

American Community Survey Travel Analysis

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Abstract

- The poster models and analyzes travel behavior by race and ethnicity in Lake County, Illinois, an early test site of the ACS, beginning 1999.
- According to the forecast of the Northeastern Planning Commission, Metro Chicago's population will be more than 50% Hispanic and African American by 2030.

Purposes

- Present demographic and socioeconomic profiles and trends.
- Analyze travel-related characteristics of the growing Hispanic and stable African American populations.
- Examine strengths and weaknesses of the ACS products for transportation analysis.

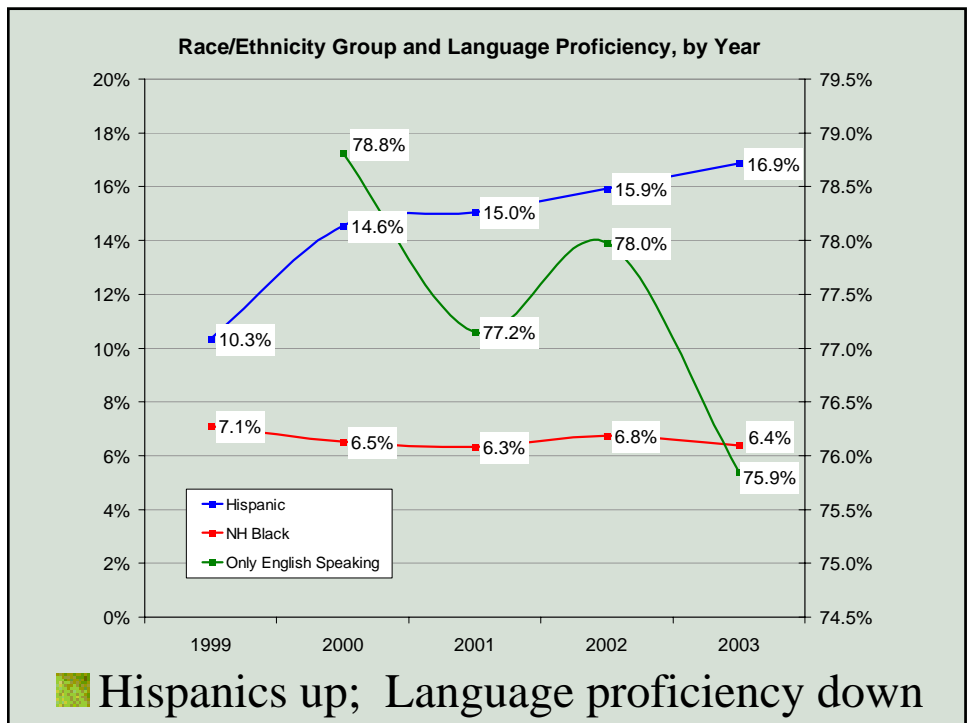
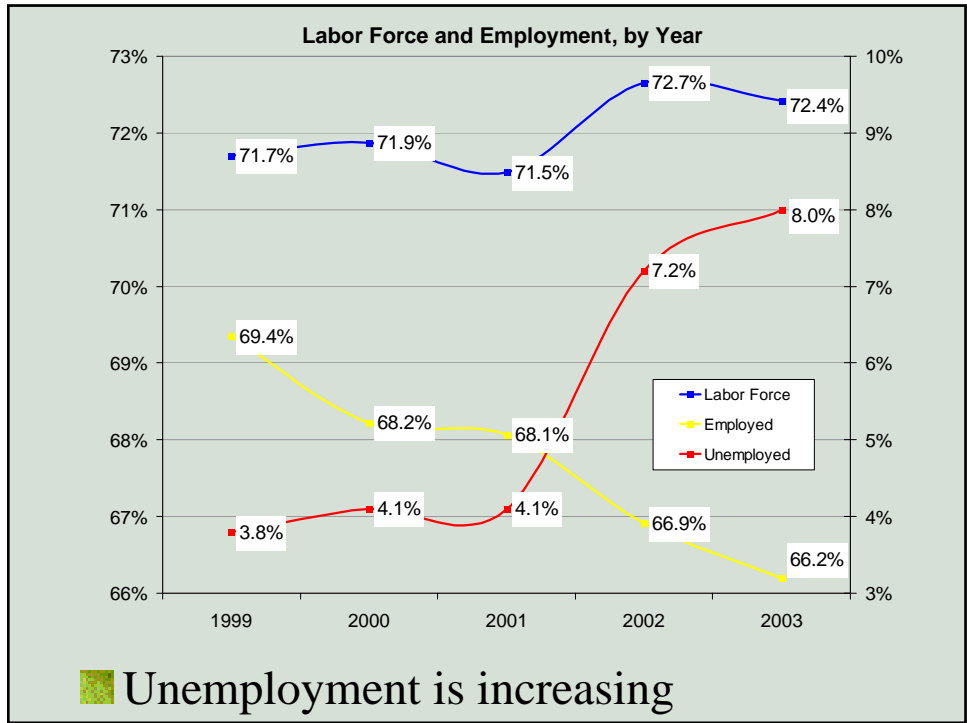
Methods I

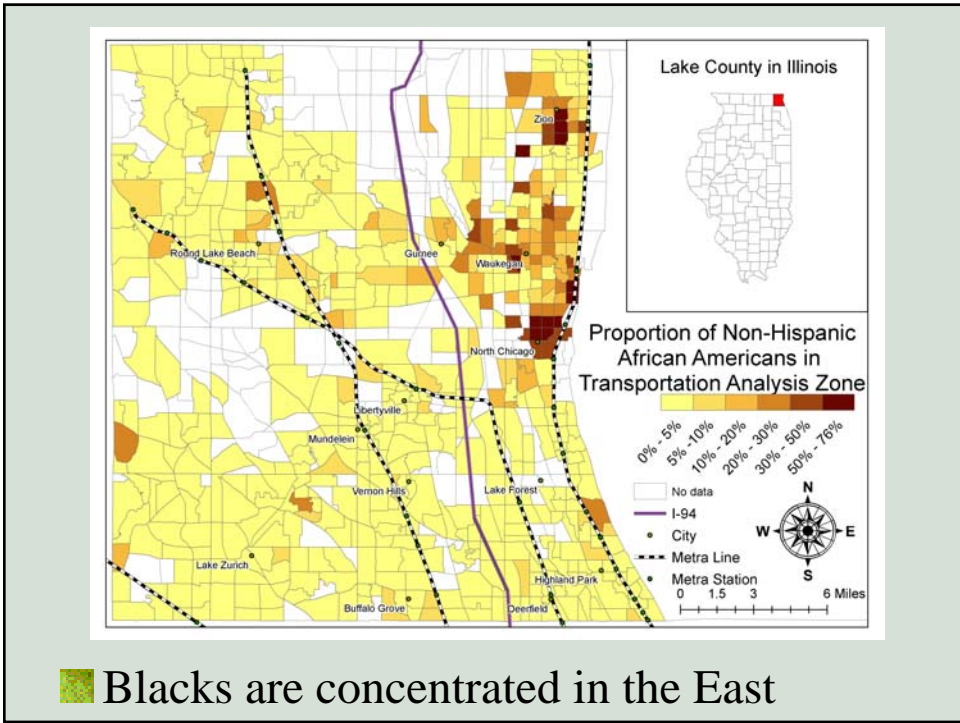
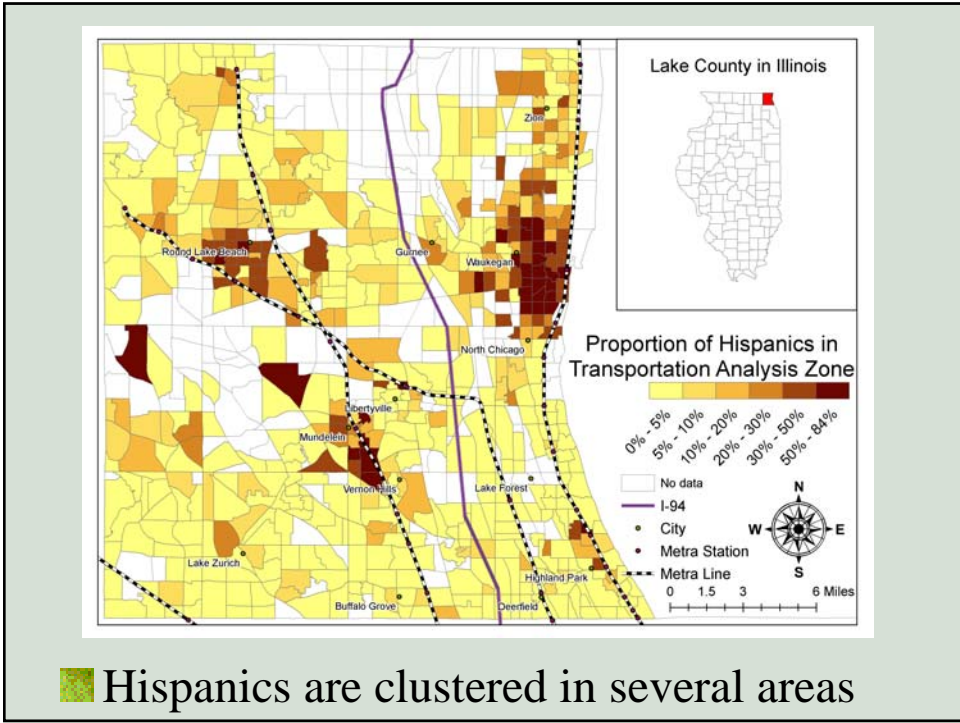
- The research maps travel behaviors through mode choice and travel time.
- Census data products used:
 - ACS Summary Tables (1999-2003)
 - CTPP ACS (1999-2001)
- Scale of analysis:
 - County level for the ACS summaries
 - TAZ level for the CTPP ACS data

Methods II

- Types of Analysis:
 - Descriptive analysis
 - Weighted Ordinary Least Squares
- Problems with the data included:
 - Data gaps in TAZs with small populations
 - Use of aggregate data
 - Response effects of various survey questions

Findings

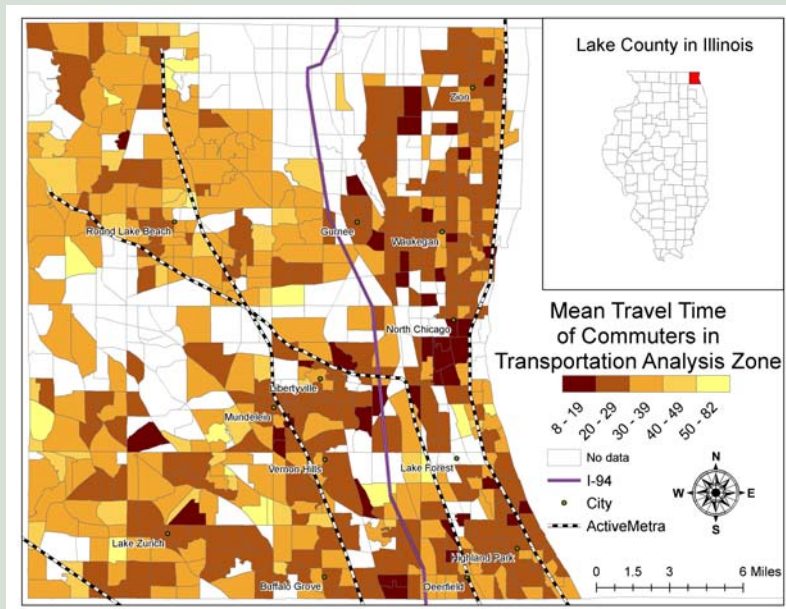




	Coefficient	Standardized Coefficient	Significance
(Constant)	25.784		0.000
VEH>2	6.175	0.179	0.000
BLACK-NH	-6.978	-0.126	0.003
HISPANIC	-3.369	-0.110	0.009

Mean Travel Time

- Hispanics and especially Black Non-Hispanics have shorter travel times.
- The impact of vehicle ownership contributes to travel time.



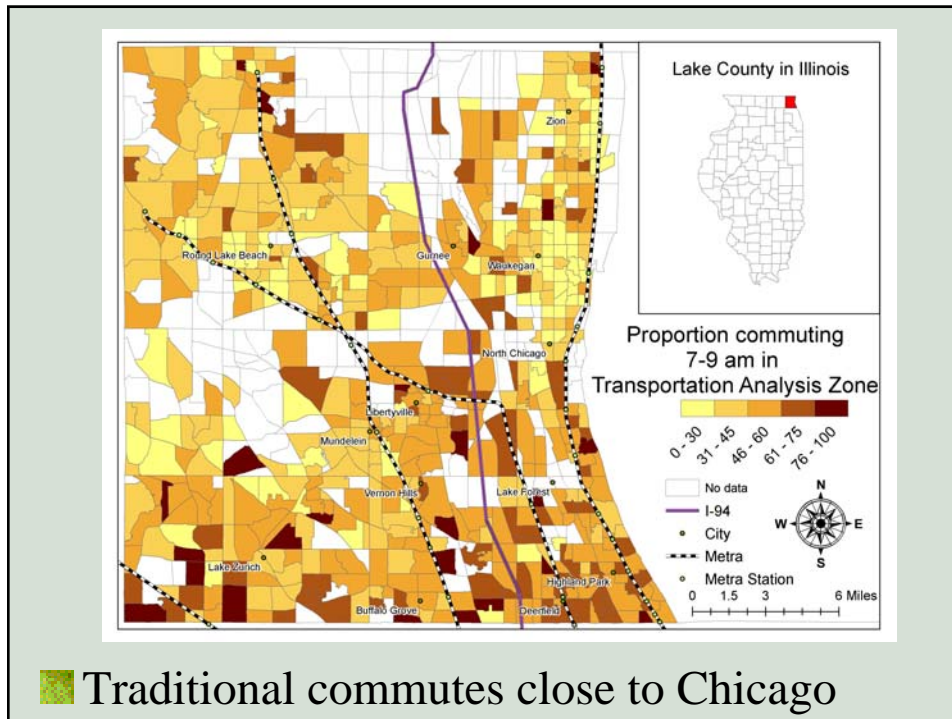
- High travel times in transportation corridors

Travel Time of Day

	Coefficient	Standardized Coefficient	Significance
(Constant)	0.099		0.128
HISPANIC	-0.248	-0.352	0.000
MNINC	0.000	0.307	0.000
VEH2	0.117	0.126	0.002
BLACKNH	-0.100	-0.079	0.032
ASIANNH	0.250	0.106	0.001
EMPLOYED	0.231	0.149	0.000
PR65PLUS	0.273	0.124	0.002
FEMALE	0.201	0.074	0.028
DISABIL	-0.175	-0.067	0.040

Hispanics, Blacks and the disabled commute during the nontraditional periods.

Women and income add to starts during traditional peak hours.



Travel by Bus

	Coefficients	Standardized Coefficient	Significance
(Constant)	-0.004		0.003
VEH=1	0.010	0.241	0.000
BLACK-NH	0.036	0.177	0.000
HISPANIC	0.020	0.174	0.000
DISABIL	0.038	0.091	0.014

- Bus users tend to be Blacks and Hispanics, employees with 1 vehicle in the household and the disabled.
- These are traditionally transit-captive populations.

	Coefficient	Standardized Coefficient	Significance
(Constant)	-0.021		0.023
MEAN INC.	0.377	0.410	0.000
AGE>=65	0.138	0.173	0.000
BLACK-NH	-0.040	-0.087	0.025
AGE<15	0.054	0.082	0.048

Travel by Train

- The population traveling by train is quite different; positive zonal association with high income, children, and senior citizens.
- The African American population displays negative association with travel by train.

Carpooling

	Coefficients	Standardized Coefficients	Significance
(Constant)	0.209		0.000
HISPANIC	0.254	0.531	0.000
VEH>2	-0.062	-0.114	0.003
BLACK-NH	0.107	0.125	0.001
FEMALE	-0.151	-0.081	0.014
AGE<15	-0.090	-0.074	0.027

Carpooling II

- Blacks and to a very high degree Hispanics car share.
- The following populations however tend to ride alone:
employees in 3+ car households,
females and families with children.
- Families with many cars tend to travel for a longer time, and not to share rides.

Conclusions

During the ACS data period (1999-2003)

- Employment rates declined.
- Unemployment rates increased.
- Hispanic population grew by 6.6%,
from 10.3% to 16.9%
- Black population declined by 0.7%.

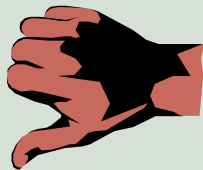
Travel by race and ethnicity

- Black and Hispanic populations tend to have shorter trips,
- They use more public transit and carpooling.
- They travel during non-traditional commute periods.

ACS Data



- Longitudinal data by County



- TAZ coverage incomplete

Future Research

- Analysis of disaggregate data through the Research Data Center
- Travel behavior modeling through advanced methods

