Abhandlungen - Anthropogeographie
Institut für Geographische Wissenschaften, FU Berlin
Band 52, Berlin 1994

THE GROWTH OF TORONTO: A MARKET-SHARE APPROACH

Jim Simmons
University of Toronto, Canada

Viewed at a continental scale, the growth of Toronto over the last two decades is truly anomalous; it has added more people than any other city north of Texas and east of California. Why?

The growth of high order service centres is best explained by growth in the markets they serve. Toronto serves Canada, which has grown more rapidly in population and income per capita than the United States. More important, the abdication of its main competitor, Montreal, gave Toronto a substantial increase in the share of this market, as demonstrated by changing patterns of air passenger flow.

Looking to the future, Toronto's role within the Canadian market is likely to be eroded with the growth of north-south linkages across the border. Its growth will depend on its ability to compete with major service centres in the northeastern U.S. to serve regions in both countries.

Key Words: Urban Systems, Market Share, Canada

The growth of Toronto during the post-war period has been rapid and significant by North American standards. Since 1971, for example, the population of the Toronto CMA has grown at an average annual rate of 1.98 per cent, almost twice as fast as the rest of Canada at a rate of 1.06 per cent; and this continued concentration of growth is an important aspect of the changing economic geography of the country. Toronto's growth becomes more astonishing, though, when the city is examined at a continental scale (Figure 1). If a spatial definition is used that matches the U.S. criteria for Metropolitan Statistical Areas, Toronto's population of 4.2 million makes it the seventh largest urban centre in the combined Canada-U.S. system, and rapidly closing on the sixth city, Detroit. In terms of the magnitude of population growth over the last two decades, Toronto ranks fifth, after Los Angeles, Houston, Dallas, and San Francisco. All these other cities are located in the far West or Southwest. Toronto's annual growth rate approximates the 1.90 per cent per year growth of Los Angeles between 1970 and 1990.

If the map of growth in this continental urban system is examined (Figure 2), Toronto stands out as the major growth node outside the Sunbelt, with more population growth (1,312,000) than any metropolitan area north and east of Dallas. Nearby American cities in the Great Lakes region have all lost population over this time period, and other major metropolitan areas in the erstwhile manufacturing belt have shown little growth at all: The MSAs of New York and Pittsburgh, for example, lost population; Philadelphia, Boston, Baltimore and Chicago grew by less than one hundred thousand. Only Washington has grown significantly.

Toronto's growth is not a minor perturbation, the result of changes in one or two economic sectors or migration streams. The explanation is not to be found internally,

Figure 1 Urban Population: Canada and the Unites States, 1990

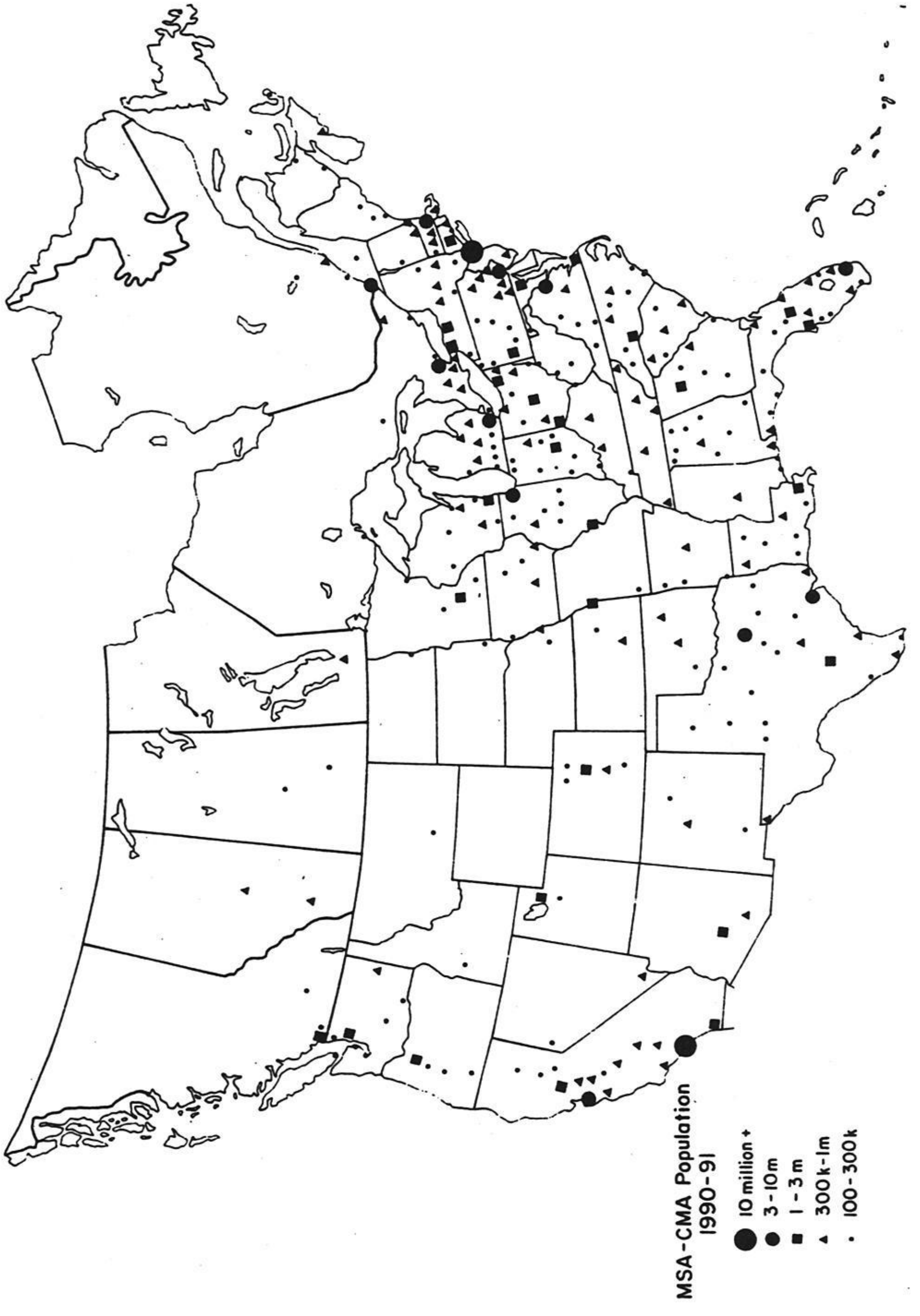
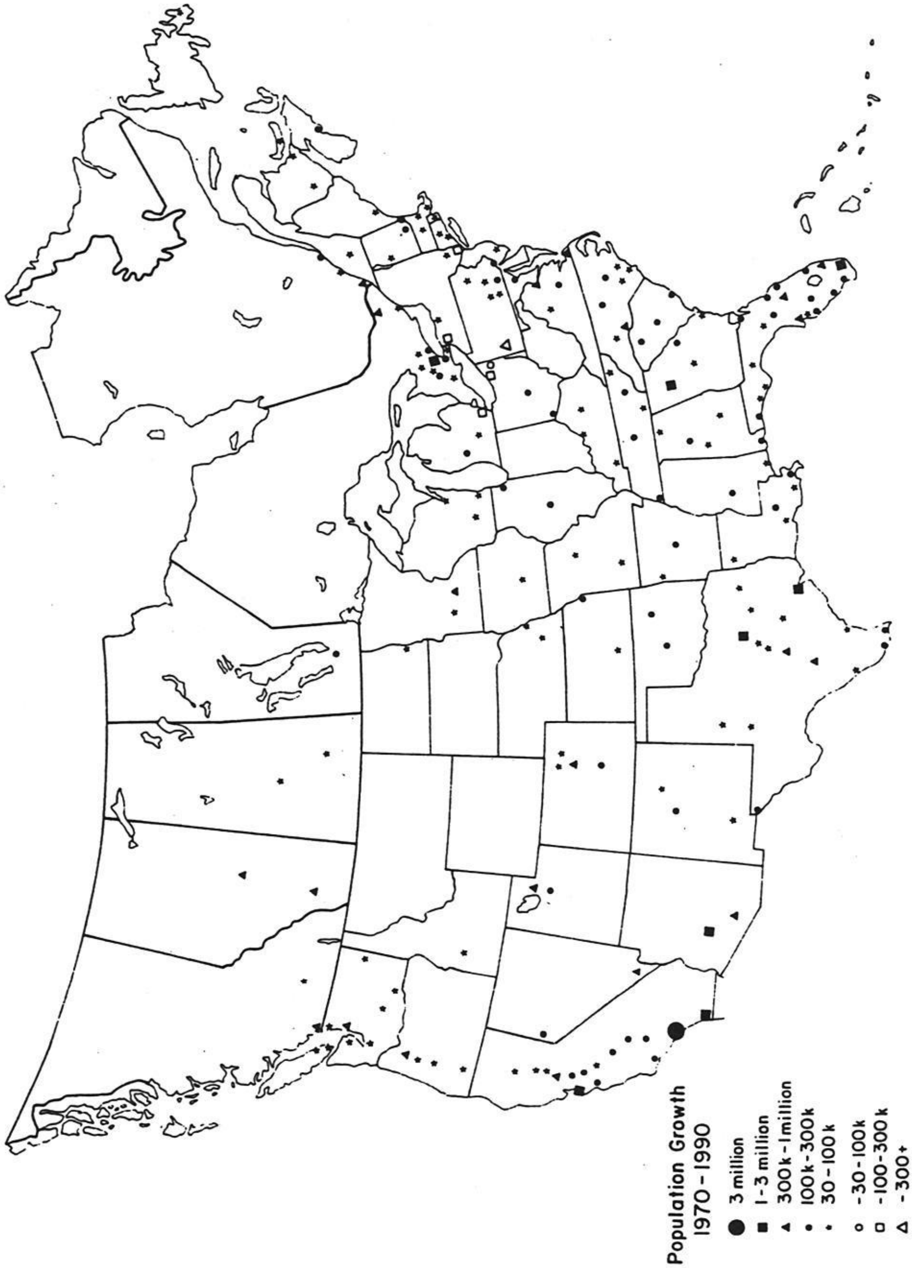


Figure 2 Urban Growth: Canada and the United States, 1970-1990



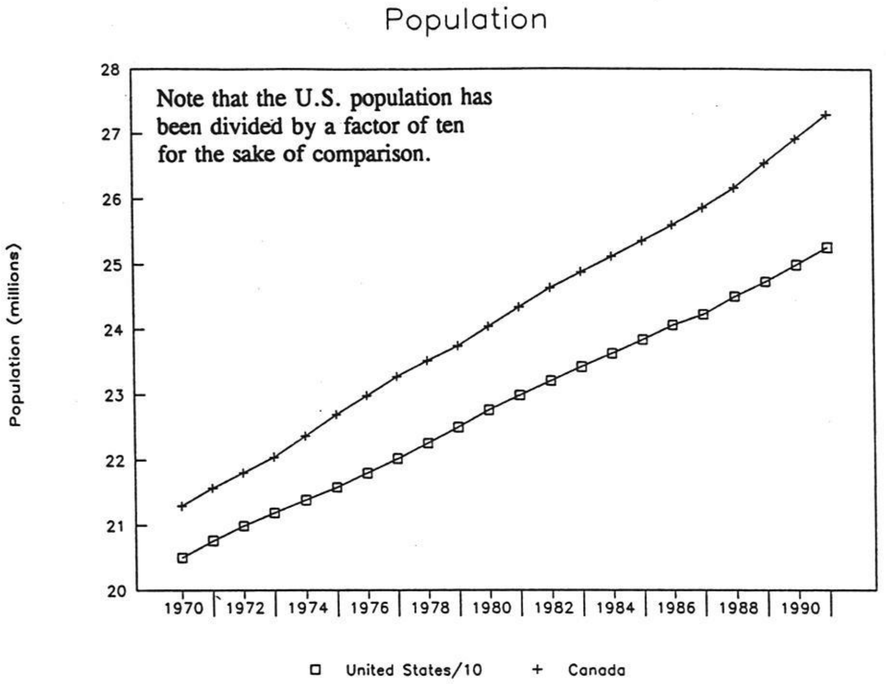
in terms of the composition of its economic base (and certainly not its climate!). It must be the result of an extended period of competitive advantage relative to other cities with respect to a variety of economic activities. Toronto has grown because of the growth of the Canadian market that it serves, and the increasing share of this market that it controls. For high order centres in the modern urban system such as Toronto it is not the sectoral composition of economic activity within the city (the economic base) that is important, but the city's external relationships with other cities within the urban system: in particular, the location of national economic growth relative to the city's market area and the market areas of competing service centres.

This paper pursues this argument by exploring the growth of Toronto's market (Canada) and especially its changing share of that growth (vis-à-vis Montreal) and then speculates on the prospects for growth in the future from this market-share perspective.

The Market-Share Approach

Cities that act as service centres grow in proportion to the market that they serve. The market can be defined as the product of the population and the income per capita, within the trade area served; its growth is the change in this market, and most important for this paper, the changes in the spatial extent of the trade area itself. Toronto's growth reflects disproportionate rates of growth in each of these three aspects of the market -- total population, income per capita, and market-share (the proportion of a market that is served by competing places). The market is Canada; the competing service centres in this market are Toronto and Montreal. As context, consider Figure 3 and Table 1, which compare the growth of Canada and the U.S. Graph 3A compares Canada's population growth to that of the U.S. since 1970. The former has grown at an average annual rate of 1.18 per cent, the latter at a rate of 1.01 per cent. Most of the difference reflects the immigration policies of the two countries; Canada's immigration rate is some fifty per cent higher, and about one-third of the immigrants go to Toronto. This also works to Toronto's advantage by providing a direct source of population to support any economic growth. Graph 3B compares the two countries in terms of gross national product per capita in constant dollar terms. Again, the Canadian growth rate has been higher, 45 per cent greater than the U.S. growth rate over the study period. The demand for Canadian commodities has held up better than the demand for U.S. manufacturing output or U.S. commodities. Note that the shifting value of the Canadian dollar is not relevant here; it is the growth within the national trade area per se that counts. Taken jointly the overall annual rate of market growth in Canada (the real gross domestic product at 3.49 per cent) is about 36 per cent higher than the U.S. growth rate (2.57 per cent), so one would expect a centre serving the Canadian market to have grown more rapidly - even without a shift in the share of the market.

Figure 3 Canada - U.S. Comparisons



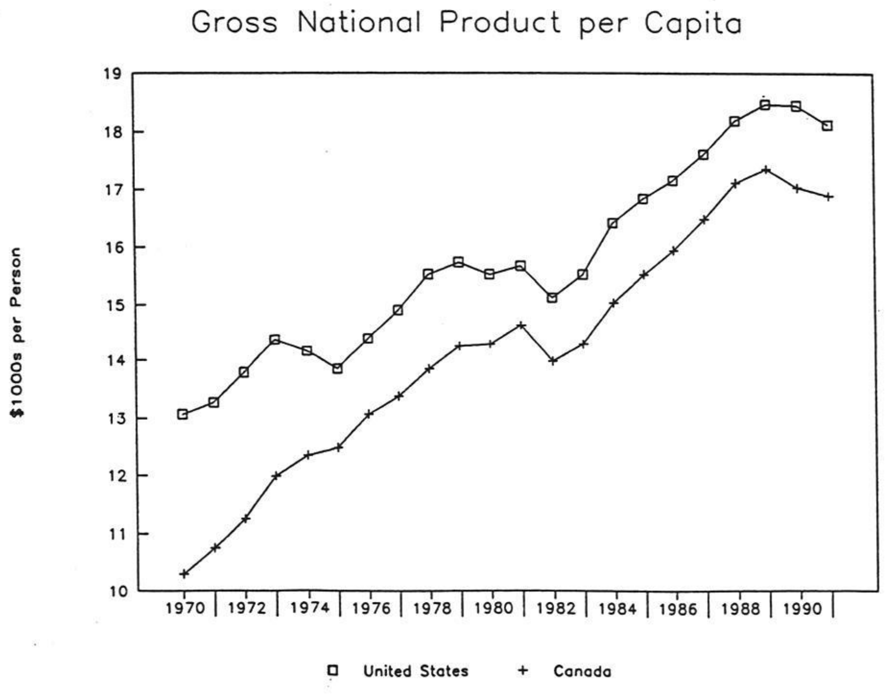


Table 1 Comparing Growth Rates

Location/ Measure	1971	1991	Average Annual Growth Rate
Canada			
Population	21,568,000	27,297,000	1.18
Gross Domestic Product/ Capita ($C1981)	$10,760	16,888	2.27
Gross Domestic Product ($C1981, billions)	$232.1	$461.0	3.49
($U.S. 1981, billions)	$229.8	$390.7	2.69
United States			
Population	207,661,000	252,628,000	1.01
Gross National Product/ Capita ($US1985)	$13,273	$18,123	1.57
Gross National Product ($US1985, billions)	$2,756.8	$4578.4	2.57
Toronto CMA			
Population	2,628,000**	3,893,000	1.98
Market* ($C1981, billions)	135.9	322.0	4.41
($U.S.1981, billions)	137.3	272.8	3.49
Montreal CMA			
Population	2,743,000**	2,921,000	0.31
Market* ($C1981, billions)	96.2	139.0	1.86
($U.S.1981, billions)	97.2	117.8	1.01

* Proportional to share of Canada's domestic air traffic x the Canadian market.

** As defined in the 1971 Census.

Source Statistics Canada. monthly. Canadian Economic Observer. Catalogue 11-010.
United States Bureau of the Census. annual. Statistical Abstract of the United States.

The most important element in Toronto's growth, however, has been the increase in market-share - its increasing domination of the Canadian market relative to its initial competitor, Montreal, and secondarily to other urban centres. To illustrate, if the patterns of intercity dependencies represented by air passenger flows are compared for 1971 and 1991 (Table 2) the decline of Montreal's role as a national service centre is apparent (see also PRESTON 1991). Montreal has lost up to seven per cent of the airline traffic even in those regional markets such as Halifax and St. John's where it has had a significant share; while Toronto has gained from five to ten per cent in almost every major market. As Montreal has lost 3.5 per cent of the share of total domestic flights, Toronto has gained - increasing its share from 58 per cent to 70 per cent of all trips to these two highest order centres. Maps of the change in share across the country suggest that Montreal has lost very heavily in the Atlantic provinces, especially New Brunswick, and in Northern Ontario and the eastern prairies. Substantial gains for Montreal have occurred within Quebec, in traffic to Sept Iles, the Saguenay and Rouyn, suggesting a stronger regional role. Toronto's gains, on the other hand, are almost universal, and the growth mirrors the pattern of Montreal's decline in the Atlantic provinces.

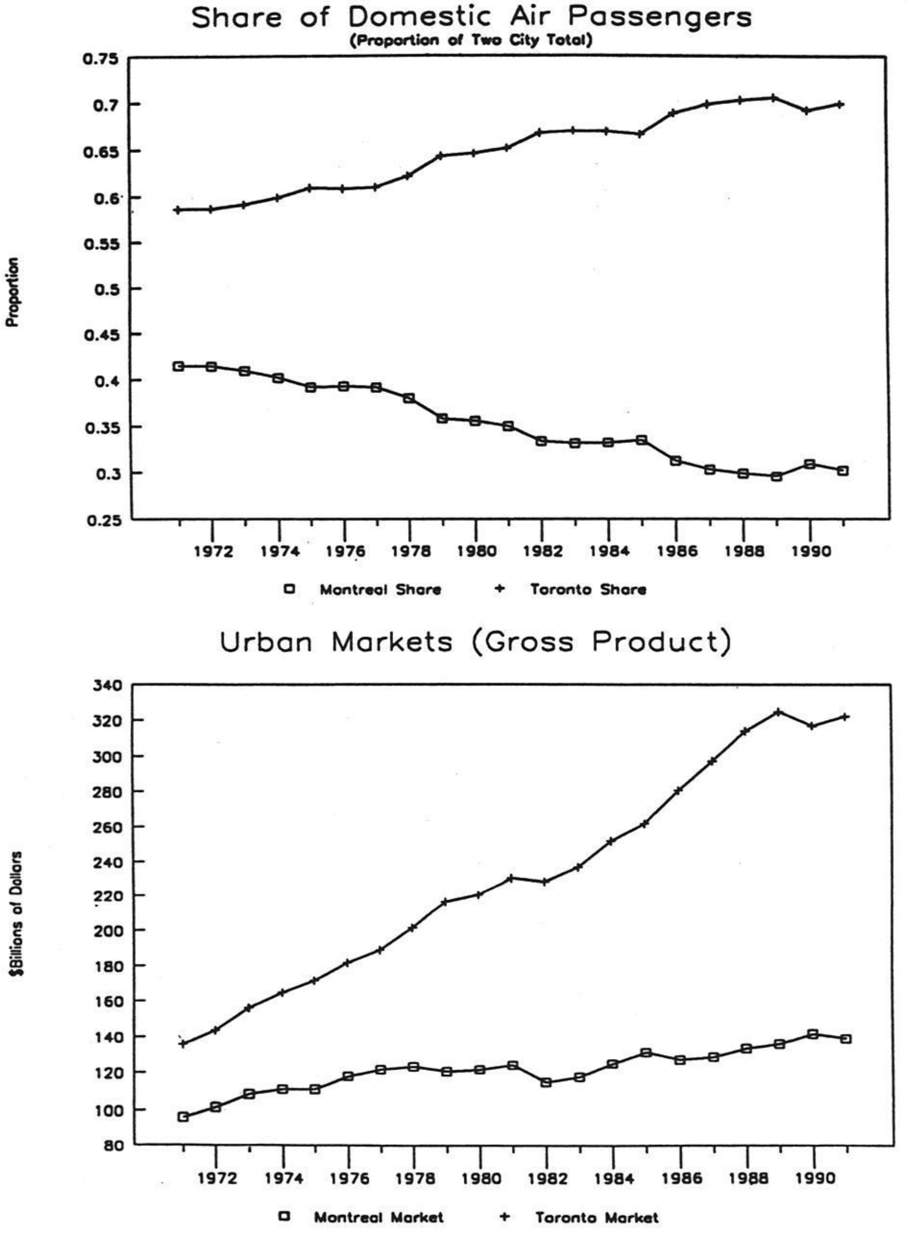
Table 2 Changing Roles in the Canadian Market (Domestic Air Passenger Flows)

	Share of All Passenger Flows (in %)					
Regional Centre	Montreal			Toronto		
	1971	1991	Change	1971	1991	Change
St. John's	11.9	9.1	-2.8	18.5	26.2	7.7
Halifax	19.6	12.0	-7.6	23.5	31.1	7.6
Montreal	---	---	---	40.8	52.5	11.7
Toronto	28.9	22.7	-7.2	---	---	---
Winnipeg	8.1	6.1	-2.0	23.2	28.8	5.6
Calgary	4.3	5.3	1.0	10.9	20.6	9.7
Edmonton	3.2	3.8	0.6	9.3	17.5	8.2
Vancouver	5.8	5.8	0.0	13.7	22.1	8.4
All domestic flights	12.9	9.4	-3.5	18.3	21.8	3.5

In 1971 it was possible to make a case for Montreal as an equal partner to Toronto at the top of the hierarchy in the Canadian urban system; suppose therefore that it was allocated a share of the Canadian market equal to its share of the total domestic airline flights originating in the two cities - 41.6 per cent. By 1991 Montreal dominates only the francophone cities of Quebec; assume that its share of the Canadian market continues to equal its proportion of flights originating in the two cities, now only 30.2 per cent (Figure 4A). Taking market growth and market-share (as assumed) together, Toronto's market has grown by an impressive 4.41 per cent per year, as shown in Figure 4B; while Montreal's market grew by only 1.86 annually.

Although Montreal's service role in Canada has been declining relative to Toronto for a long period, a series of political events in the 1970s undoubtedly hastened the process, as reflected in migration flows (SIMMONS and BOURNE 1989). Many Anglophones and anglophone businesses relocated to Toronto, taking their anglophone customers with them. Toronto's growth, coupled with Montreal's economic stagnation, quickly cemented Toronto's dominant position in the Canadian market, while Montreal intensified its regional role serving the francophone trade area. Toronto was also helped by the continued growth in its immediate hinterland - southern Ontario - due in part to the Canada-U.S. auto pact of 1965, - and by the fragmentation of the market in the growing regions of western Canada among three competitors: Calgary, Edmonton and Vancouver.

Figure 4 Changing Internal Relationships: Toronto, Montreal



The contrast with the United States again is striking; almost all that country's growth has occurred in the periphery, outside the old manufacturing belt, and Los Angeles has become a significant competitor to New York, overtaking Chicago. Washington DC, the only growth point in the northeast and north-central regions, is the one city that continues to reflect the growth of the entire national economy, due to the links by government.

The principles of the market-share approach that underlie the above argument are quite simple:

1. Service centres grow in proportion to the economic growth of their trade areas.

2. Within the pre-existing trade area the effect of growth is inversely proportional to the distance from the centre. Growth at the periphery is more likely to be served locally, or leaked to competing centres.

3. The spatial expansion or contraction of the trade area (changing market share) may be due to changes in transportation systems or public policies; but it may also reflect the differential growth rates of the two competing centres themselves in a process of positive feedback. Rapidly growing centres attract services from centres that grow slowly, and thus become more attractive across a wider region.

4. Stability in the urban system is maintained by the substantial city size differences that are inherent in the urban hierarchy. Sustained differences in growth rates of at least two per cent per year over twenty years are required to shift the hierarchical relationships between a pair of cities; i.e. to make a tributary city into a competitor, as Toronto challenged Montreal in the post-war period, and Los Angeles now challenges New York City.

The Future of Toronto

What does the market-share approach to urban growth suggest for Toronto's future over the next twenty years? Let us make some assumptions and speculations:

1. The overall growth rate of the Canadian market will slow down, perhaps averaging three per cent per year - still higher than the U.S.

2. A greater share of this growth will occur in the far West; and given other pressures for fragmentation, Toronto's share of the Canadian market will decline slightly, perhaps losing 0.5 per cent of the market per year. Toronto's market, as a result, will grow at 2.5 per cent per year (about half as fast as the last twenty years), and population growth will be reduced to about one per cent per year unless an alternative source of market growth is found.

3. The Canadian market will continue to become more open; this will increase the competition in peripheral regions in the east and west (see item two), but will permit Toronto to compete to a limited extent within the adjacent United States market.

4. An increased service role in the U.S. provides the major opportunity for accelerated growth. Detroit aside, Toronto is the largest urban centre between Philadelphia and Chicago, and the only one that has grown substantially in the last

twenty years. Many erstwhile competitors such as Buffalo, Cleveland, and Pittsburgh have already been left far behind. Toronto has a strong 'urban' image; and its recent growth provides a significant advantage for many service activities that depend on infrastructure and technology. From office buildings to universities, shopping malls and hospitals, Toronto is newer. Toronto's disadvantages in this competition relate to the advantages that protected its Canadian market in the past: the invisible barriers of institutions that restrict cross-border flows, ranging from financial regulation to health care and education systems, to customs officials and government procurement policies. The relative value of the Canadian dollar will be important.

Toronto in the future will be competing in a much different kind of market, with many more competitors and quite different rules. On the one hand, this is a huge market! The part of the U.S. that is north of the Mason-Dixon Line and east of the Mississippi has an income equivalent to $U.S.(1991) 2,135 billions, just under 40 per cent of the U.S. total and about 3.5 times the size of Canada's GDP. If Toronto could increase its share of that market by only 0.5 per cent per year the city could maintain the level of growth in the last twenty years. On the other hand, in the worst case scenario, Toronto's headquarters and service activities could migrate to New York, Dallas or Los Angeles as quickly as they moved from Montreal to Toronto.

BIBLIOGRAPHY

PRESTON, R.E. 1991. "Central Place Theory", in T. BUNTING and P. FILION, eds. Canadian Cities in Transition. Toronto: Oxford University Press, pp. 148-177.

SIMMONS, J.W. and BOURNE, L.S. 1989. "Urban Growth Trends in Canada, 1981-86", Major Report # 25. Centre for Urban and Community Studies, University of Toronto.

Statistics Canada. Annual. "Air Passenger Origins and Destinations: Domestic Report". Catalogue 51-204.

Statistics Canada. Monthly. Canadian Economic Observer. Catalogue 11-010.

Statistics Canada. 1992. Census of Canada, 1991. Ottawa.

United States Bureau of the Census. 1992. State and Metropolitan Area Data Book. Washington.

United States Bureau of The Census. Annual. Statistical Abstract of the United States. Washington.