

Economic Trends for Winnipeg to 2000

Occasional Paper No. 10

**by Greg Mason
1985**

The Institute of Urban Studies





THE UNIVERSITY OF
WINNIPEG

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1.0 INTRODUCTION

The economic history of Winnipeg is familiar. Beginning as a trading nexus for various native organizations, then forming a key link in the fur trade, Winnipeg has traditionally fulfilled a commercial and financial service role. The city also dominates the economic life of Manitoba and casts a market shadow into northern Ontario and parts of Saskatchewan. Indeed with exchange rate adjustments, its shadow is expanding into the northern border states.

In projecting economic growth and structure for the urban economy over the next 15 or 20 years, one is immediately confronted by a paucity of usable data upon which scenarios may be painted. Municipal governments typically have few policy instruments with which to explicitly encourage growth scenarios and consequently have not even exploited the data they collect. Few series collected by official governmental agencies such as Statistics Canada directly describe the course of an urban economy, primarily because urban areas typically have had rather amorphous and expanding administrative boundaries, and because economic activity frequently lies outside the formal boundary of the city.

This brief paper outlines what can be gleaned from these official sources and concentrates upon employment and structural features, some demographic trends.

2.0 ECONOMIC STRUCTURE

In many cases, Winnipeg's economy must be inferred from provincial data using some "reasonable" assumptions. Also, the technique for projecting these trends into the future must also rely upon some rather simple assumptions. Nonetheless, it is possible to arrive at some interesting speculations about the future course of the Winnipeg economy.

2.1 Employment and Economic Structure

In the past years, employment has become the dominant economic indicator. Most studies on the Winnipeg economy in the last decade were published well before the current recession and recovery, and did not concentrate on sectoral or demographic unemployment. In particular, little mention has been made of youth and minority unemployment, or growth trends in the employment of key sectors such as services.

Table 1

Winnipeg Employment
(Firms with 20 or more employees)

<u>Sectors</u>	(thousands)		
	<u>1976</u> ¹	<u>1981</u>	<u>1982</u>
Manufacturing	40.0	39.4	55.5
Construction	5.9	4.5	3.4
Transportation	23.0	24.4	21.9
Trade	34.8	38.9	36.3
Finance, Insurance, Real Estate	10.8	13.0	13.1
Services	21.1	23.6	22.4

Source: Statistics Canada 72-002; Employment, Earnings and Hours (Firms with 20 or more employees).

¹Data is for May which approximate the annual average.

No complete employment data are routinely produced for Winnipeg as the Statistics Canada estimate published in Employment Earnings and Hours (72-002) is the result of a survey of firms with 20 or more employees. Clearly, for Winnipeg, employment by small firms is very significant, especially in the service sector.

The most useful recent analysis of employment in Winnipeg is the Economic Base Study (McNeal and Hildebrandt) undertaken for the Winnipeg Development Plan Review in 1978. This study analyzed in detail the economic activity of Winnipeg using standard regional science procedures (location quotients and shift-share analysis). Forecasts of employment by industry are produced for several years into the future under three scenarios differentiated by the following assumed environments:

1. Scenario A - No major change in macro policy (i.e., continued fiscal restraint and adherence to a monetary rule with respect to money supply).
 - High and increasing real energy prices.
 - Domestic growth closely related to the U.S. experience.
 - Slight increase in participation rates in the labour force and immigration rates.
 - No changes in tax structure or level.
 - No change in the exchange rate (1977 level).

2. Scenario B - Increased divergence of Manitoba growth rates relative to the rest of Canada due to high energy prices (i.e., Manitoba growth slows relative to Canada).

3. Scenario C - Median range between A and B.

The precise mechanism for incorporating these scenarios into forecasts of growth and employment is not explained in the report, but appear to be a variation of simple trend analysis. The scenarios are very sensitive to variations in the cost of energy and in general this is problematic for two reasons. First, energy costs are not a significant component for most economic activities in production of goods and services. Generally, they range around 5 per cent of the total operating costs except for one or two significant outliers such as chemical processing which uses energy as a resource input and aluminum smelting which needs

great quantities of electric power. Second, the inflation adjusted price of energy has typically declined since the Second World War, except for two significant periods 1972 - 1973 and 1977 - 1979. Since these forecasts were released, energy prices have declined in real terms (adjusted for inflation) and it is likely that the economy has become less sensitive to energy price real or imagined.

The forecasts produced by the economic base study for the scenario are shown in Table 2. The data for 1976 are drawn from Statistics Canada sources, plus estimates derived from interviews with local employers.

Table 2

Reference Scenario C
Winnipeg's Projected Employment 1976 - 1986

<u>Sectors</u>	(thousands)		
	<u>1976</u>	<u>1981</u>	<u>1982</u>
Manufacturing	45.2	46.9	47.8
Construction	10.9	11.0	11.0
Transportation, Communication, Utilities	26.4	27.0	27.5
Trade	50.3	53.0	54.4
Finance, Insurance, Real Estate	14.8	14.5	14.9
Commercial Services	33.8	34.6	36.1
Non-Commercial Services	36.7	39.4	41.2
Public Administration & Defence	<u>25.4</u>	<u>25.5</u>	<u>26.4</u>
TOTAL	255.8	263.2	270.4

Source: Economic Base Study, Winnipeg Development Plan Review, McNeal and Hildebrandt, 1978.

Of particular interest for long-term economic planning in any region is the structure of its economy. "Structure" usually refers to the sources of production income, and is most often measured by the contribution to overall gross domestic product (market value of all goods and services produced in the region) or the proportion of total value-added by industry (profits plus wages). As a second best alternative, the percentage of employment by industry is frequently computed.

There currently is no sound basis to compute the structure of the Winnipeg economy. Indeed it is impossible to compute what proportion of the total provincial economy is contributed by Winnipeg. Certainly it seems safe to state that agriculture does not figure prominently in the local urban economy (although there is some). Common wisdom also alleges that some 75 - 80 per cent of all manufacturing in the province is located in the city.

Consider manufacturing. As a crude measure of economic structure consider the provincial data relating to shipments in manufacturing in the province as shown in Table 3. It is possible to estimate the contribution of Winnipeg by applying the percentage of Winnipeg to Manitoba shipments for 1979 to compute an expected share of Winnipeg shipments by industry for 1980. This assumes, of course, that the technology is the same in Winnipeg as the rest of the province, but the overall results should be reasonably close.

Given the lack of any other direct information on the structure of the Manitoba industry, analysis is forced into conjecture and speculation. Since industrial strategy figures so prominently in current economic planning, and since it is expected that the next decade will bring important changes, especially as it relates to new technologies, it is a major weakness of current analysis that we must rely upon employment-based measures of the economic structure.

3.0 DEMOGRAPHIC CHANGE AND INCOMES

Basic to the economy of any region is the demographic composition (age structure) and income base. Table 4 indicates clearly that over the past 25 years, Winnipeg has come to dominate the population of Manitoba, both in terms of total number of people as well as households.

Table 3

Diversity of Manufacturing in Manitoba and Winnipeg

Rank of Manufacturing Industry Output by
Value of Total Shipments, 1980
(Manitoba)

<u>Rank</u>	<u>Industry</u>	<u>Shipments (\$Million)</u>	<u>Per cent of Total</u>	<u>Winnipeg Shipment</u>	<u>Per cent</u>
1	Food and Beverage	1,308.7	30.0	952.7	39.1
2	Machinery (incl. agricultural machinery)	418.6	9.6	384.9	15.8
3	Metal Fabricating	344.3	7.9	301.2	12.4
4	Transportation Equipment (incl. aerospace)	338.1	7.7	156.9	6.4
5	Paper & Allied	269.9	6.2	--	0.0
6	Clothing	255.3	5.9	242.4	8.9
7	Printing, Publishing & Allied	212.2	4.9	189.8	7.7
8	Primary Metals	207.5	4.8	59.2	2.4
9	Electrical Products	164.4	3.8	147.3	6.1
10	Other*	844.8	19.5	--	2.0
		<u>\$4,363.7</u>	<u>100.0</u>	<u>2,434.4</u>	<u>100.0</u>

Source: Statistics Canada; and Economic Base Study, Winnipeg Development Plan Review, McNeal and Hildebrandt, 1978.

*Other = 10 sectors, each less than 3 per cent.

The shift is quite dramatic. It is likely that this trend will abate somewhat in the next 15 years, however, further increases are probable. It is important to note that Census data can be very problematic. The administrative boundaries always lag reality. The fact that the data appear to show a slow down is probably very misleading. Winnipeg casts a large economic and social shadow. Increasingly the small villages and municipalities such as Oak Bank and Birds Hill function as part of Winnipeg. The result is that while the official data may observe a slowing of Winnipeg growth relative to the rest of the province, in all likelihood the reality is opposite.

Table 4

	<u>Total Population</u> <u>Manitoba/Winnipeg</u> 1901-1981		
	Manitoba 1	Winnipeg 2	Ratio 2/1
1901	255,211	48,488	19.0
1911	461,394	156,969	34.0
1921	610,118	229,212	37.6
1931	700,139	294,905	42.1
1941	729,744	302,024	41.4
1951	773,541	356,813	46.1
1961	921,686	476,000	51.6
1971	988,255	540,265	54.6
1981	1,026,245	564,475	55.0

Source: Census of Canada, CS92-539.

Table 5

	<u>Households</u>		
	<u>Manitoba/Winnipeg</u>		
	1961-1983		
	Manitoba	Winnipeg	Ratio
	1	2	2/1
1961	239,754	128,532	53.6
1971	287,915	166,220	57.7
1981	357,985	211,245	59.0

Source: Census of Canada.

When incomes are examined the tale becomes interesting. As Table 6 shows the proportion of provincial taxable income located in Winnipeg has actually declined in the past 20 years. There appears to be some evidence that the non-Winnipeg regions (which include centres such as Brandon, as well as rural areas) have tended to have an increase in taxable incomes, while the major city has had a declining tax base. Although, these data are somewhat aggregated, and further detailed analysis is essential, it appears as though Winnipeg is receiving many more lower income households. As economies-of-scale remove many farm operations and reduce the viability of smaller communities, these displaced households and individuals appear to be disproportionately located in Winnipeg.

Table 6

Taxable Income
Manitoba/Winnipeg
(Thousands of Dollars)

	Manitoba	Winnipeg	Ratio
1961	924,647	663,631	71.7
1971	2,143,949	1,518,877	70.8
1981	7,944,710	5,290,707	66.6

Source: Taxation Statistics, Department of National Revenue, Canada, 1963, 1973, 1983.

This shift in tax base can be seen in Table 7 where average taxable income per household is computed for Manitoba, Winnipeg and non-Winnipeg. As the last column clearly indicates non-Winnipeg residents are quickly approaching Winnipeg residents in terms of taxable incomes. These data should be viewed with some caution. First, the Census definition and the Revenue Canada definition for Winnipeg differ to a certain extent. Even more important is that many rural residents (agricultural producers) have a more complicated tax environment and often taxation for agricultural purposes and income taxation merge in complex ways. If anything, these data probably understate the extent to which non-Winnipeg taxable incomes lag those of Winnipeg households.

Table 7

Average Household Taxable Income

	Manitoba 1	Winnipeg 2	Non-Winnipeg 3	Ratio 3/1
1961	3,856	5,163	2,347	45.5
1971	7,446	9,137	5,136	56.1
1981	22,193	25,045	18,086	72.2

Source: Taxation Statistics and Census of Canada.

4.0 RETAIL ACTIVITY

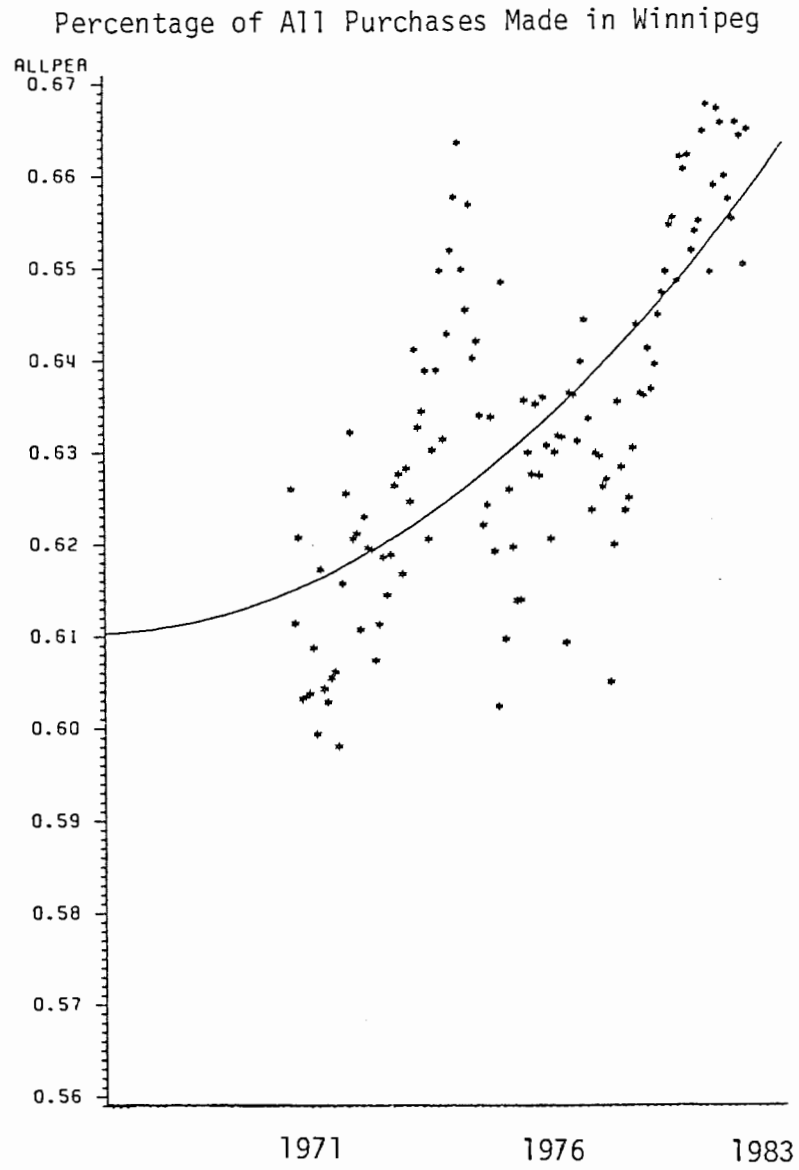
It is possible to glean some insights into the shift in economic activity within Manitoba by examining retail trade patterns. As Figure 1 shows the percentage of purchases made in Winnipeg relative to the rest of Manitoba has been increasing over the past decade. In part this is due to population shifts, but a certain proportion of this shift is also probably due to the increased travel by non-Winnipeg residents to Winnipeg for major purchases.

Again, the data while suggestive are not conclusive by any means. However, it would be a comparatively simple task to develop data which portrayed the extent to which Winnipeg functions in the provincial retail economy.

5.0 TOWARD THE YEAR 2000

Trends to the 2000 may be conjectured. In general, it is unlikely that Winnipeg will witness a major expansion in manufacturing. The plans for the aluminum smelter notwithstanding, it is optimistic to project any

Figure 1



significant increase in wealth and income from manufacturing. The recent service sector expansion, including transportation and communication is likely to continue and by the turn of the century this sector will employ over 80 per cent of the labour force.

Many view this with some alarm. There is the strong belief among planners that manufacturing jobs are somehow of higher "quality" with more stable employment patterns and attracting highly skilled workers with higher incomes. In fact, the "deindustrialization" of Winnipeg is parallel to similar developments in Canada and certain areas of North America. A single-minded policy to attract manufacturing because that sector provided high wages and the associated tax base simply is no longer applicable. In fact, the service sector, comprised of high skill wage positions, as well as a large number of lower paid occupations in retail services for example, tends to be more stable than manufacturing over the business cycle. Services in general depend upon total incomes and population and in particular upon the demographic profile. The willingness of major real estate firms to develop up-scale retail functions reflects this projected increase in demographics, especially the purchasing power embodied in a more mature and financially secure population. Also, critical to the projection of the future is that high wage services must be export-oriented. Consultancies, entertainment, cultural and financial services are prime examples of the economic activity essential for the economic future of the city.

The trend of population and households to locate in the Winnipeg region, and as well the trend for the average taxable income per household in non-Winnipeg locations to match, then perhaps to surpass that of Winnipeg seem to point to some basic realities for urban government over the next decade. First, simply to meet the demand, the distribution of social services may increasingly be located in Winnipeg and selected regional centres. A preliminary view is afforded in the Appendix. Although the

population percentages in various age cohorts has remained closely matched, it is risky to assume this will be maintained. Manitoba tends to lose people during good times, and then recapture much of this loss when the national economy turns sour. Migration patterns for Manitoba can be complex. For example, it appears that Manitoba loses people in their twenties and then regains these when child rearing occupies the family. There is also some evidence and more speculation about the loss of retired people who later return for their final years with their families

This increased importance of Winnipeg, may come at the expense of the small village and hamlet. Urban areas with more than 1,000-5,000 in population can be expected to remain stable, and those with greater population will probably increase. These intermediate areas, such as Dauphin, will be the focus of social and medical services to the rural population. The real decline will be witnessed by the smallest areas with populations under 1,000. We shall witness a form of "musical chairs" with population shifts from the farm and small hamlet to the intermediate municipality. In turn, it is possible that these areas will lose population to the largest areas such as Brandon and Winnipeg.

Along with these migration patterns, which at this point are admittedly speculative, may well come demographic shifts. It is unlikely that all health services will be located in only one or two areas and Winnipeg. More to the point is that certain intermediate areas (such as Dauphin) will become strategic sites in the provision of health and social care. The reason is simply that while the aged may not move from the farm to Winnipeg, they likely will be attracted to a move from the farm to a relatively small community. Although the data do not show this, it is also possible that the shift in population generally from rural to urban area will be accompanied by age structure shifts. Winnipeg may become relatively younger than Manitoba as a whole. On the other hand, depending upon decisions in the location of health services and other support

systems, the aged may find that Winnipeg city provides the most accessibility to social and medical services. Forecasting this is dependent upon the political decisions to be undertaken over the next several years.

Second, the per capita tax base on non-Winnipeg regions may surpass that of the central city, implying a redistribution of wealth devoted to social services, away from non-Winnipeg locales to Winnipeg. An important implication for Winnipeg, is that the province may inevitably become more involved with the governance of the city by virtue of its superior taxation powers and mandate to plan and locate these services. In the same way the federal-provincial division have produced considerable tension and loss of efficiency for the Canadian economy, this increased involvement by the province in locating social services within the city boundaries has potential for producing similar tensions over the next few decades.

Another vital implication of the above trends is that Winnipeg is unlikely to experience anything but moderate growth over the next two decades, and that will occur only if public investment is made efficient. Recent squabbles over the Core Area Initiative highlight the potential of the present system of allocating public investment to produce waste and compromise overall growth. At the root, the Core Area Initiative is critically important to the long-run viability of Winnipeg. With a growing proportion of older citizens, centralization of social services, residential areas and other facilities is by far the most efficient and humane strategy. Unfortunately this program continues to be compromised by fuzzy thinking and poor planning. For example, it seems to make little sense to allow continued outward expansion of the city (which further renders public investments in roads, services and transit less efficient) while at the same time pumping tax dollars into a downtown revitalization. Many families are maturing with older children. These higher income households could be attracted to the downtown or they may move to ex-urban

areas beyond the perimeter. A well focused urban redevelopment strategy is indispensable to keeping these high incomes available to retailers at the core. Unfortunately, this market has not been identified, with the result that subdivision beyond the perimeter may cater to this group, and feature innovative multiple units in a parkland atmosphere. In this event, the suburban shopping centres will clearly win.

At this point, the core area defined for redevelopment is simply "too big." Investments are scattered with no chance of developing the symbiosis needed to encourage the private sector. The fact that the private sector has failed to participate (whether out of indifference or because they have been excluded) is lamentable.

Many appear to question that suburban development is costly. For some, the issue becomes one of free choice. Thus, when land economists argue that suburbanization and sprawl produces costs for the city, in excess of revenues generated, there is doubt expressed that this is anything but some arcane intellectual argument based perhaps on some snobbish distaste for suburbia.

In a simple accounting sense, it is probably true that the tax revenues generated on suburban residential land exceeds that generated on inner city lots (excluding commercial properties). But the difference in many cases is slight. More to the point are the losses due to the inefficiencies of decentralizing services. The transit deficit is a case in point. Presently, transit is able to recover about 45 per cent of costs from the fare box. Some routes, recover close to 90 per cent of all costs (on average), while others recover about 20 per cent. In general, routes to the suburbia recover the least. What is rarely done is a service by service calculation of costs and benefits associated with spatial extension.

For Winnipeg, the costs of sprawl have probably not been especially significant but continued extension, especially if it comprises the past investment in the core area will prove costly in terms of the opportunity costs of the capital already used, and more importantly the future resources devoted to the core.

Sub-optimal public investment produces further inefficiency, such as the location of the National Research Centre downtown, away from the major research facility in the province at the University of Manitoba and not close to the Health Sciences complex. No doubt, when viewed in terms of the specific need to consolidate the core area program, the location of high income employment at the centre of the city is wise, however, when viewed against the objective to promote the adoption of high technology in Manitoba this location decision makes little sense. The major high technology areas in the United States have sprung up, either in areas with already established infrastructure (i.e., defence) or in close proximity to research centres at universities. One of the more effective approaches to developing high technology is to locate such industry and research in close proximity. To ignore these simple truths, well known in land economics will be tragic.

In conclusion, to attain modest economic growth for Winnipeg, will require that government coordinate and plan effectively. Jurisdictional and internecine battles will simply compromise our ability to provide the wealth and income to create a humane urban environment in the year 2000.

APPENDIX



Table A1

Demographic Structure Manitoba/Winnipeg, 1961 - 1981

Age	Manitoba 1	% Total	Winnipeg 2	% Total	Ratio 2/1
<u>1961</u>					
0- 4	107,574	11.7	25,454	9.6	23.7
5- 9	101,382	11.0	22,456	8.5	22.1
10-14	91,150	9.9	21,104	8.0	23.2
15-19	70,808	7.7	18,910	7.1	26.7
20-24	59,007	6.4	21,472	8.1	36.4
25-34	117,317	12.7	36,001	13.6	30.7
35-44	120,774	13.1	35,267	13.3	29.2
45-54	100,500	10.9	31,627	11.9	31.5
55-64	69,886	7.6	23,809	9.0	34.1
65-69	28,169	3.1	9,821	3.7	34.9
70+	<u>55,119</u>	6.0	<u>19,508</u>	7.3	35.4
Total	921,686		265,429		
<u>1971</u>					
0- 4	85,385	8.6	43,190	8.0	50.6
5- 9	100,215	10.1	49,835	9.2	49.7
10-14	101,175	10.2	49,905	9.2	49.3
15-19	96,370	9.8	50,895	9.4	52.8
20-24	85,315	8.6	52,845	9.8	61.9
25-34	121,905	12.3	72,055	13.3	59.1
35-44	106,090	10.7	60,685	11.2	57.2
45-54	107,565	10.9	61,095	11.3	56.8
55-64	88,880	9.0	48,600	9.0	54.7
65-69	32,405	3.3	17,130	3.2	52.9
70+	<u>62,950</u>	6.4	<u>34,030</u>	6.3	54.1
Total	988,255		540,265		
<u>1981</u>					
0- 4	76,760	7.5	38,015	6.7	49.5
5- 9	79,175	7.7	38,460	6.8	46.7
10-14	82,330	8.0	40,360	7.2	49.0
15-19	96,215	9.4	50,435	8.9	52.4
20-24	94,015	9.2	57,405	10.2	61.0
25-34	165,280	16.1	98,475	17.4	59.6
35-44	112,805	11.0	63,695	11.3	56.5
45-54	99,590	9.7	56,570	10.0	56.8
55-64	98,245	9.6	55,350	9.8	56.4
65-69	42,015	4.1	23,010	4.1	54.8
70+	<u>79,815</u>	7.7	<u>42,700</u>	7.6	53.5
Total	1,026,245		564,475		

Table A2

Demographic Structure Winnipeg/Non-Winnipeg 1961 - 1981

Age	Winnipeg		Non-Winnipeg	
	1	% Total	2	% Total
<u>1961</u>				
0- 4	25,454	9.6	82,120	12.5
5- 9	22,456	8.5	78,926	12.0
10-14	21,104	8.0	70,046	10.7
15-19	18,910	7.1	51,898	7.9
20-24	21,472	8.1	37,535	5.7
25-34	36,001	13.6	81,316	12.4
35-44	35,267	13.3	85,507	13.0
45-54	31,627	11.9	68,873	10.5
55-64	23,809	9.0	46,077	7.0
65-69	9,821	3.7	18,348	2.8
70+	<u>19,508</u>	7.3	<u>35,611</u>	5.4
Total	265,429		656,257	
<u>1971</u>				
0- 4	43,190	8.0	42,195	9.4
5- 9	49,835	9.2	50,380	11.2
10-14	49,905	9.2	51,270	11.4
15-19	50,895	9.4	45,475	10.1
20-24	52,845	9.8	32,470	7.2
25-34	72,055	13.3	49,850	11.1
35-44	60,685	11.2	45,405	10.1
45-54	61,095	11.3	46,470	10.4
55-64	48,600	9.0	40,280	9.0
65-69	17,130	3.2	15,275	3.4
70+	<u>34,030</u>	6.3	<u>28,920</u>	6.5
Total	540,265		447,990	
<u>1981</u>				
0- 4	38,015	6.7	38,745	8.4
5- 9	38,460	6.8	40,715	8.8
10-14	40,360	7.2	41,970	9.1
15-19	50,435	8.9	45,780	9.9
20-24	57,405	10.2	36,610	7.9
25-34	98,475	17.4	66,805	14.5
35-44	63,695	11.3	49,110	10.6
45-54	56,570	10.0	43,020	9.3
55-64	55,350	9.8	42,895	9.3
65-69	23,010	4.1	19,005	4.1
70+	<u>42,700</u>	7.6	<u>37,115</u>	8.0
Total	564,475		461,770	

BIBLIOGRAPHY

McNeal and Hildebrandt Consulting, Economic Base Study, City of Winnipeg Development Plan Review, 1978.

Revenue Canada, Taxation Statistics, Various Years, 1963, 1973, 1983.

Statistics Canada, 1961 Census of Canada, Series 1.1, Population Historical 1901-1961, CS92-539.

_____, 1971 Census of Canada.

_____, 1981 Census of Canada, Population Geographic Distributions, CS93-907.