

Amenity-Driven Growth: Recent Trends and Future Directions

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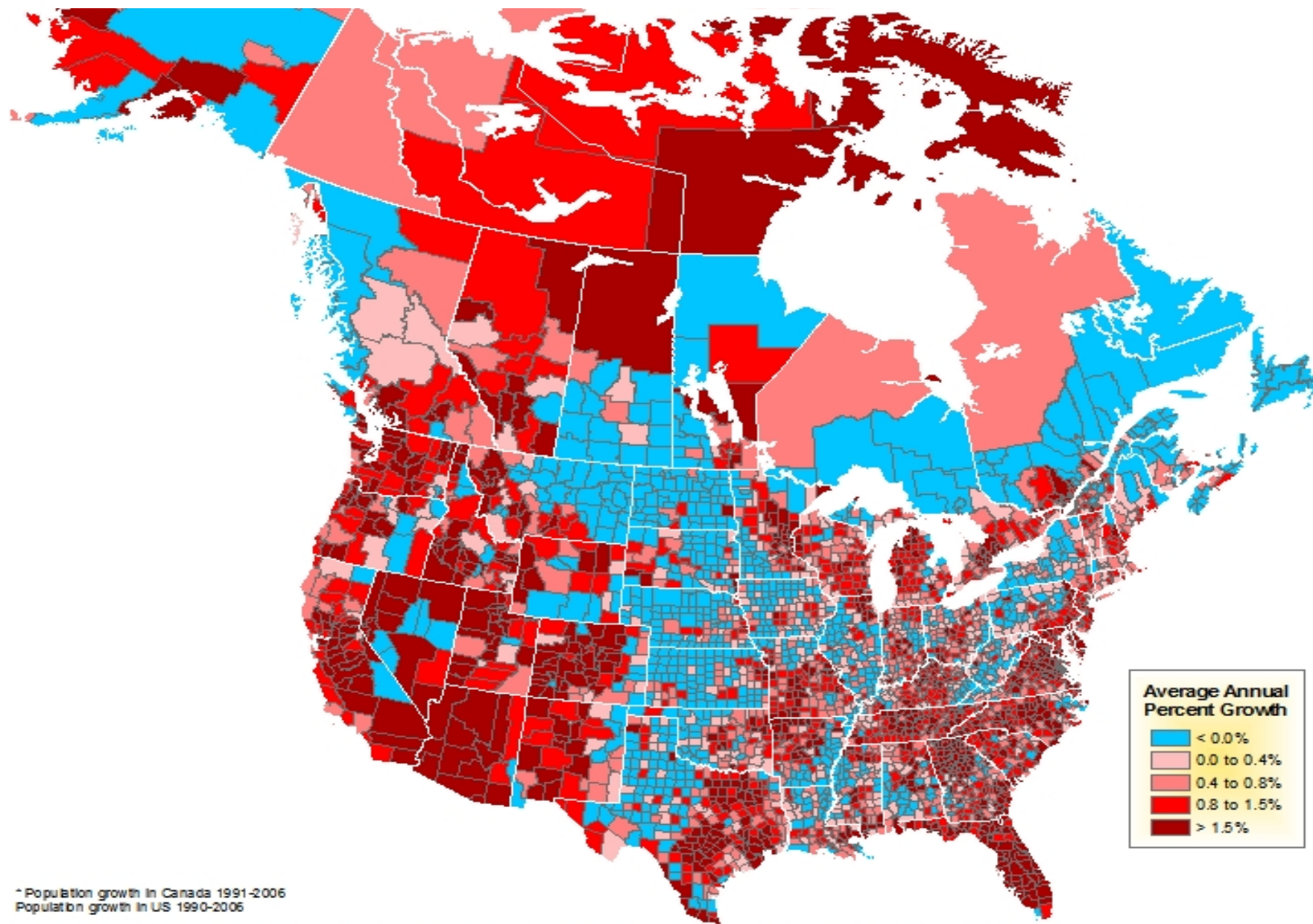


Outline: Why are we here?

- 1. Amenity Growth—basic conceptual ideas.**
 - **Define amenities**
 - **Man-made**
 - **Natural**
- 2. Basic evidence of amenities and local economies**
 - **Amenities are capitalized into wages and housing prices**
 - **They affect population/job growth.**
- 3. Future trends in Amenity-Led Growth**



1990/91-2006 North American Population Growth



* Population growth in Canada 1991-2006
Population growth in US 1990-2006

Source: Canada Rural Economy Research Lab, 1991 & 2006 Census, Statistics Canada; 1990 Census, U.S. Census Bureau; 2006 U.S. Census Bureau estimates.

Notes: The map shows 1990-2006 average annual percent growth for US counties.

The 1991-2006 percent population change for Canadian census divisions use Statistics Canada data and are based on 1996 consistent boundaries.

Broomfield County, CO (08014) is comprised of the counties of Adams (08001), Boulder (08013), Jefferson (08059) and Weld (08123). Source: <http://www.census.gov/geo/www/tiger/city/chng.html#1990>



Amenities—Conceptual Issues

Brief for those who are not familiar with the issue

- What are amenities?
 - Natural amenities: climate, water, landscape, mountains, clean environment. My focus today.
 - Man-made amenities:
 - Facilitate natural amenities such as boat ramps or ski resorts (Deller et al. 2001; Kim et al. 2005)
 - Urban amenities such as cultural venues, recreation, urban milieu. (Glaeser et al., 2001; Adamson et al., 2004; Florida, 2004)



Conceptual Issues

- Motivating question is ‘Jobs vs People’ led growth.
- Partridge and Rickman *J. of Urban Econ.* (2003)
 - Roughly, just under 50% jobs and just over 50% people. Amenities are important!
- The basic research on amenities dates to Graves and Linneman (1979) and Roback (1982).
 - Amenities are normal goods→ rising incomes over time are increasing demand for amenities.
 - Amenities are capitalized into higher housing costs and lower wages as people crowd into high-amenity areas
 - Amenities also lead to faster population growth

Basic Empirical Evidence

- Capitalized into wages and housing costs
 - Gabriel et al. (2003, p. 632) found the range of quality of life effect, (1989\$) or about double for 2008:

Variable	Max– 1989\$	Min—1989\$		
Heating Degree Days (5,091)	0	-\$15,716		
Cooling Degree Days (1,215)	0	-\$7,358		
Wind Speed (9.36 mph)	-\$1,450	-\$2,992		
Coast (1=state on coast)	\$0	\$5		
Inland Water (2.7% of land)	\$52	\$3,228		
Violent Crime (475 per 100k)	\$19	\$499		
Air Quality (0.12 pts per mil)	-\$812	-\$7,456		



Basic Empirical Evidence—cont.

- Gabriel & Rosenthal (2004, p.440) *RESTAT*
 - For 37 metro areas, examine Quality of Life and Business Environment. Find an inverse association.

City	QOL Rank	QOL \$ (2002\$)	Q of Bus Env Rank	QBE \$ (2002\$)
Miami	1	7,990	34	-4,644
San Jose	14	-603	1	13,187
Detroit	37	-8,589	9	3,645
Tampa-St. Petersburg	5	3,802	37	-7,044
Cleveland	31	-2,796	21	90
Chicago	19	1,448	8	3,997
Columbus	24	-1,789	26	-1,595



Basic Empirical Evidence—cont.

- Schmidt and Courant (2006, p. 939, 942) note that people would take a 4% pay cut to live 100 miles nearer to a ‘nice place’ such as a national park, seashore, landmark.
 - Omaha is farthest from nice place and Oxnard-Ventura CA is almost the closest. Their results suggest Omaha has 20% higher wages to compensate for this disadvantage (*cet. par.*).



Population and Amenities

- Rappaport (2007) finds climate may be most important amenity beginning even in the 1920s (before AC and central heating), suggesting income effect.
- McGranahan (1999, 2007) finds huge population growth effects for amenities in rural America.
 - Climate, topography, landscape, water area
 - McGranahan (2007, p. 234) finds:
 - If typical rural Iowa county was 50% forest, 25% cropland vs actual 5% forest, 75% cropland, it would have had 7% more net-migration in the 1990s vs 1% on avg. (*cet. par.*)
 - **If it had 7% water area (like Sawyer County WI) vs actual 2% water area, it would have had 1% more net in-migration.**



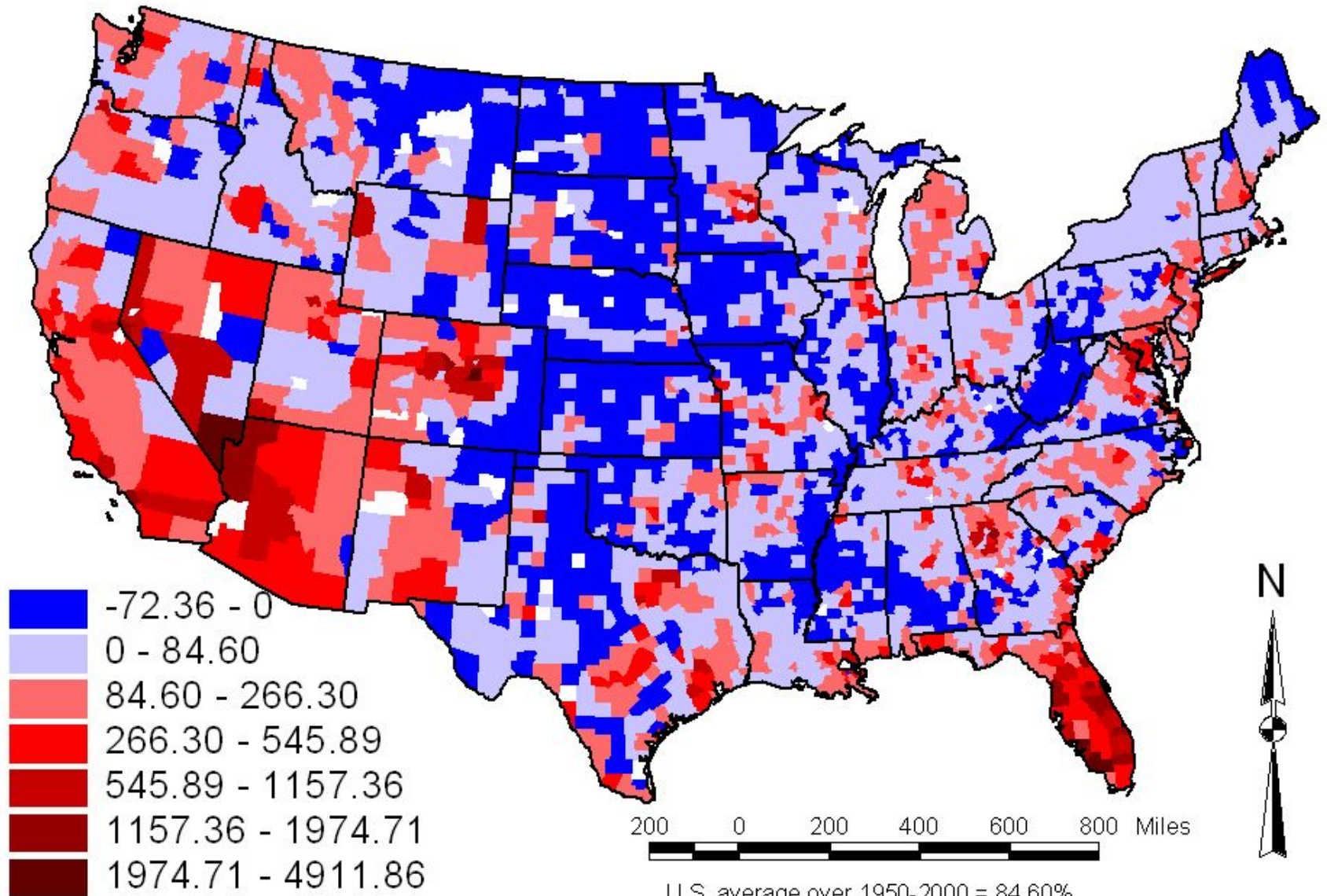
Population and Amenities

- Deller et al. (2001) finds that developed recreational facilities, including for water and winter recreation are associated with both faster rural population and rural job growth.
 - A key point of Deller et al. and Kim et al. (2005) is that natural amenities are necessary, but not sufficient for growth. A location needs developed facilities to really experience growth.
- Evidence suggests smaller amenity effects in other countries (for Canada, see Ferguson et al., 2007 and for W. Europe, see Cheshire and Magrini, 2006).

1950-2007 Population Growth

- The next slides show 1950-2000 and 2000-2007 growth.
- 1950-2000 period growth dominated by the Sunbelt and places with warm weather.
- 2000-2007 note the shift to cooler areas with lakes and woods: e.g., Northern MI, MN, WI; Northern Rockies, Ozarks, South central Appalachia.
- Note the growth in northern MI, MN, and WI

1950-2000 Population Growth





Some Direct Effects of Amenities

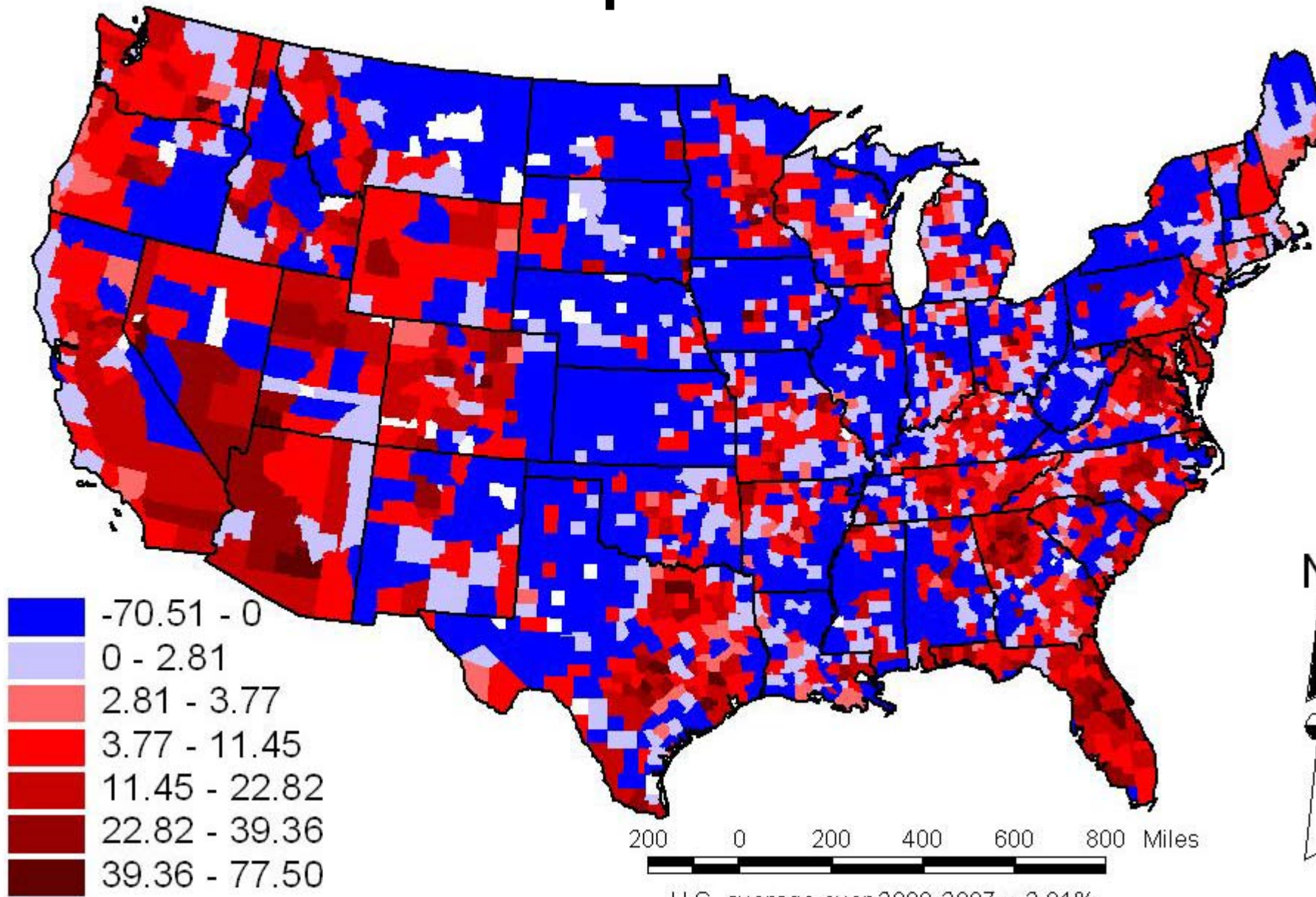
- The next slide shows the predicted impacts of some variables on 1950-2000 population growth—see Partridge et al. (2008) *J. of Econ. Geography*.
- The slide shows the effect of climate between Detroit and Orlando and for other natural amenities to give a sense of the importance of these variables.

Table 1: Difference in population growth over 1950-2000

Variables\Samples	Non-metro	Small metro	Large metro
Mean pop growth % (std. dev.)	32.20 (122.93)	122.47 (271.64)	138.00 (257.38)
Jan temp (diff Detroit – Orlando)	-135.58	-768.63	-731.88
July temp (diff Detroit – Orlando)	94.87	323.93	255.89
July humidity (diff Detroit – Orlando)	57.61	215.23	162.94
Sunshine hours (diff Detroit–Orlando)	7.69	-257.88	-248.06
Percent water area (1 std. dev.)	11.03	0.53	-3.04
Great Lakes (within 50 kms)	-45.19	37.25	52.44
Atlantic Ocean (within 50 kms)	56.09	205.85	133.31
Pacific Ocean (within 50 kms)	-28.28	-162.18	-177.55
Typography (most mtn. to coast plain)	26.1	24.6	22.29
Amenity rank (diff between Detroit (3) and Orlando (5) on a 1-7 amenity scale)	-69.74	-153.05	-143.11

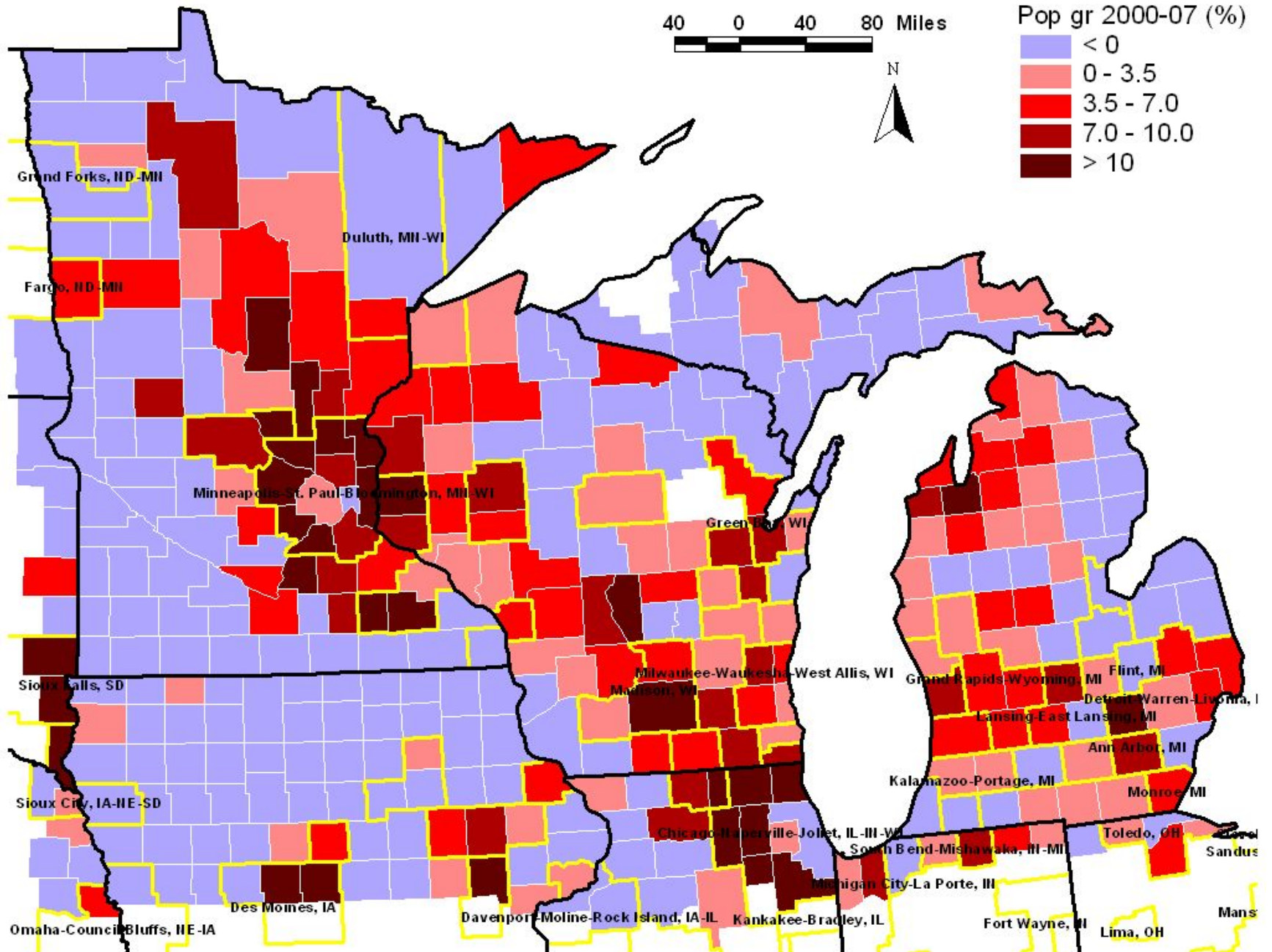
Note: **Boldface** indicates significant at 10% level. The difference between Detroit and Orlando uses their actual values. “1 std dev.” represents a one-standard deviation change in the variable. The models were re-estimated with USDA ERS amenity rank replacing all 9 individual climate/amenity variables to calculate the amenity rank effects (available online at ERS). The amenity scale is 1=lowest; 7=highest.

2000-2007 Population Growth



U.S. average over 2000-2007 = 2.81%

2000-2007 Population Growth in NC U.S.



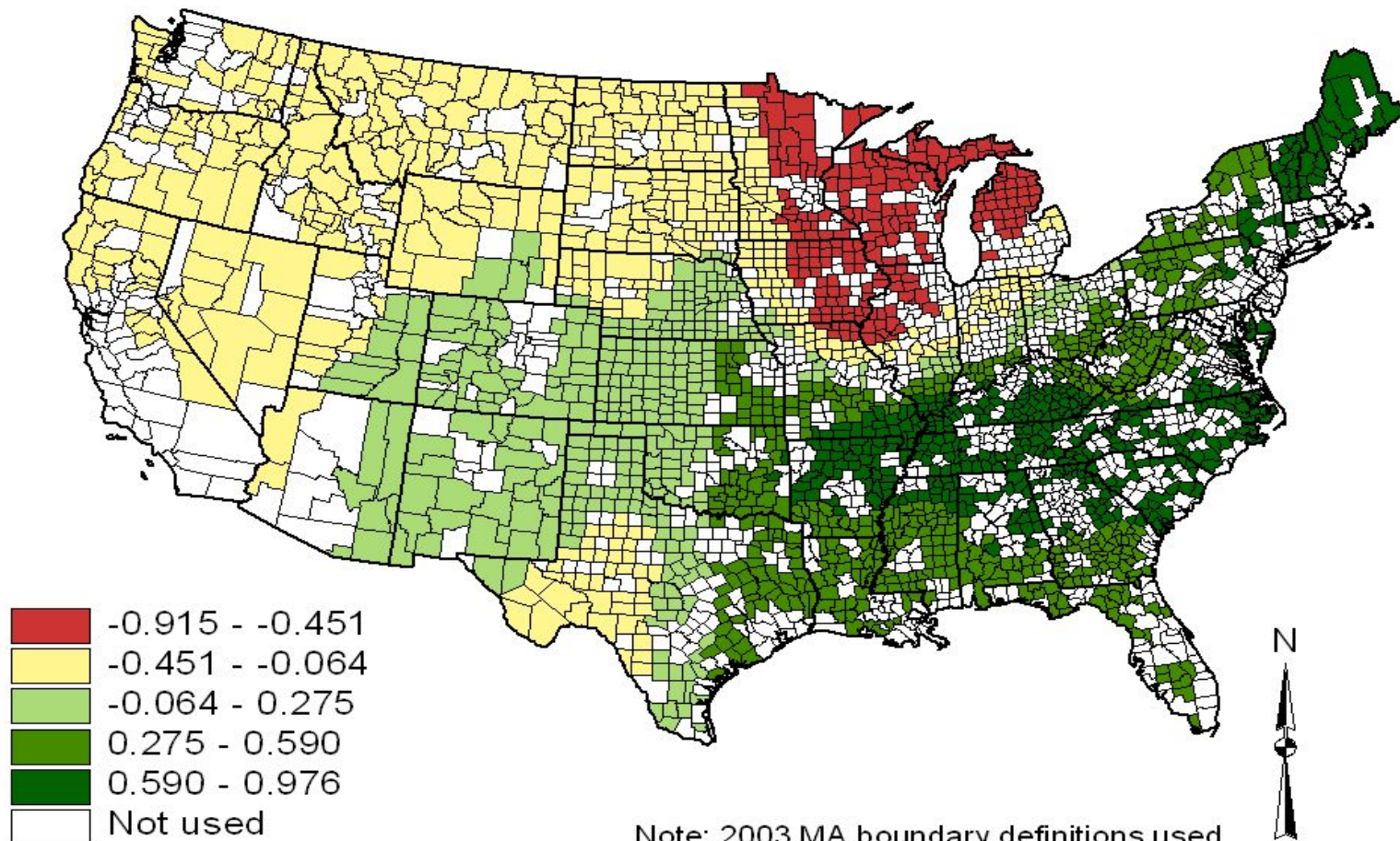


Heterogeneity Impacts

- Partridge et al. (2008) finds great regional variation in how amenities affect growth.
 - They use a GWR to find these effects.
- For example, high amenities tend to interact with higher initial shares of college graduates to produce even faster growth.
- Next two slides illustrate diverse effects of January temp, %Water Area, typography on nonmetropolitan 1990-2004 population growth.

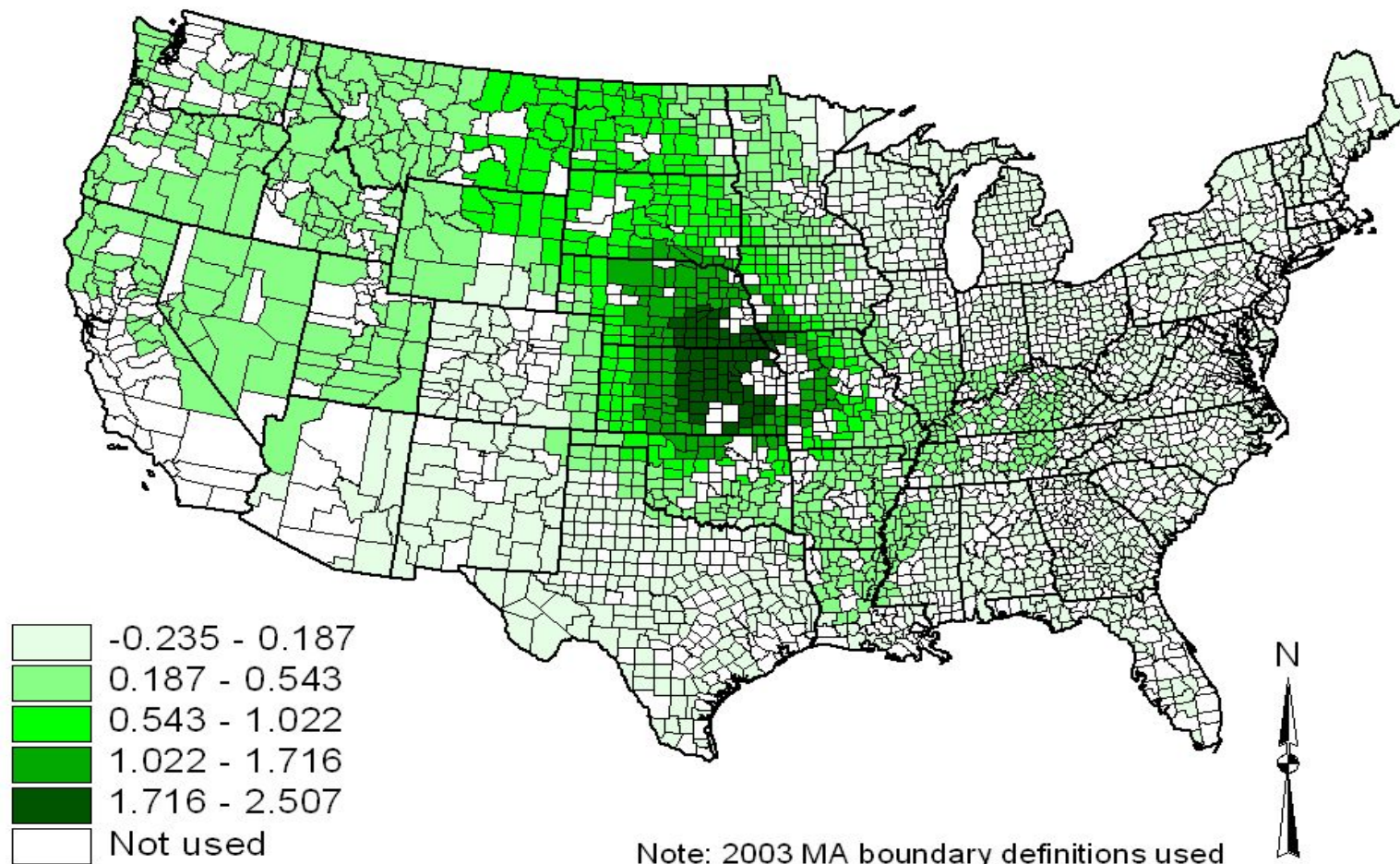
Nonmetro Employment Change 1990-2004

1a: Variations in the Coeff. of January Temperature



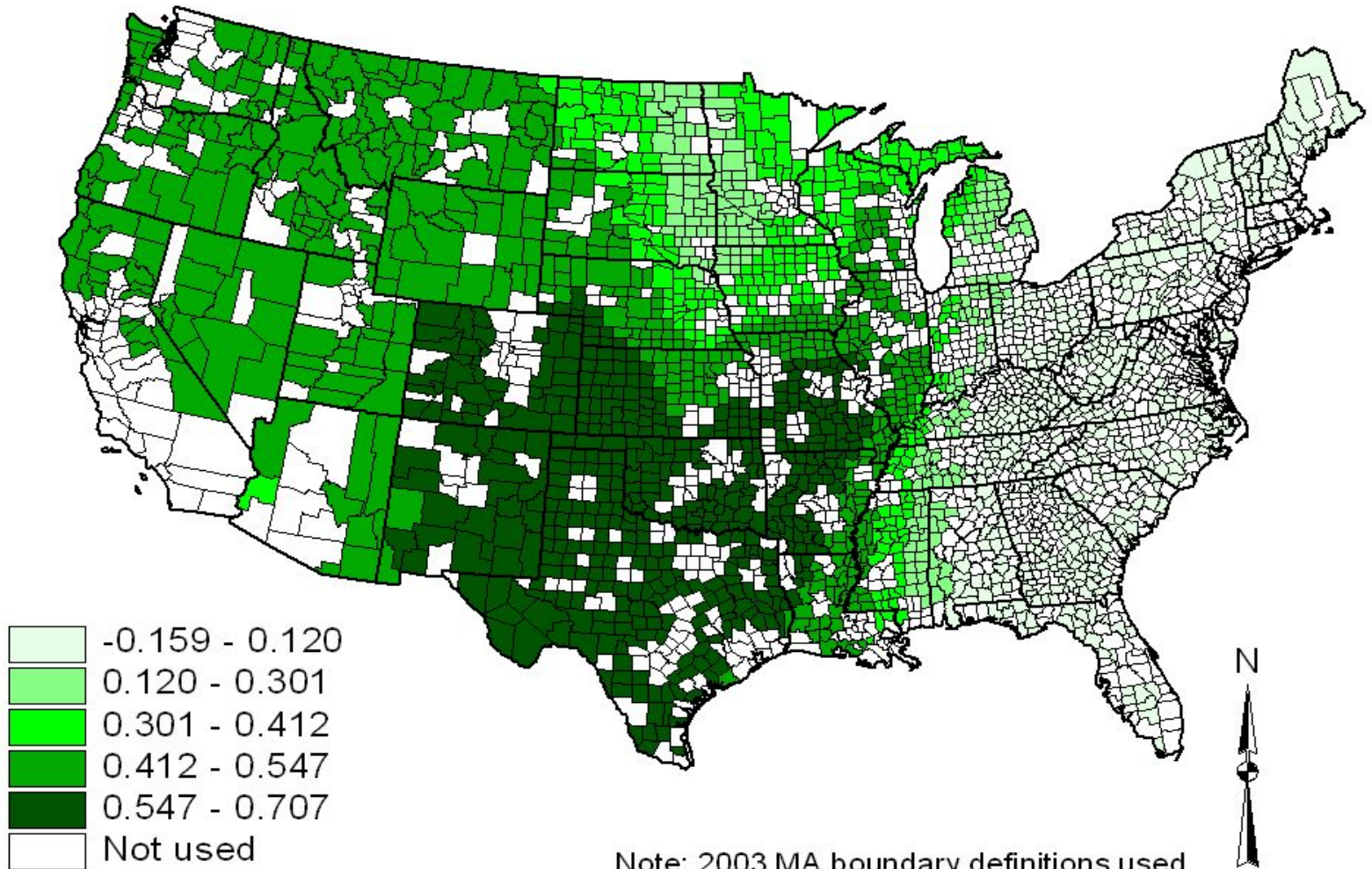
Nonmetro Employment Change 1990-2004

1b: Variations in the Coeff. of % Water Area

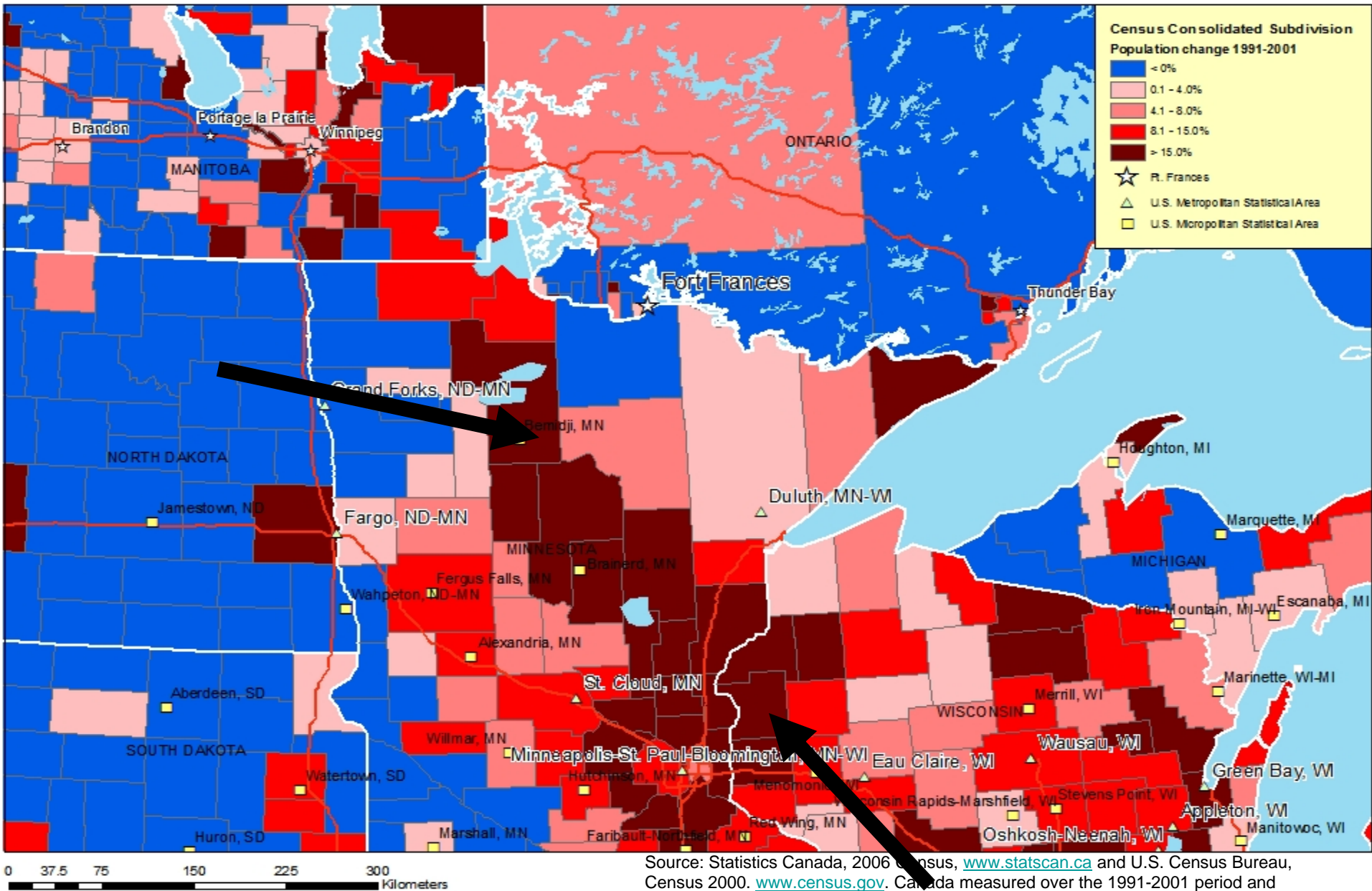


Nonmetro Employment Change 1990-2004

1c: Variations in the Coeff. of Topography

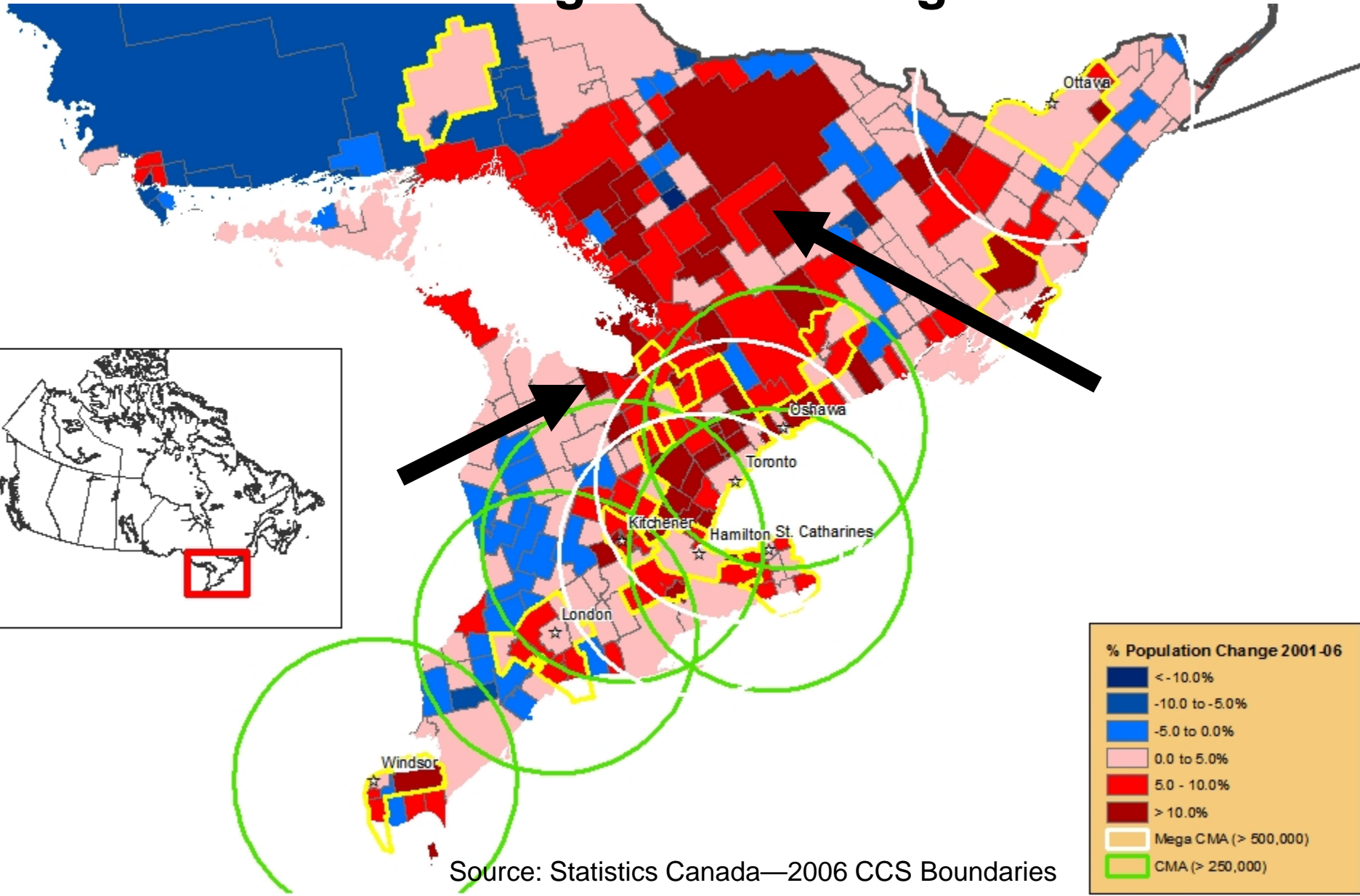


1990s Growth in Winnipeg/Twin Cities Region



Source: Statistics Canada, 2006 Census, www.statscan.ca and U.S. Census Bureau, Census 2000. www.census.gov. Canada measured over the 1991-2001 period and the U.S. is measured over the 1990-2000 period.

2001-2006 Population Growth in S. Ontario: With 100 km rings around Large CMA



Source: Statistics Canada—2006 CCS Boundaries

Future Trends

- Two main trends.
- 1. At the macro level, amenity migration may be slowing (my unpublished work) and McGranahan (2007).
 - Warm areas or spectacular settings are now ‘crowded’ and high housing costs deter new migrants. So, while rising incomes support amenity migration, congestion and high costs do not.
- 2. North areas with lakes and woods are now benefiting more from amenity growth. These areas are more ‘virgin’ and they have lower housing costs.

Future Trends—cont.

- Climate change—and mitigating adjustments to climate change—imply that the Great Lakes regions will further benefit from trend 2.
 - Cooler summers and more water may reverse Sunbelt migration.
 - Access to water may help certain industries such as food processing: not just recreation
 - Great Lakes Compact is an example of a policy change that may facilitate this process.

Conclusion

- Amenities cause higher land costs, lower wages and faster population growth.
 - Income growth supports the 'purchase' of Quality of Life
- The influence has been remarkable growth in the American Sunbelt.
- Amenity growth may be changing over time to favor areas with lakes and woods. This favors the Great Lakes states.
- Climate change may further boost growth in the Great Lakes region through reversal of Sunbelt migration.

Thank you

Presentation will be posted at The Ohio State University, AED Economics, Swank Program website:

<http://aede.osu.edu/programs/Swank/>

(under presentations)