly parking within a year or two; proposed limit on downtown high-rise development will help avoid serious road traffic congestion over the next few years.

- Transit Facilities - the 1965 study recommended an improved bus service consisting of a greater transit coverage through the adoption of east-west circumferential transit routes in areas of high travel demand. The reduction of suburban service from very low density residential areas was proposed as a means of improving transit capabilities in the higher density areas. More recently, consideration is being given to the introduction of Telebus services, which could be particularly attractive for the large proportion of elderly, retired people living in Victoria. Issues: Takeover or regional transit by CRD; financial arrangements with B.C. Hydro and provincial government for on-going transit deficit subsidies; possible introduction of Telebus tied into a Light Rapid Transit system.
  
- Water and Sewer - have been taken over by CRD. No particular problems, although local ocean pollution owing to inadequate sewage treatment is a recurring source of public indignation and a new outfall into the ocean is under study.

3. Opportunities to Create New or Expanded Economic Activity

a) MANITOBA

- Winnipeg - urban tourism - the greater Winnipeg area possesses a rich historic part which to date has remained relatively unexploited. As part of the early fur trading and frontier days, Winnipeg played a key role in the early exploration and the opening up of the western frontier. Numerous early forts were established in the area which provide focal points for historic events. The locations are all interconnected by the Red River which possesses considerable natural beauty. Added to this is the multi-cultural development of the city with all of its unique characteristics.

Another tourist potential of the area exists in the fact that Winnipeg is the largest, coldest city in the world. Winnipegers are well aware of the uniqueness of their city. A new enthusiasm has developed for the city resulting in the construction of the convention centre (the facilities in which are unmatched by most cities twice the size). People see Winnipeg as the gateway

to the west and north and as such are enthusiastic about promoting the city qualities as part of a tourist package.

- electronics industry - entrepreneurs in the city have recently and successfully begun to produce and market electronic devices associated with the medical world. Some potential may exist to build on this industry.

- Brandon - agricultural processing - particularly related to livestock may have some possibilities for development.

b) SASKATCHEWAN

- Saskatoon - Agricultural - new product research and development - rapeseed has had a beneficial impact on Saskatchewan's economy. Further potentials in this area may be relatively unexplored. The city presently has considerable research talent in this area which could be utilized through the establishment of a large scale research unit for this purpose.

- Regina - Agricultural equipment - new product research and development - innovators in the province are continually developing new types of agricultural equipment which are marketed

as fast as they can be sold. It may be feasible to establish a research institute in Regina to develop and provide a basis for marketing types of agriculture equipment.

c) ALBERTA

- Edmonton - northern development orientated equipment - the development of the tar sands is likely to provide a demand for unique types of equipment related to the oil and gas industry.
- Calgary - pollution control facilities, research and development - the hinterland of Calgary houses some of the best opportunities for testing pollution control devices. The new university with its strong emphasis on environmental quality could provide the expertise required to develop such facilities. The production and marketing of the same would follow.

d) BRITISH COLUMBIA

- Vancouver - port facilities development - the port facilities of Vancouver has great potential, relative to anticipated trade with oriental countries. Initial processing, with consideration to the urban environment could provide an impetus for further growth.

- Victoria - tourist development - this city possesses obvious amenities for tourist development - climate, physical beauty, etc. - a large input of capital will be required to improve the urban tourist facilities of the area.



A P P E N D I C E S

CANADA'S MAJOR WESTERN URBAN CENTRES

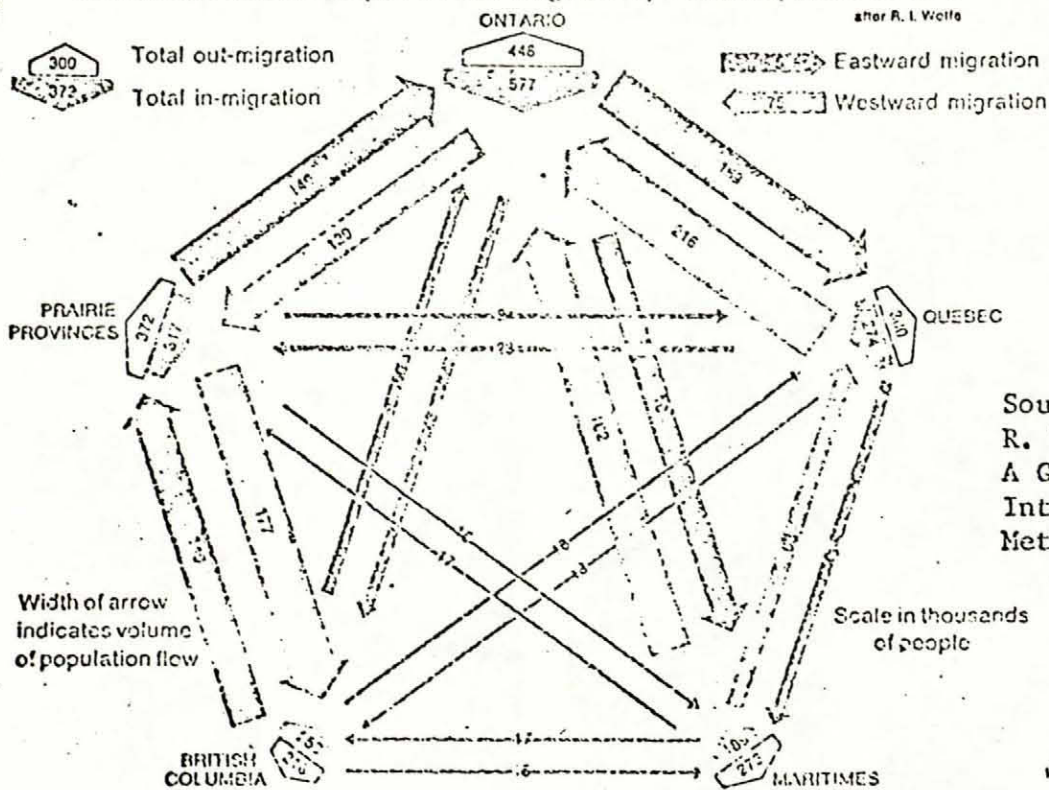
City	Province	1971 Pop.	Site Amenities	First Settlement	First Role
Winnipeg	Man.	540,260	River/CP/ CNR	1811	Fur Trade Post
Regina	Sask.	140,735	Creek/CPR	1882	Capital for N.W.T
Saskatoon	Sask.	126,450	River/CN	1883	Settlement Node
Edmonton	Alta.	495,700	River/CN	1795	Fur Trade Post
Calgary	Alta.	403,320	River/CP	1875	Police Post
Vancouver	B.C.	1,082,355	Ocean Port/ River	1843	Fur Trade Post
Victoria	B.C.	94,010	Ocean Port/ Climate	1750	Fur Trade Post

SOURCE: Urban Canada, J. and R. Simmons, Copp Clarke, Toronto, 1969, p. 166.

Most of the Prairie and Alberta/B.C. cities were founded in the 1800-1900 period, the earlier ones as forts and trading posts and the later ones as agrarian market centres and resource sites.

Estimated total interprovincial migration, Canada, 1956 to 1961

after R. L. Wolfe



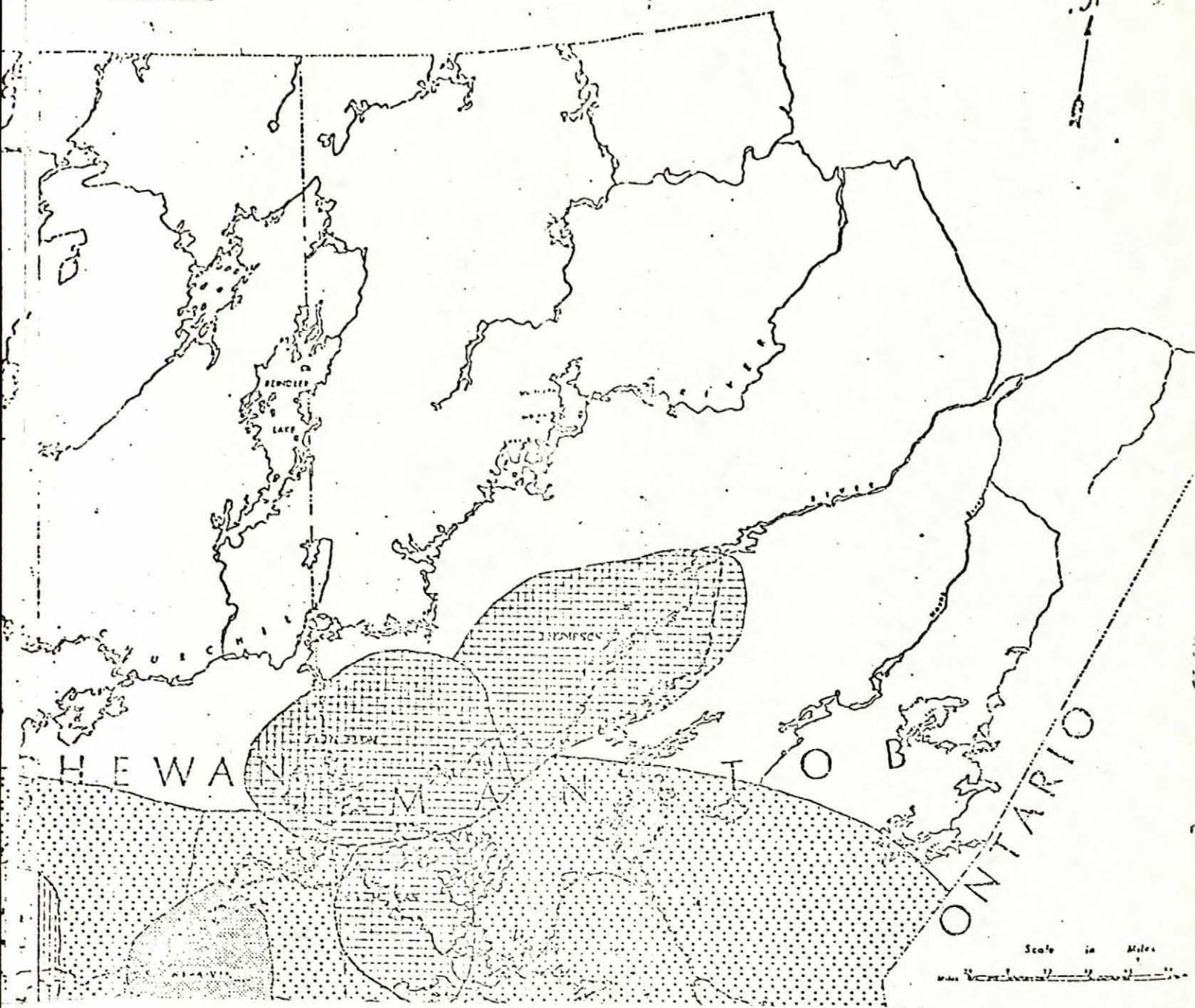
Source:  
R. Wolfe, Canada  
A Geographical  
Interpretation,  
Methuen Press, 1963

TABLE RANKING IN DESCENDING ORDER AREA OF HINTERLAND  
TWO HIGHEST POPULATION CATEGORIES

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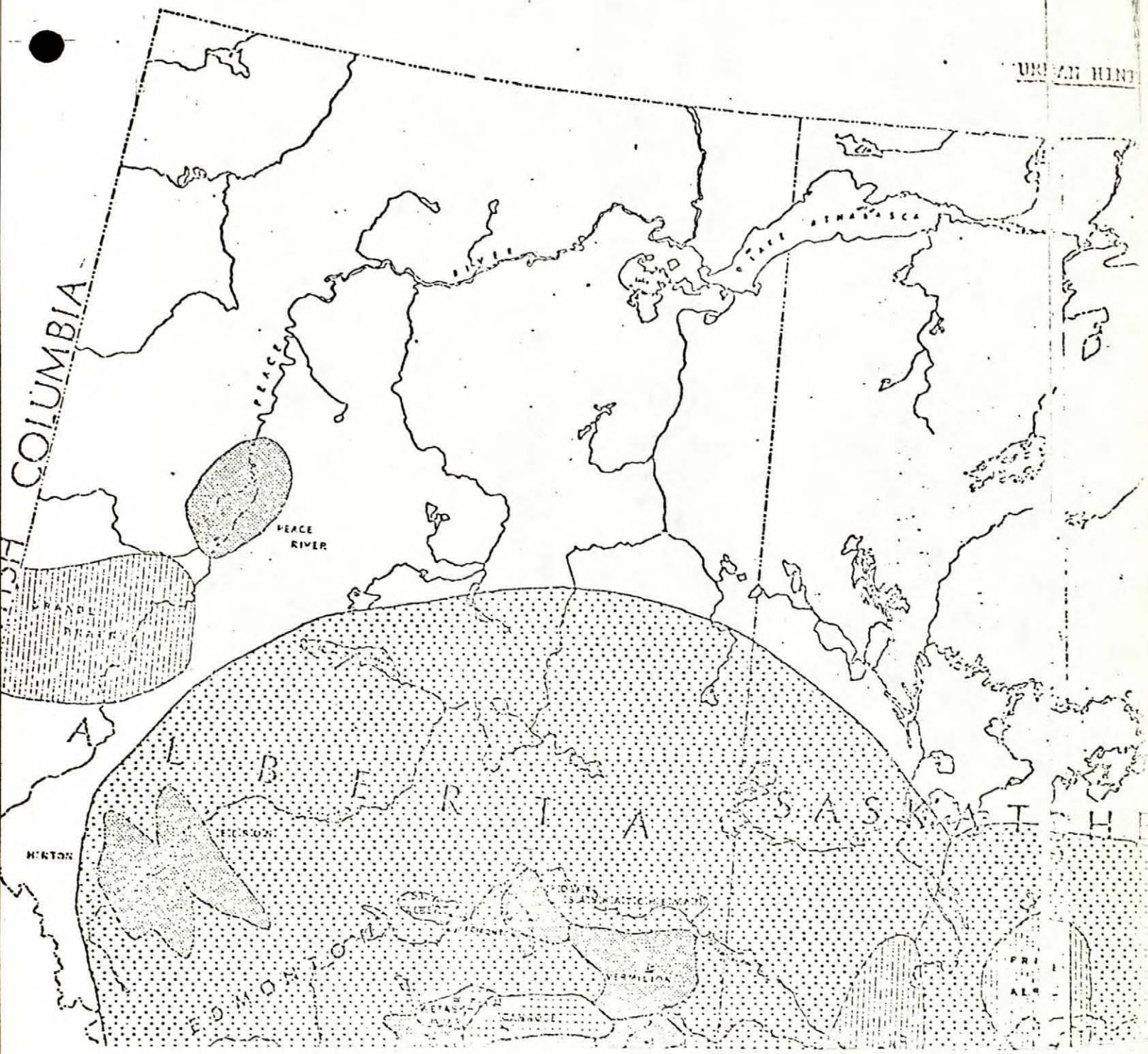
<u>Centre</u>	<u>Area of Hinterland</u> (thousands of sq. miles)
	Second Order Centres (10,000 - 50,000)
Yorkton	28.7
Medicine Hat	28.6
Brandon	26.0
Grande Prairie	23.0
Swfit Current	22.0
Moose Jaw	19.0
Lethbridge	14.1
Red Deer	12.0
Prince Albert	10.5
North Battleford	9.3
Portage la Prairie	6.5
	First Order Centres (greater than 50,000)
Winnipeg	338
Edmonton	254
Calgary	178
Saskatoon	93
Regina	75

HINTERLANDS



Scale in Miles  
0 10 20





BRITISH COLUMBIA

PEACE RIVER

SASKATCHEWAN

ALBERTA SASKATCHEWAN MANITOBA

WINSTON

EDMONTON

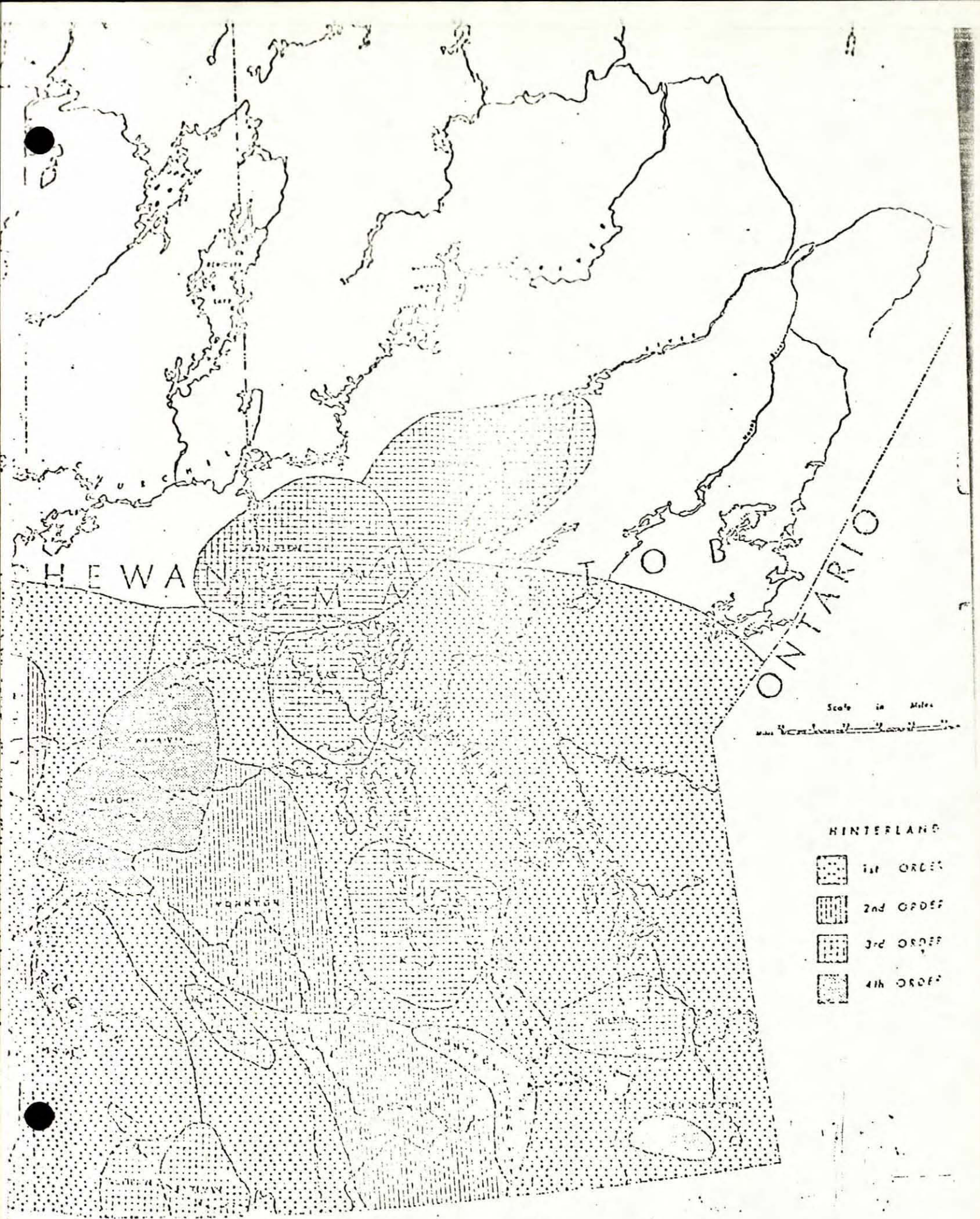
VERMILION

WINNIPEG

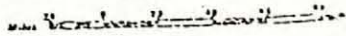












Scale in Miles



HINTERLAND

-  1st ORDER
-  2nd ORDER
-  3rd ORDER
-  4th ORDER



TRAVEL VOLUMES IN EACH DIRECTION

- 1000-10,000 TRIPS
- 10,000-25,000 TRIPS
- 25,000-100,000 TRIPS
- 100,000-350,000 TRIPS

1964

INTERPROVINCIAL TRAVEL BY AIR

FIGURE 6b

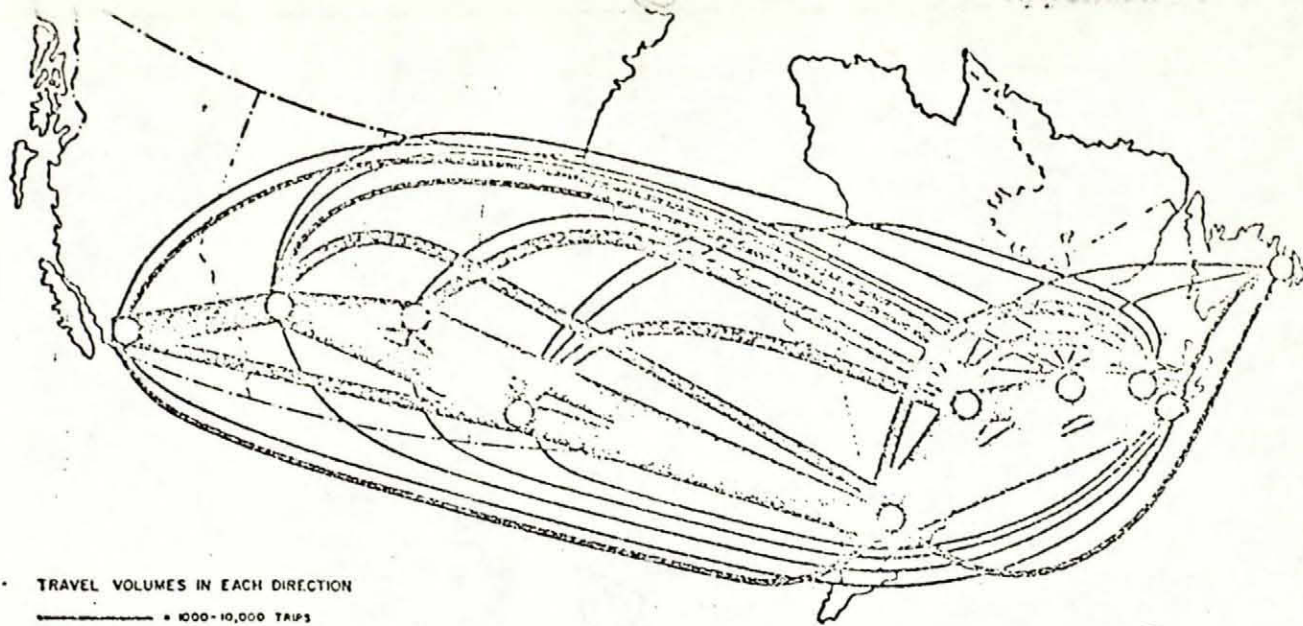
TRAVEL VOLUMES IN EACH DIRECTION

- 1000-10,000 TRIPS
- 10,000-25,000 TRIPS
- 25,000-100,000 TRIPS

1964

INTERPROVINCIAL TRAVEL BY RAIL

FIGURE 6c



TRAVEL VOLUMES IN EACH DIRECTION

- 1000 - 10,000 TRIPS
- 10,000 - 35,000 TRIPS
- 35,000 - 100,000 TRIPS
- 100,000 - 350,000 TRIPS
- 350,000 - 1,000,000 TRIPS

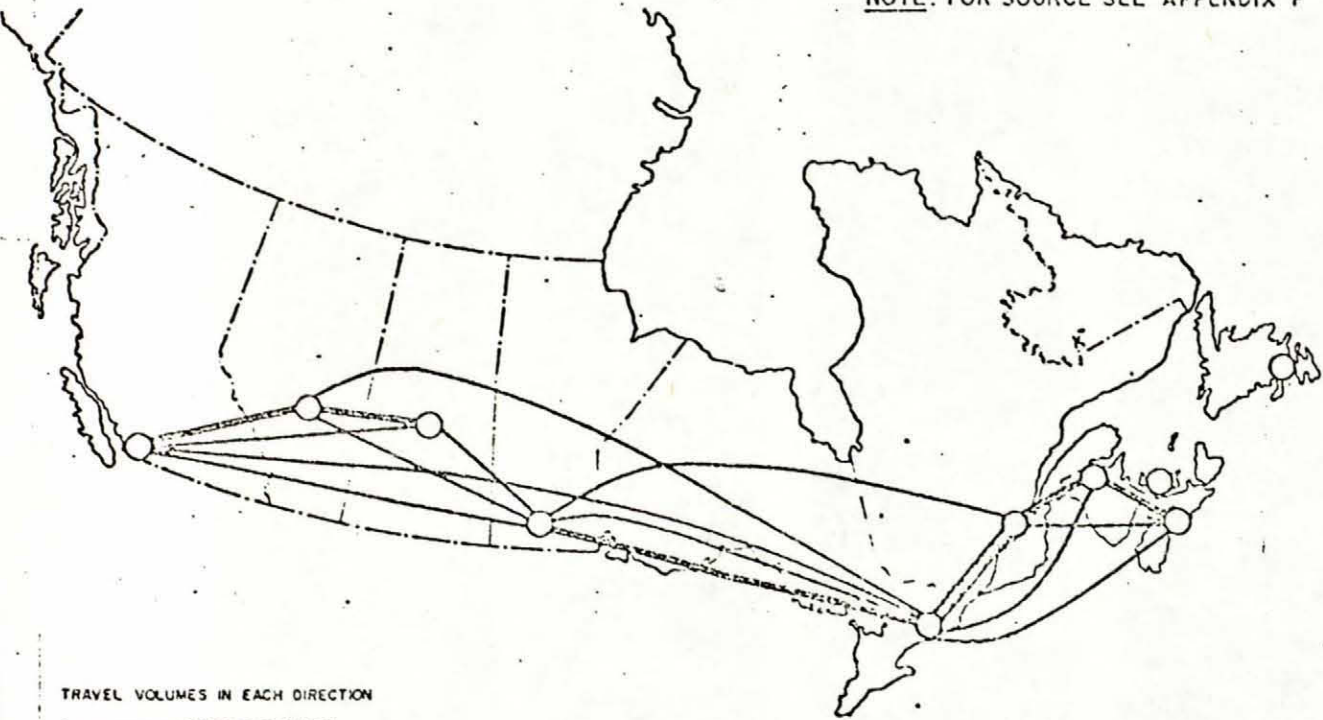
1964

INTERPROVINCIAL TRAVEL BY CAR

FIGURE 60

PROVINCIAL TRIP-ENDS WITHIN EACH PROVINCE SHOWN SCHEMATICALLY RATHER THAN FOR SPECIFIC CITIES

NOTE: FOR SOURCE SEE APPENDIX F



TRAVEL VOLUMES IN EACH DIRECTION

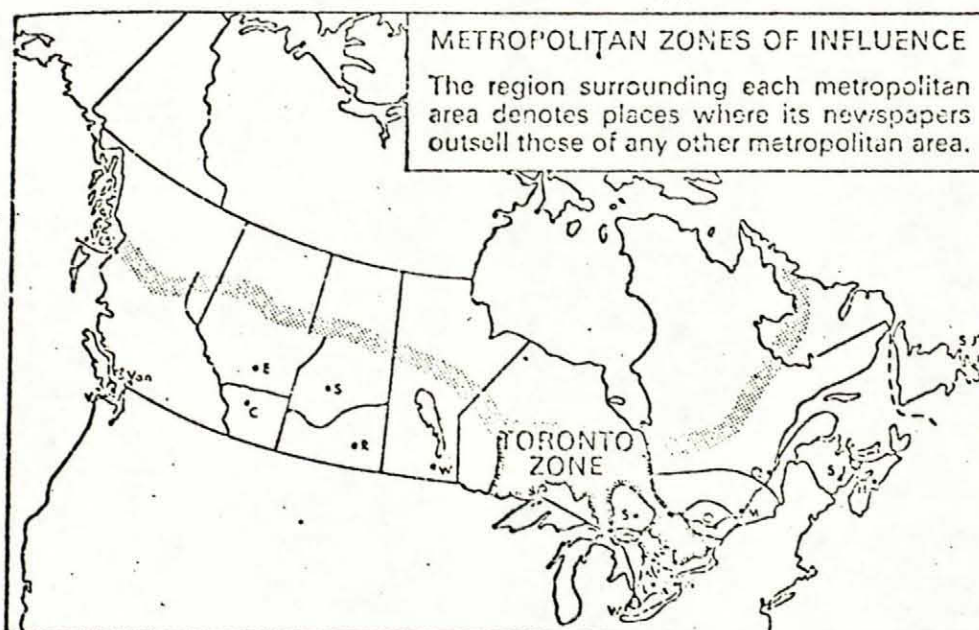
- 1000 - 10,000 TRIPS
- 10,000 - 35,000 TRIPS
- 35,000 - 100,000 TRIPS

34

INTERPROVINCIAL TRAVEL BY BUS

FIGURE 61



INTRA-WESTERN READERSHIP OF METROPOLITAN NEWSPAPERS

4.2 Trade Areas of Metropolitan Newspapers  
Data obtained from Dominion Bureau of Statistics, *Census of Canada, 1961*.

Source: Urban Environment,  
Dep't. of the Environment  
Ottawa, 1971

## DOMESTIC AIR PASSENGER MOVEMENTS IN WESTERN CANADA - 1971

FROM \ TO	Winnipeg	Regina	Saskatoon	Calgary	Edmonton	Vancouver	Victoria	Brandon	Kamloops	Prince George	Prince Albert	Lethbridge	Medicine Hat	Red Deer
Winnipeg	-	21,185	19,170	28,575	21,760	42,460	5,130	25	390	430	225	480	30	5
Regina	21,600	-	3,105	20,285	12,160	17,245	2,885	10	305	155	1,465	160	-	35
Saskatoon	19,830	3,365	-	13,415	10,145	14,425	2,080	10	365	180	275	150	-	20
Calgary	28,510	20,100	14,355	-	126,220	90,120	14,270	60	4,370	400	205	80	-	10
Edmonton	21,550	10,745	10,855	128,580	-	70,295	8,810	30	570	2,855	90	25	-	-
Vancouver	42,590	17,680	14,520	89,250	74,420	-	29,235	90	18,410	32,735	110	1,690	70	65
Victoria	4,745	2,750	2,245	14,680	9,700	28,455	-	-	1,135	1,640	10	230	30	-
Brandon	10	10	-	30	30	70	-	-	-	-	-	-	-	-
Kamloops	440	180	240	4,700	1,890	20,095	1,265	5	-	535	5	15	-	-
Prince George	445	170	250	710	3,080	34,440	1,520	-	580	-	5	-	10	-
Prince Albert	280	1,465	585	175	115	150	25	-	-	-	-	5	-	-
Lethbridge	415	160	140	20	20	1,310	145	-	10	-	5	-	-	-
Medicine Hat	30	-	10	5	-	70	30	-	-	5	-	-	-	-
Red Deer	-	35	20	-	-	70	-	-	-	-	-	-	-	-

Source - Air Passenger Origin and Destination Statistics (Domestic Report)

Statistics Canada 1971

AIRPORTS IN WESTERN CANADA

<u>Airport</u>	<u>Rank in Canada</u>	<u>Number of Arriving and enplaned passengers*</u> (000's)
Vancouver Int.	3	2,656
Calgary Int.	4	1,466
Winnipeg Int.	5	1,388
Edmonton Int.	8	759
Edmonton Industrial	9	388
Regina	11	348
Saskatoon	12	308
Victoria Int.	13	285
Prince George	23	184

\* Includes international passengers

Source: Airport Activity Statistics, 1971 Statistics Canada