

# **A Quick Review of Commuting in America III**

## **THE TOP TEN**

**Alan E. Pisarski**

# A couple of ways to examine the topic

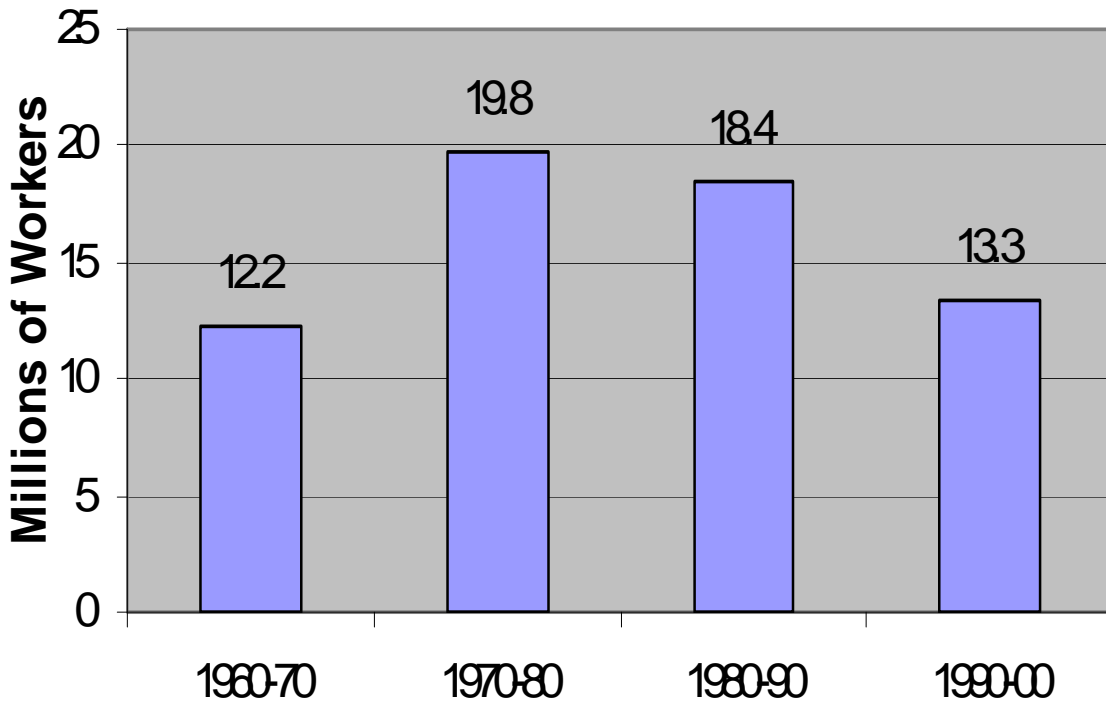
- Short Overview – *AASHTO Journal*
- Factlets [TRB.org/ciaiii](http://TRB.org/ciaiii)
- **Dichotomies** - Exec Summary
- **My top ten tidbits** [TRB.org/ciaiii](http://TRB.org/ciaiii)
  - Demographic Overview
  - Role of commuting
- **OR YOU COULD BUY THE BOOK!**

# The Demographic Story

1. **The Commuting in America series has been the history of the working years of the baby boom generation**
2. **The Boomers are now moving off stage creating a new phase in American commuting.**
3. **The key question will be where will the workers come from?**
4. **Advent of the immigrant workforce will be just one of the challenging concerns**

# END OF THE BOOM

WORKERS ADDED PER DECADE



## 1980-90

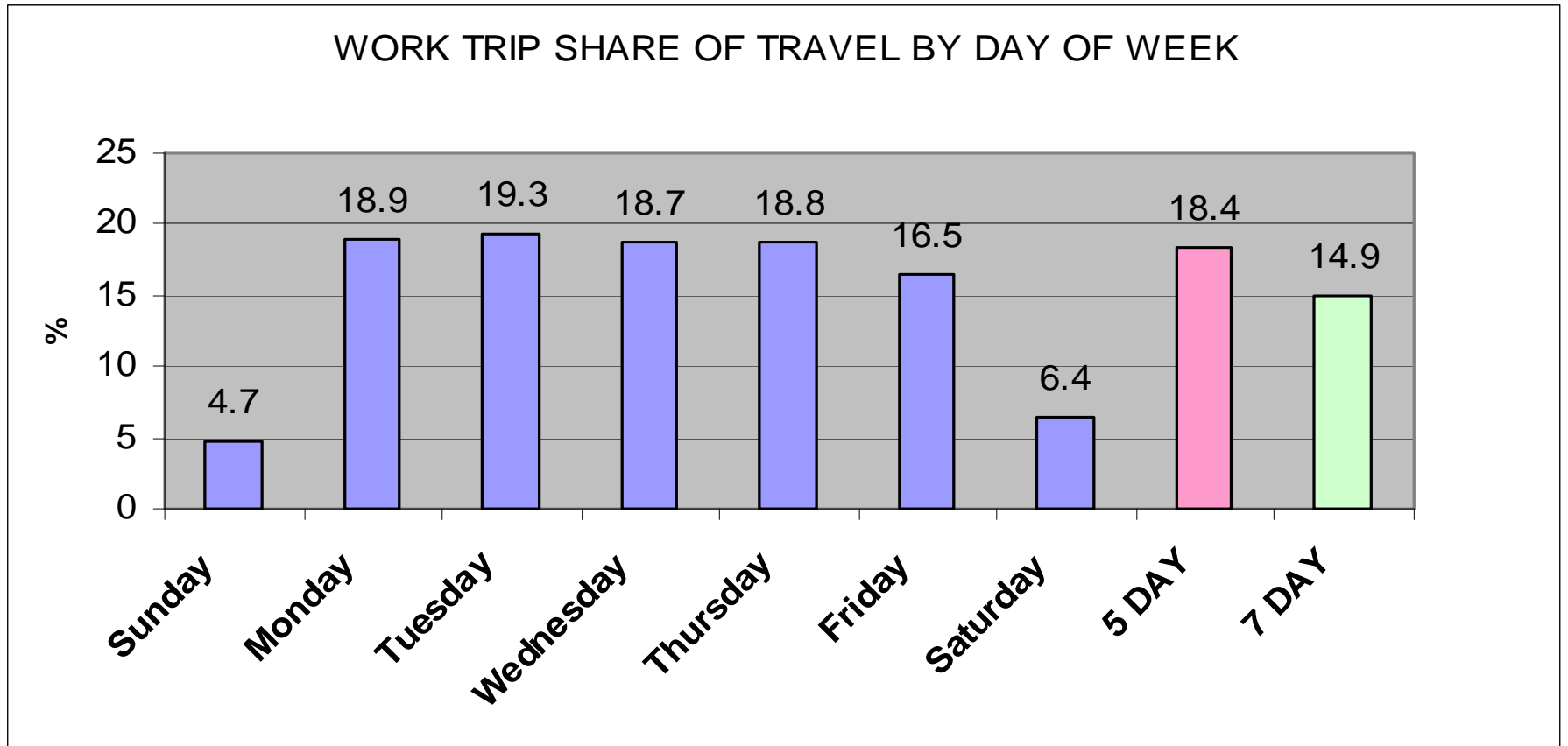
■ 18.5 MILLION WORKERS

## ■ 1990-2000

■ 13.3 MILLION WORKERS

■ Our problem may be too few commuters not too many!

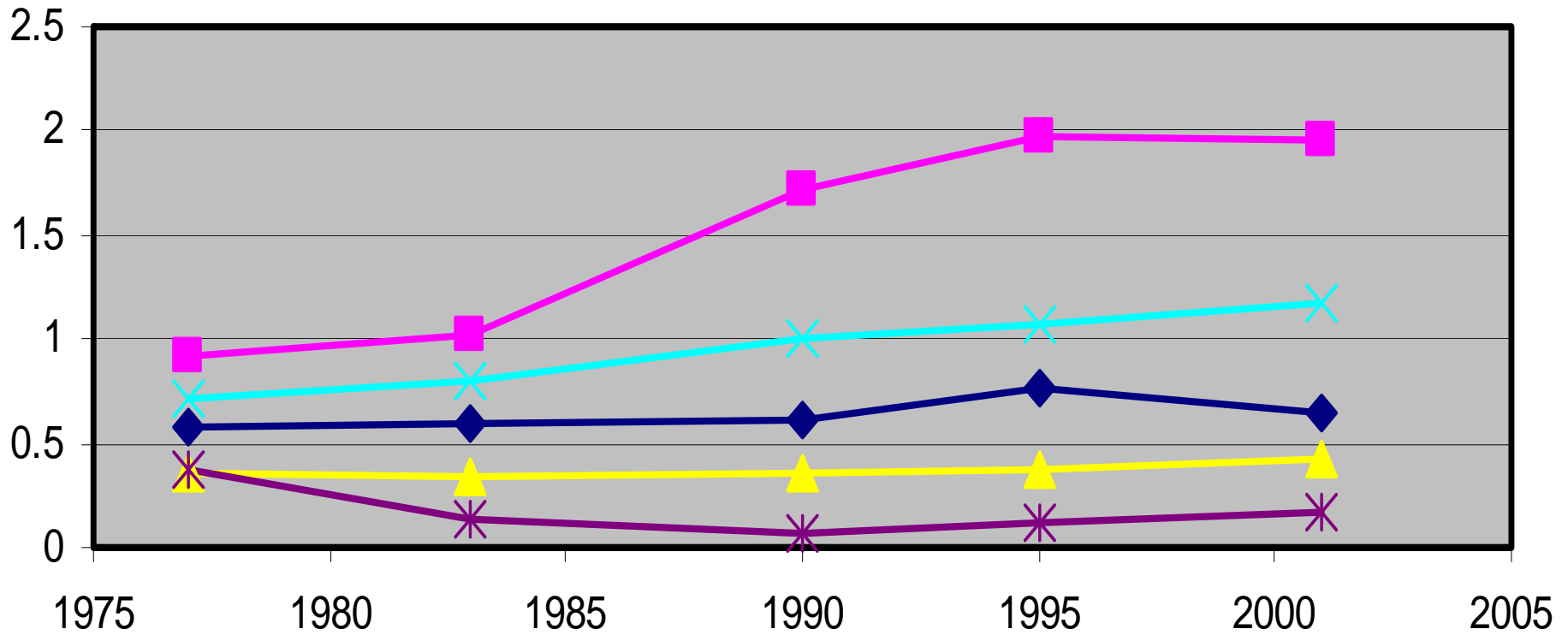
# The Role of Commuting Today





# Daily trips per Capita

◆ WORK    ■ FAM/PERS BUS    ▲ SCHOOL/CHCH    ✕ SOC/REC    \* OTH



**But** the work trip still defines much of what we need to know about travel to make our transportation systems work better

**The** home and workplace are the two anchors for many of those other trips that now claim increasing prominence—trips to the gym and market, drop-offs/pick-ups, etc.—are as likely to start from work as home in many households.

**Thus**, for the majority of adults who work, the workplace location is a major force in the stimulus for travel, the direction, location, and time of travel and—often—the mode of travel as well.



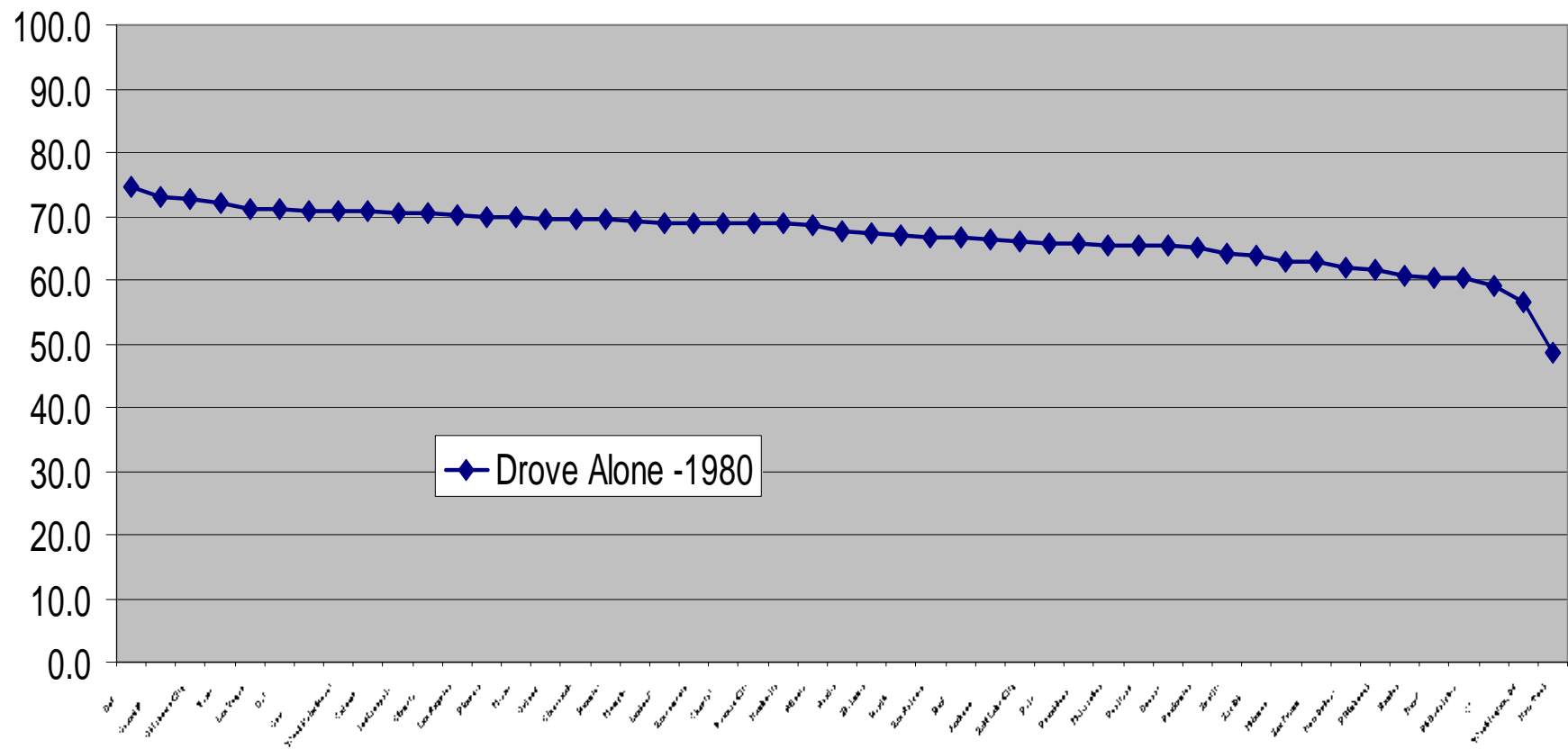
# Four key Dichotomies

- Over/under 20 minutes commute
- In/out of metro area over 5 million (12 metros in 2005)
- Before/after 8 am
- Over/under age 55



# #10 – SOV GROWTH SLOWS

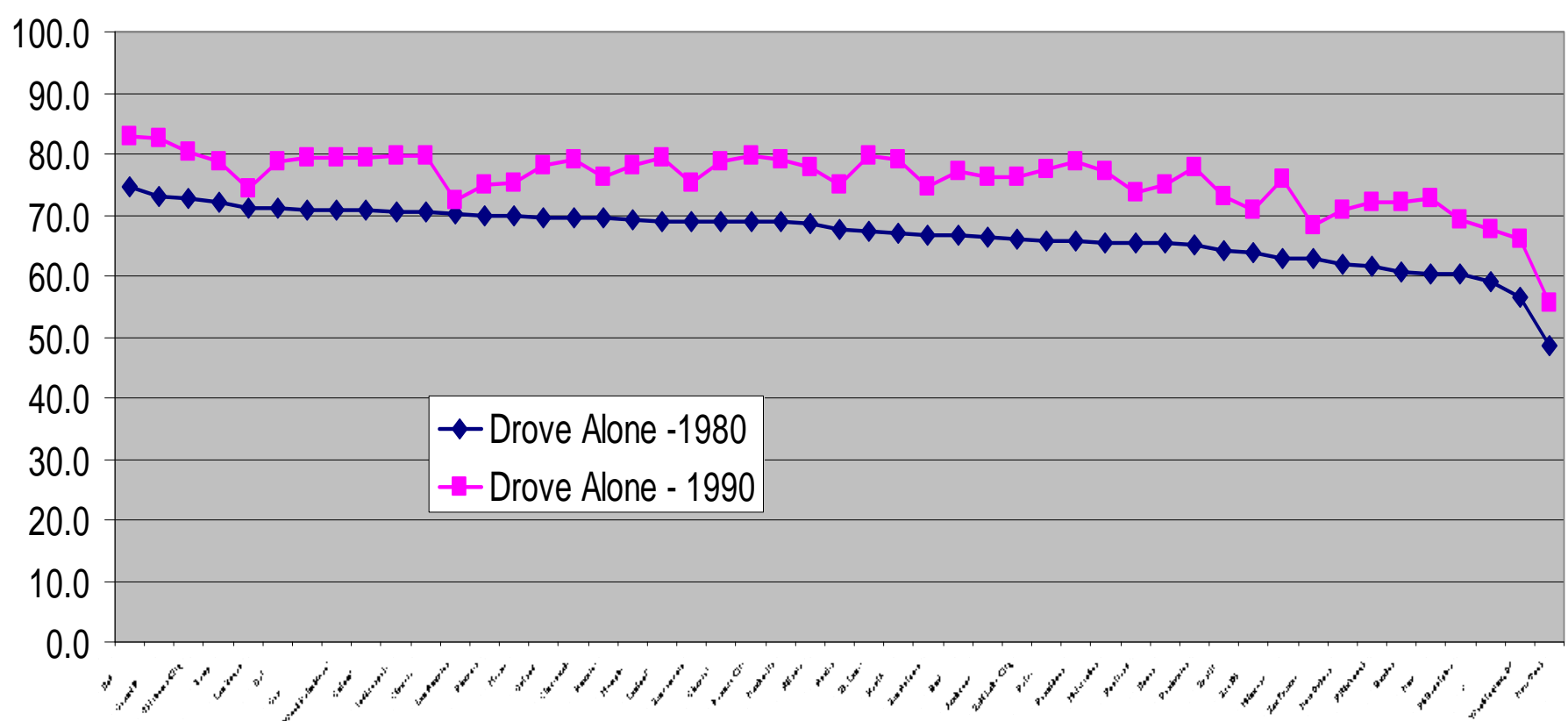
## Drive Alone Growth 1980-2000





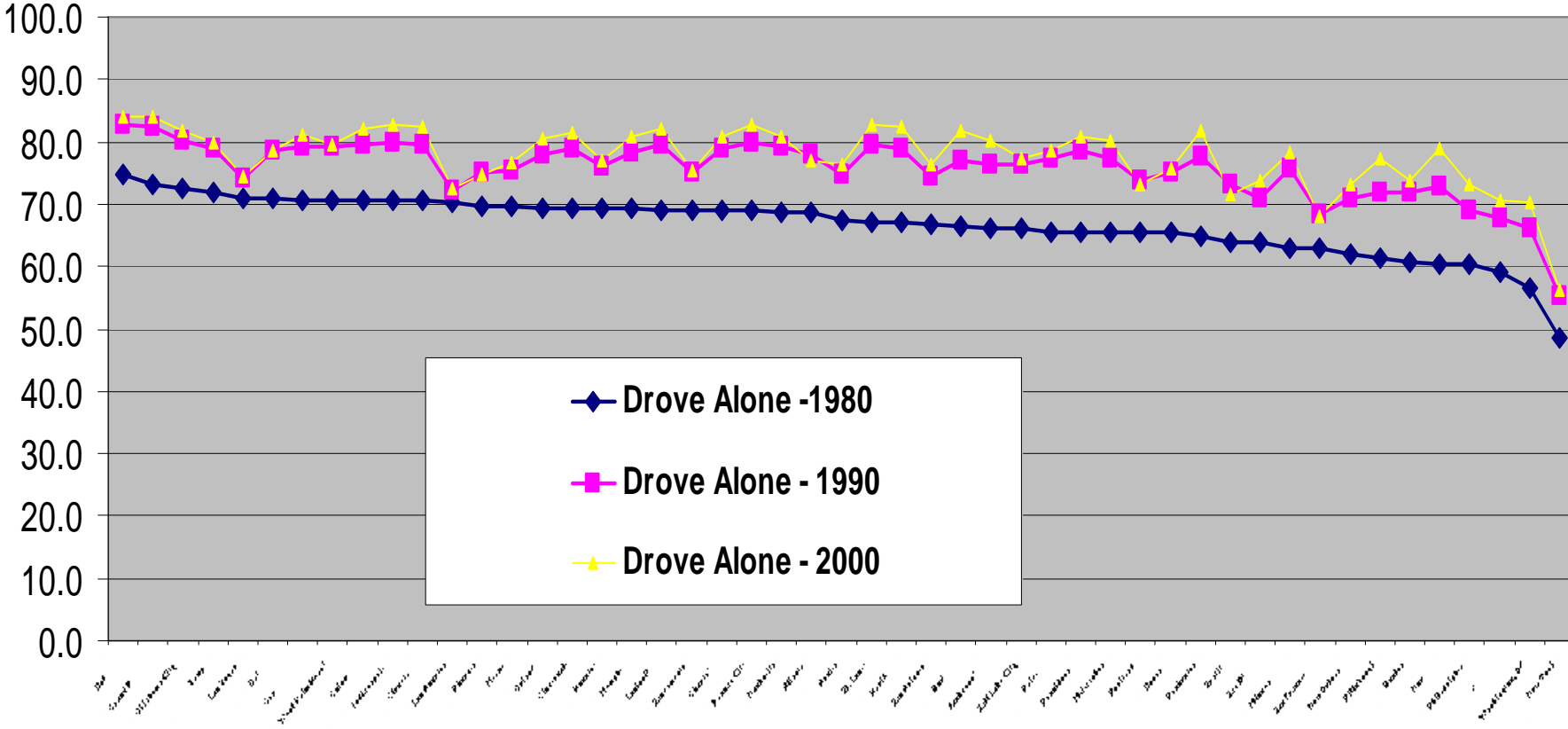
# Metro Stability re Driving Alone?

### Drive Alone Growth 1980-2000



# Metro Stability re Driving Alone?

## Drive Alone Growth 1980-2000

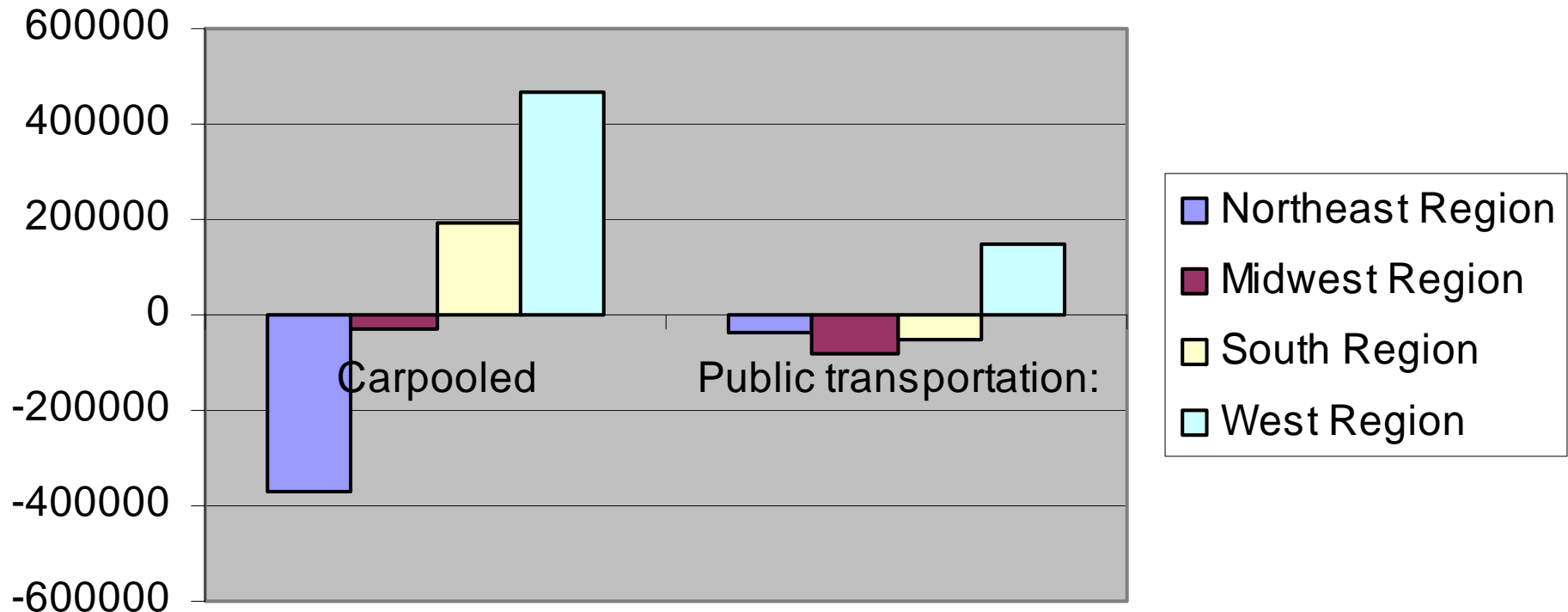




# DECLINES IN DRIVE ALONE! A FIRST

- Actual declines in share of Driving Alone – mostly in West
- Seattle down 1.5 percentage points
- 4 under a point
  - San Francisco; Portland; Phoenix; Atlanta
- Constant share or small increase:
  - LA; DFW; Sac; LV
  - Den; Tampa; SLC; West Palm; NY

# #9 REGIONAL SWINGS IN CARPOOLING AND TRANSIT 1990- 2000





# The Focus will be on Big Metros

- ◆ **metros over a million**
  - 1960 34 areas
  - 1990 39 areas
  - 2000 50 areas
  - 2005 53 areas
  - Probably 60 areas by 2020
  - 60% of population
- ◆ **12 areas with more than 5 meg.**
- ◆ **1/3 of national pop.; 100 meg.**
- ◆ **Growth is in exurb areas**



# Special Transit Study of Trips Downtown

	% metro			
Wash DC	9%			
New York	25%			
Seattle	7%			
Dallas Ft W	1.8%			



# Special Transit Study of Trips Downtown

	% metro	% cc		
Wash DC	9%	21%		
New York	25%	45%		
Seattle	7%	12%		
Dallas Ft W	1.8%	2.6%		

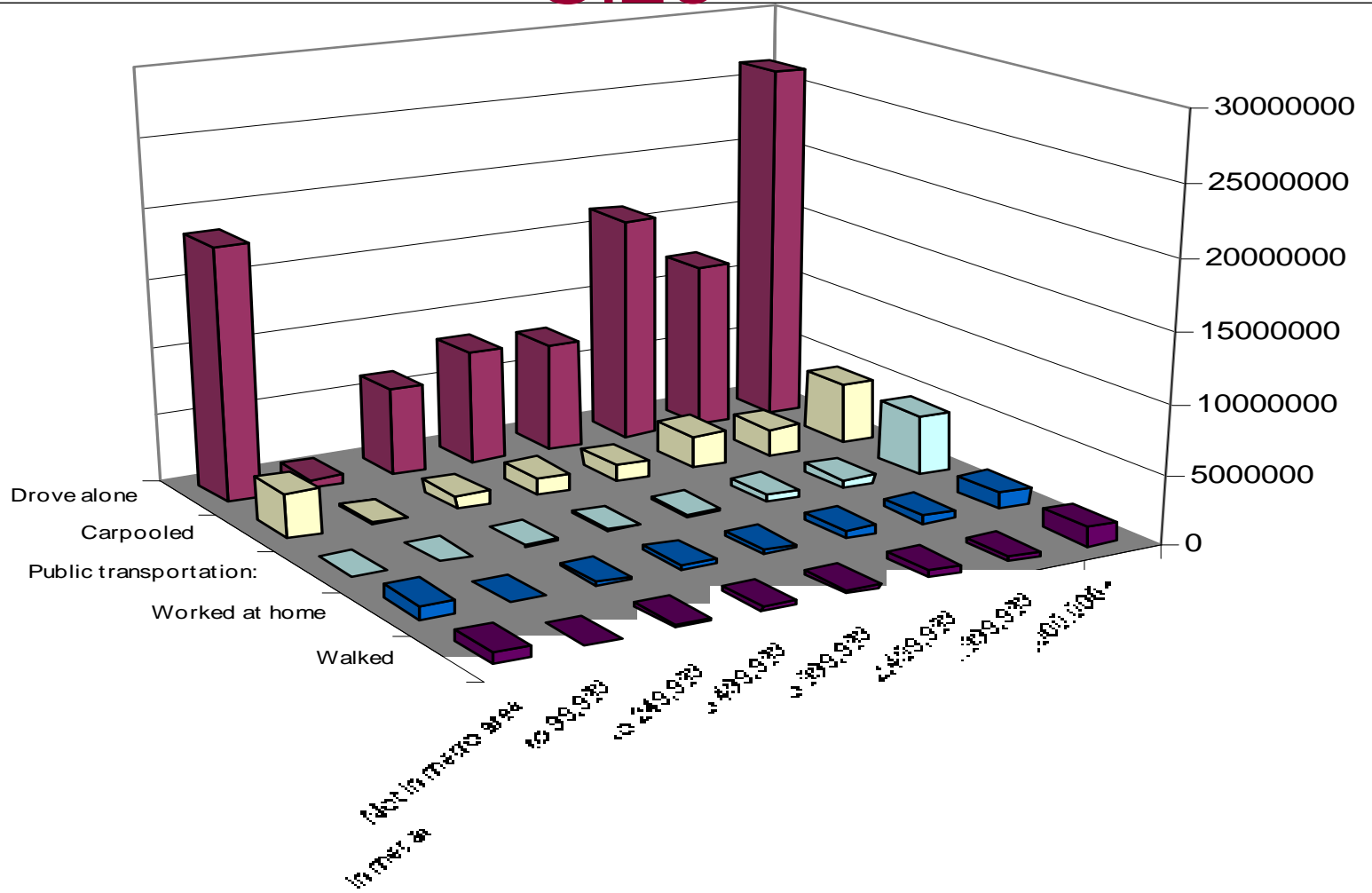




# Special Transit Study of Trips Downtown

	% metro	% cc	% “Downtown”	
Wash DC	<b>9%</b>	<b>21%</b>	<b>38%</b>	
New York	<b>25%</b>	<b>45%</b>	<b>77%</b>	
Seattle	<b>7%</b>	<b>12%</b>	<b>37%</b>	
Dallas Ft W	<b>1.8%</b>	<b>2.6%</b>	<b>14%</b>	

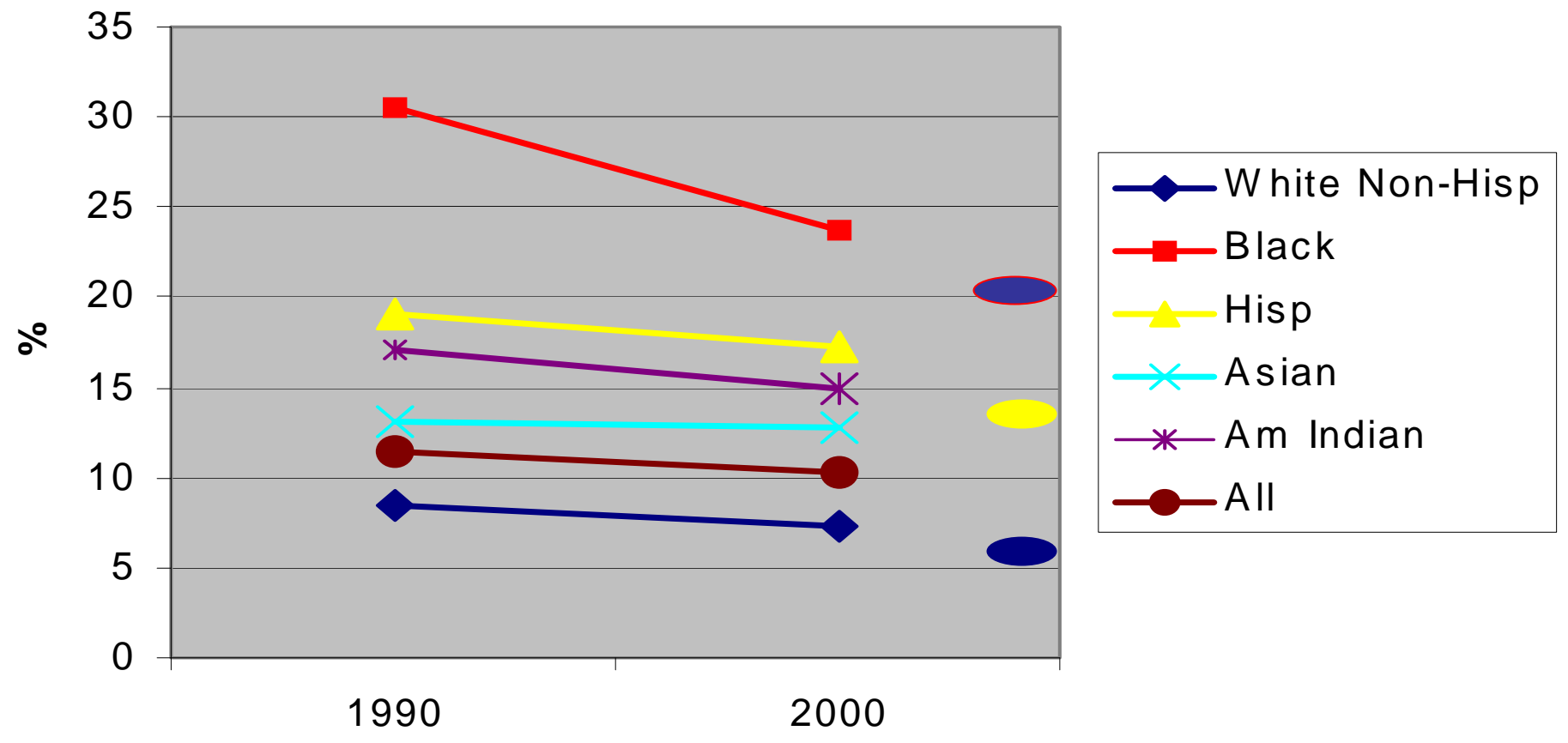
# National Modal Usage By Area Size



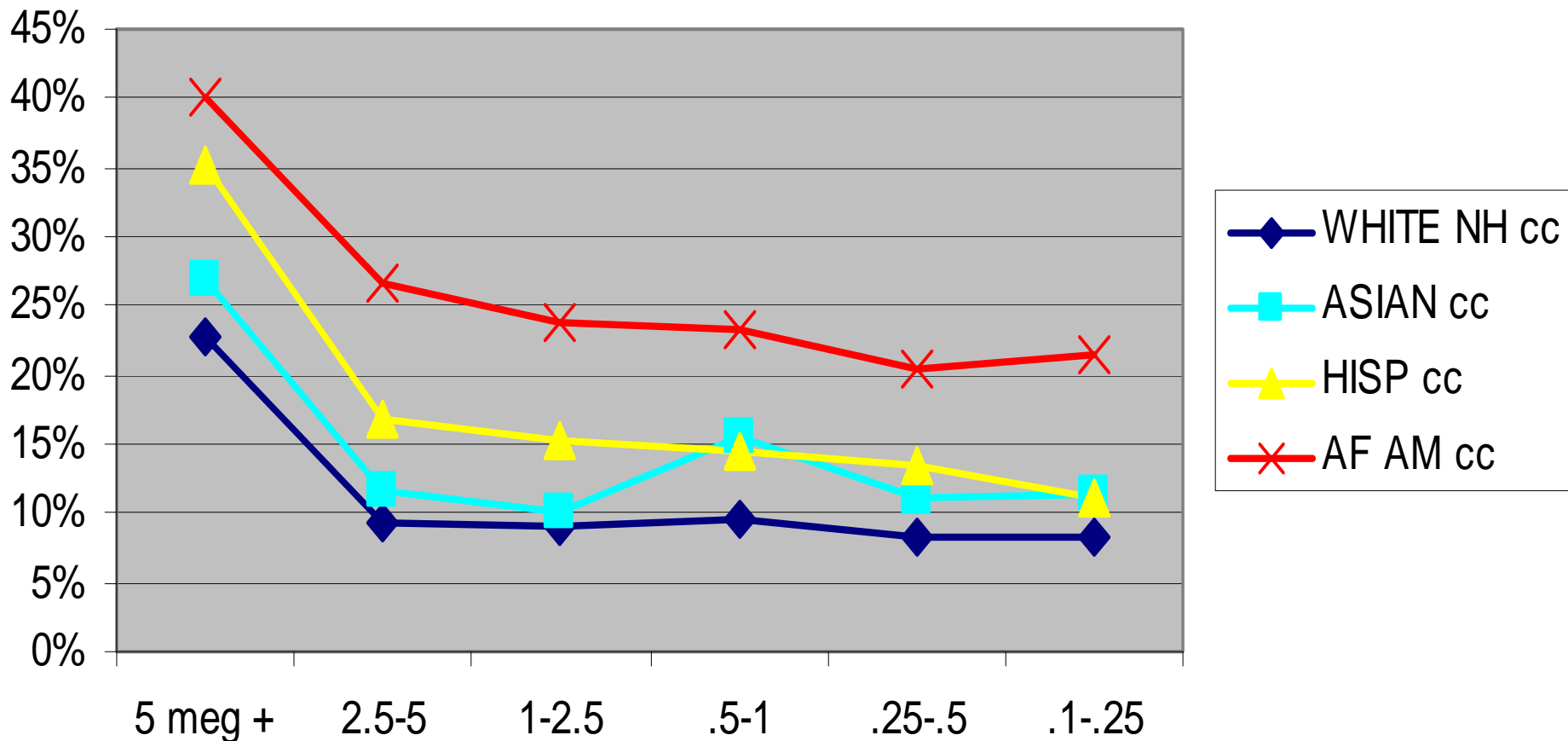


# #8 AFRICAN-AMERICAN VEHICLE OWNERSHIP SURGES

zero vehicle households by Race and Ethnicity

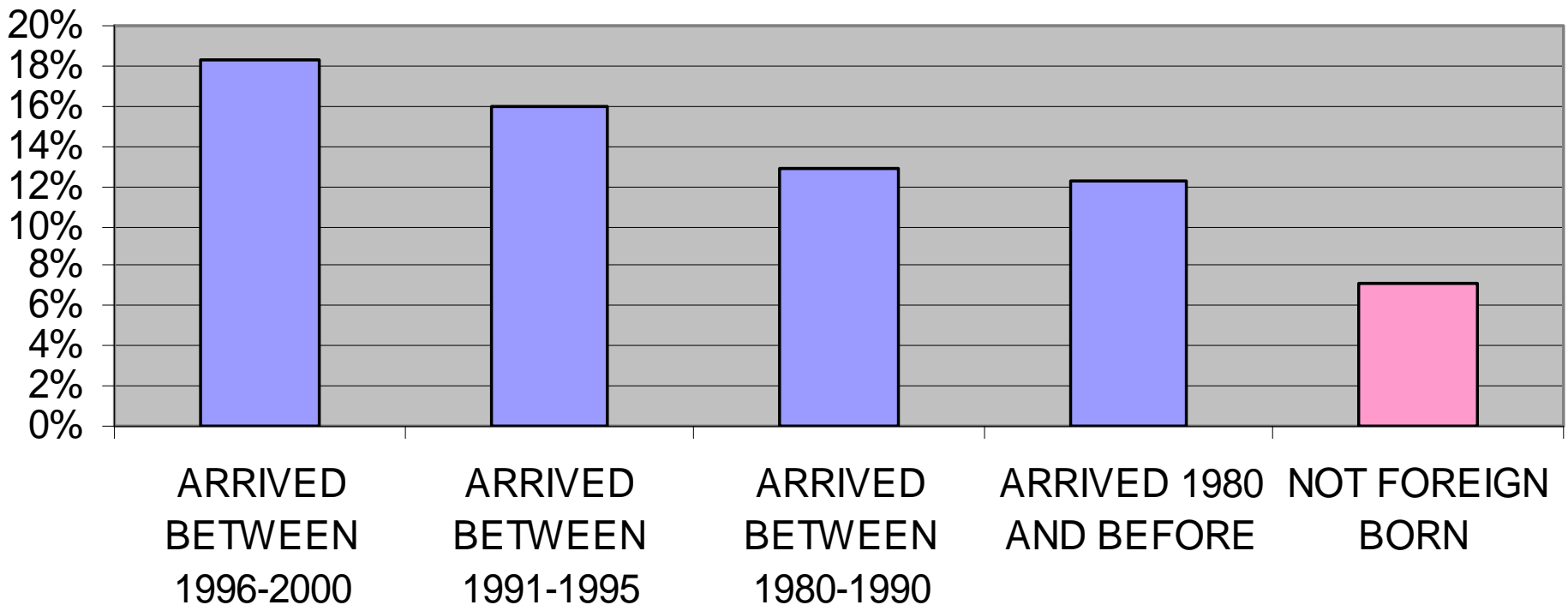


# % HH without vehicles in central cities by metro area size 2000



# Another key

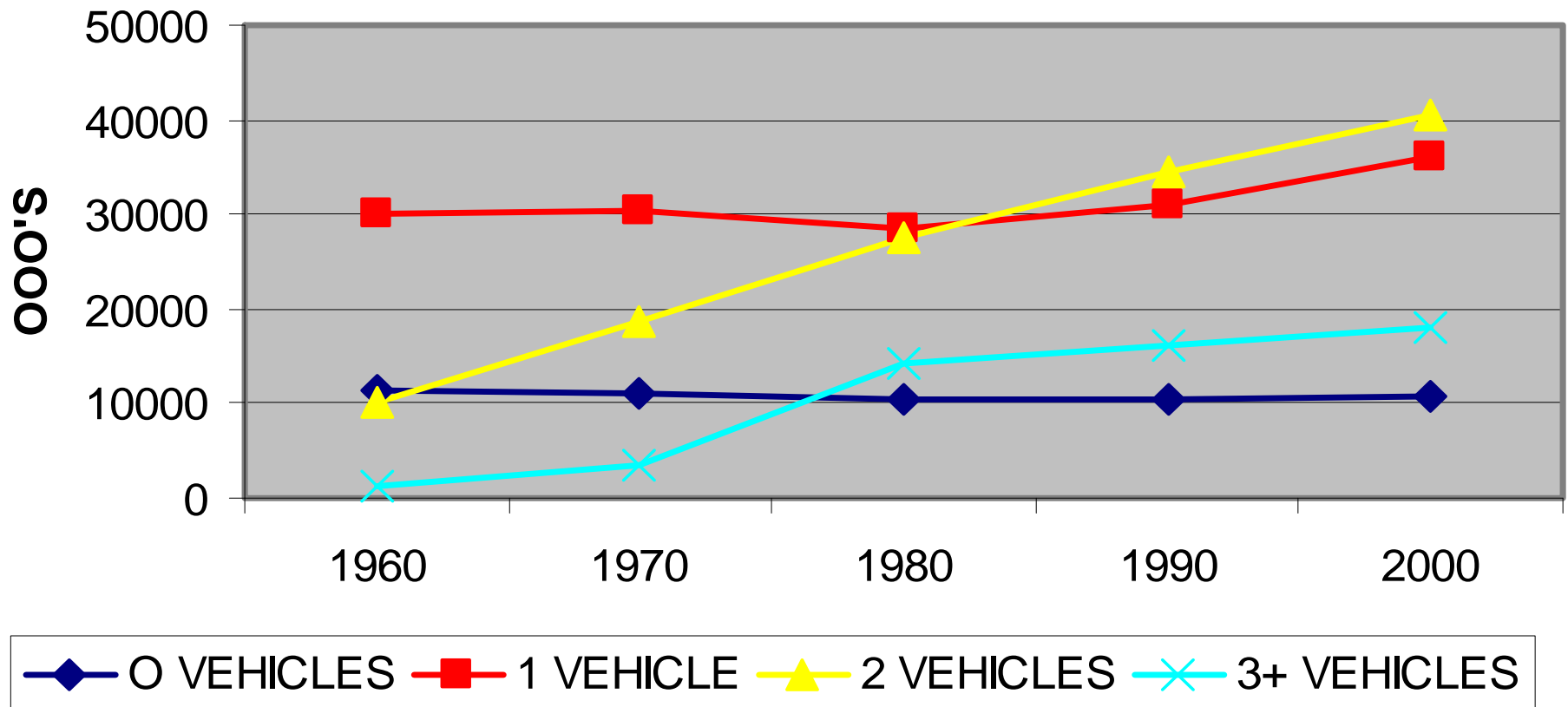
**Foreign-born persons in households without Vehicles  
by Year of Arrival**



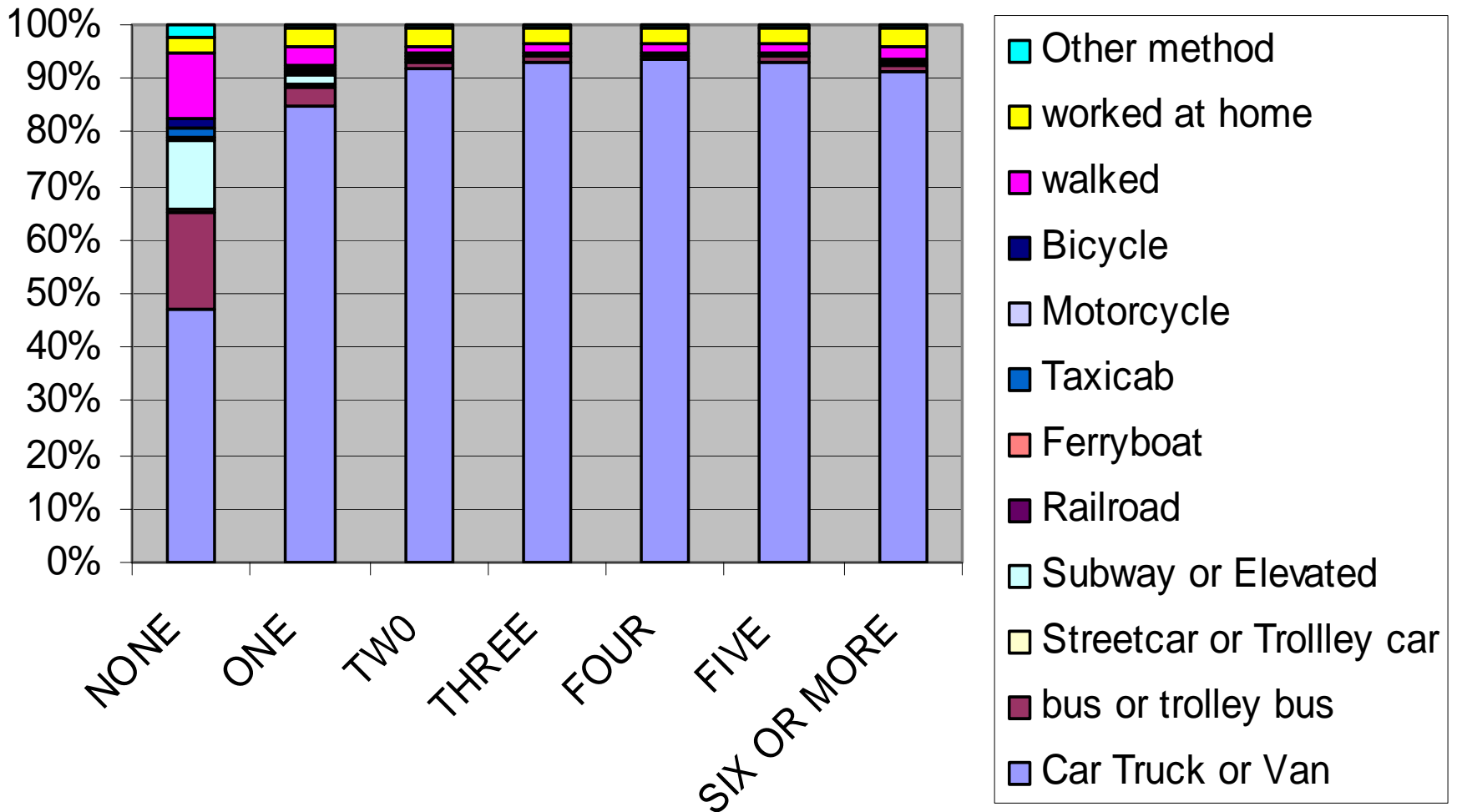


# Cars per Household – 40 year trend

## NUMBER OF HH BY VEHICLES OWNED

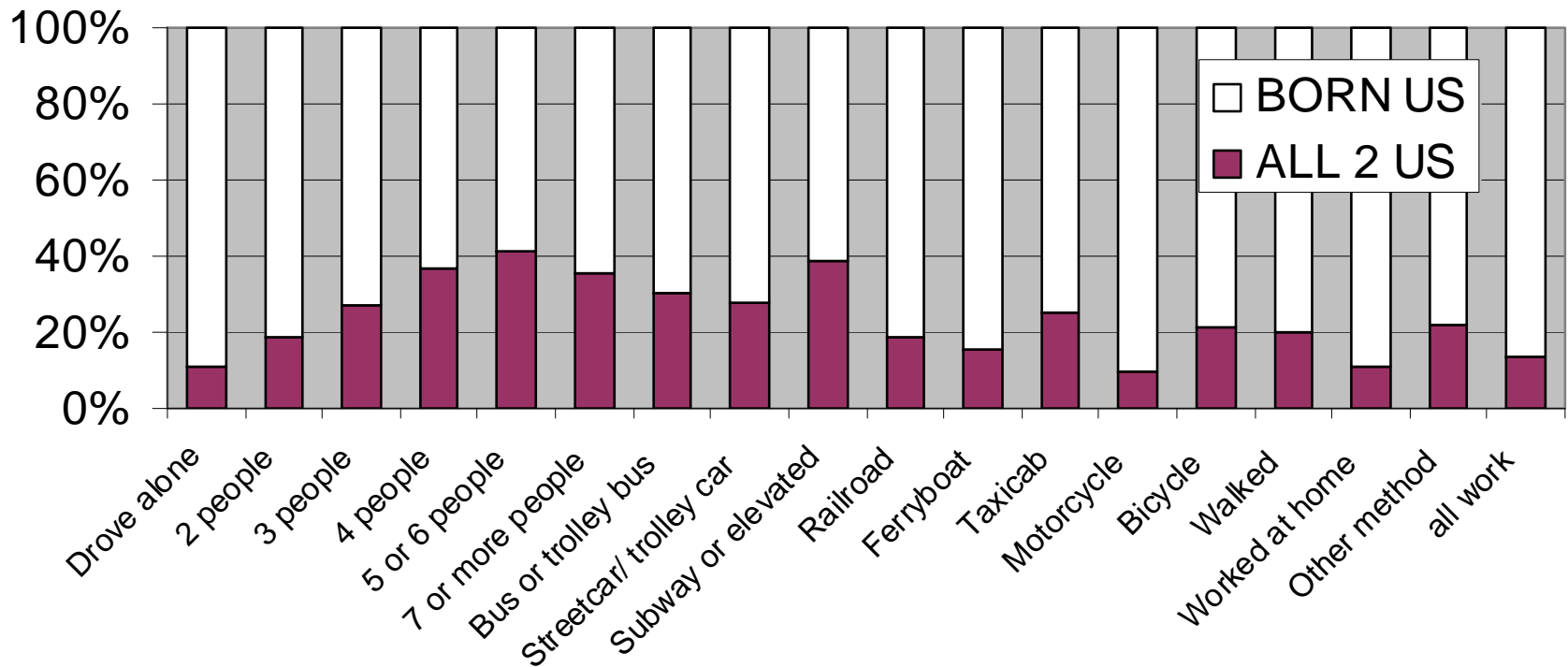


# Why Vehicle Ownership Matters



# #7 IMMIGRANT ROLES AND PATTERNS - 1

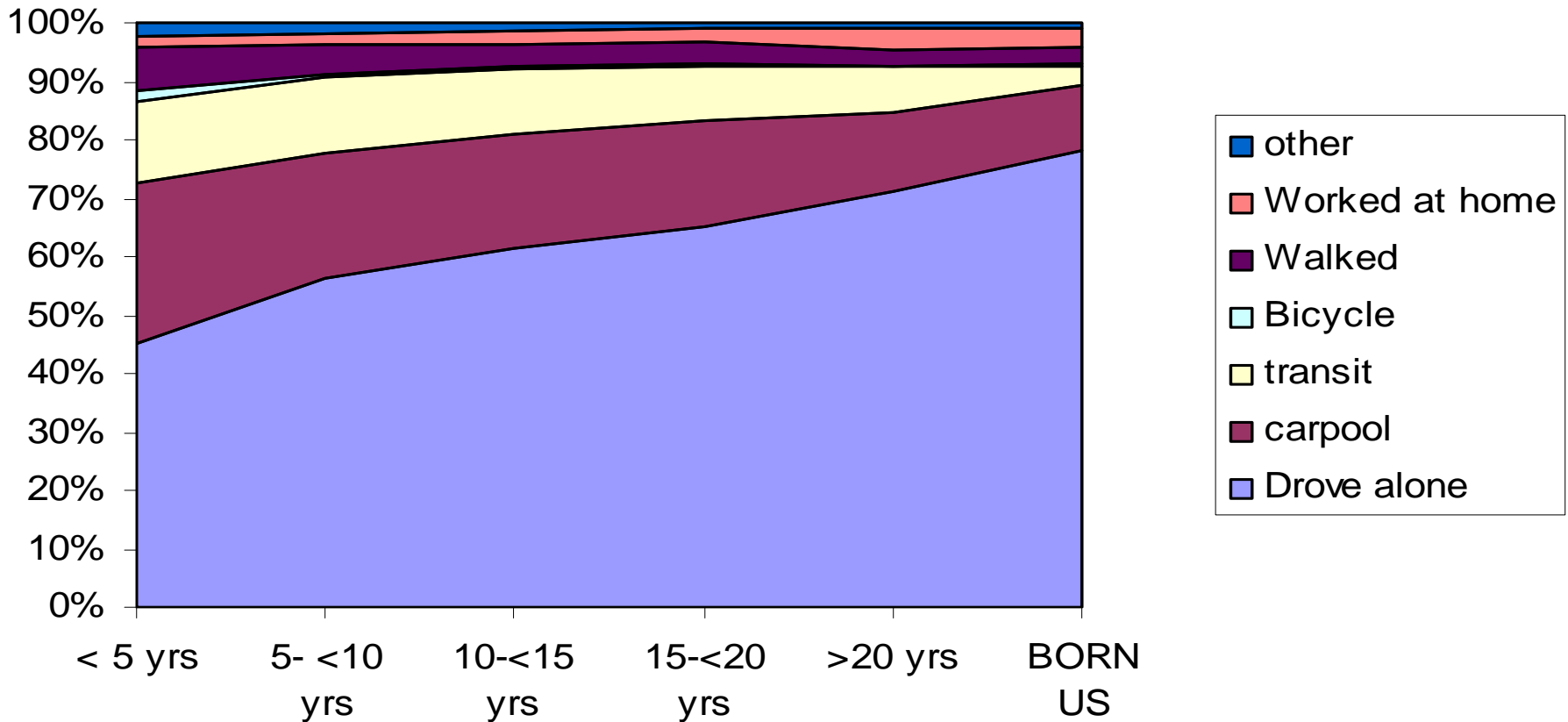
**immigrants are only 13.5% of workers but are significant part of usage in some modes**





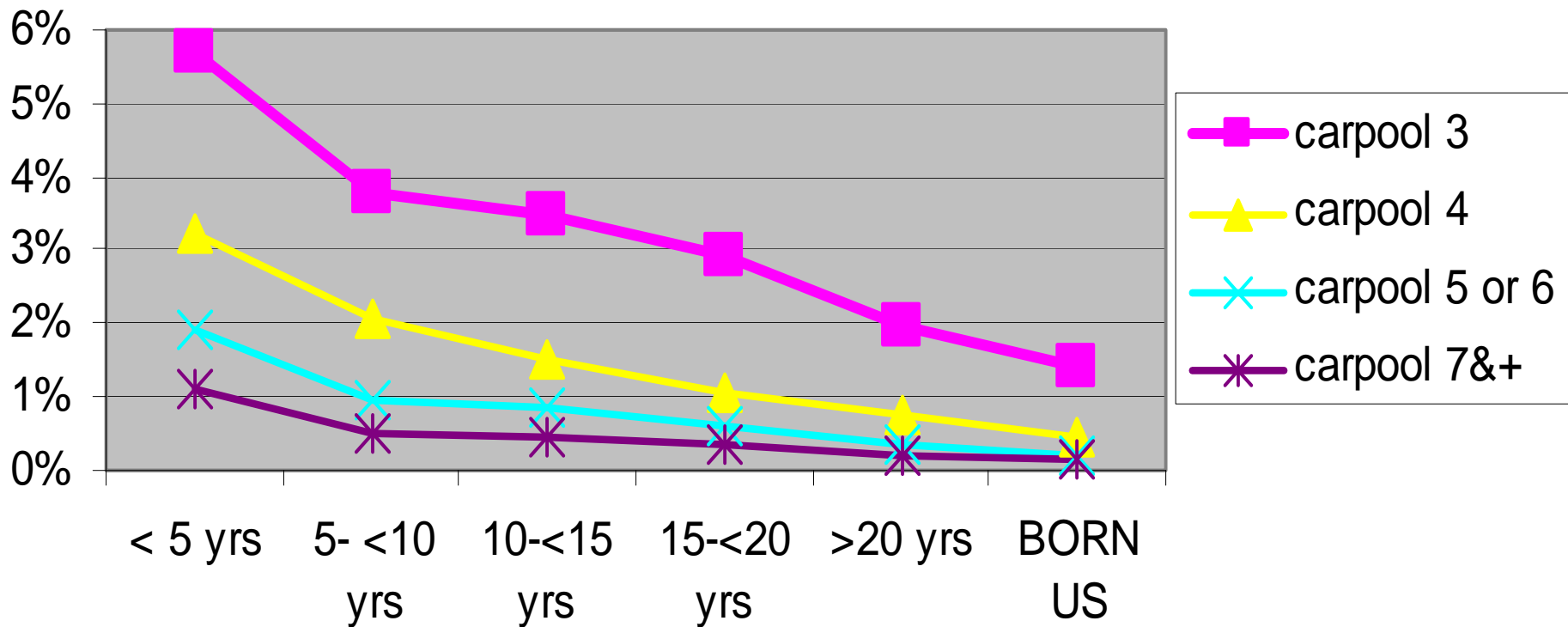
# #7 IMMIGRANT ROLES AND PATTERNS - 2

## Mode Use by Years in US

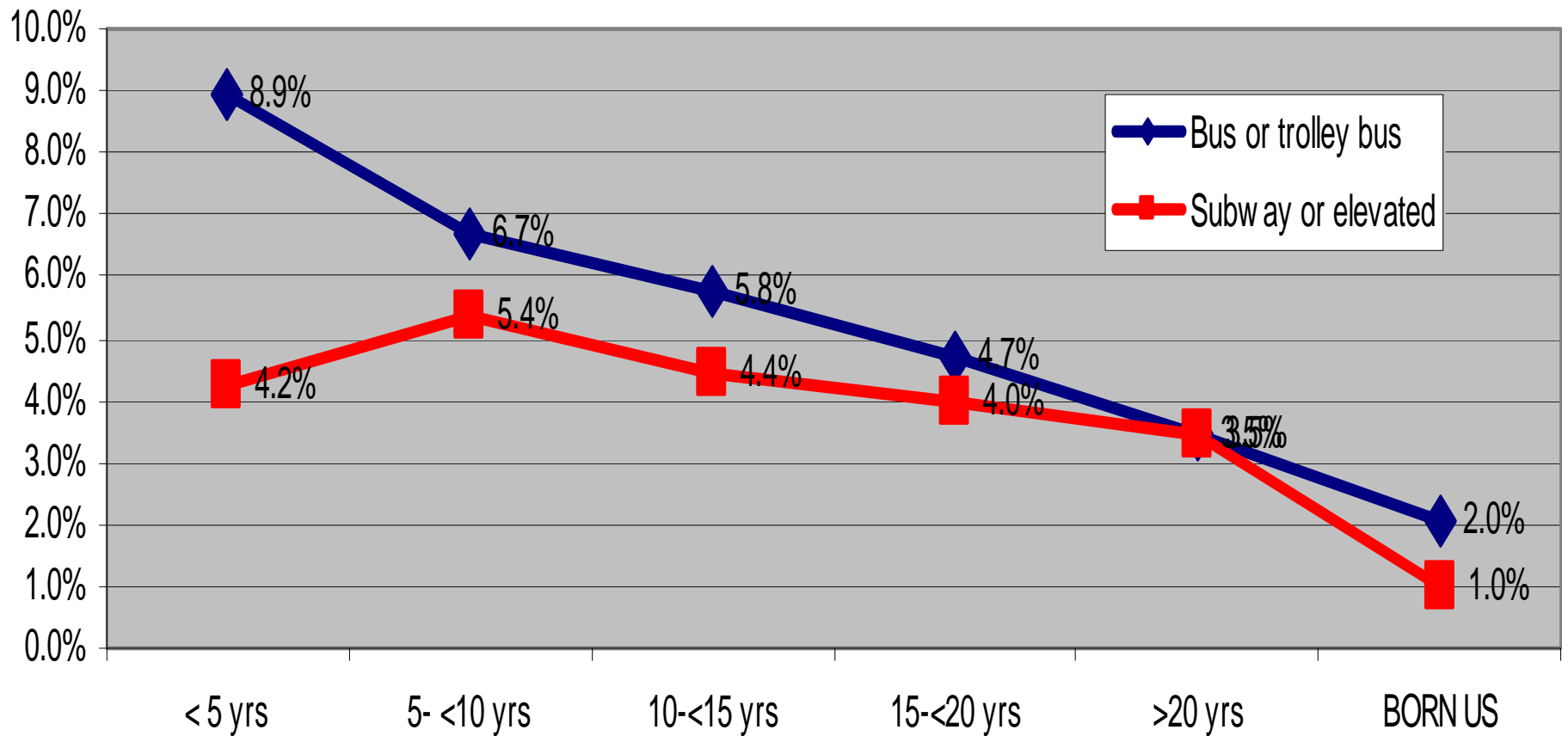


# #7 IMMIGRANT ROLES AND PATTERNS - 3

## Carpool Use by Yrs in US

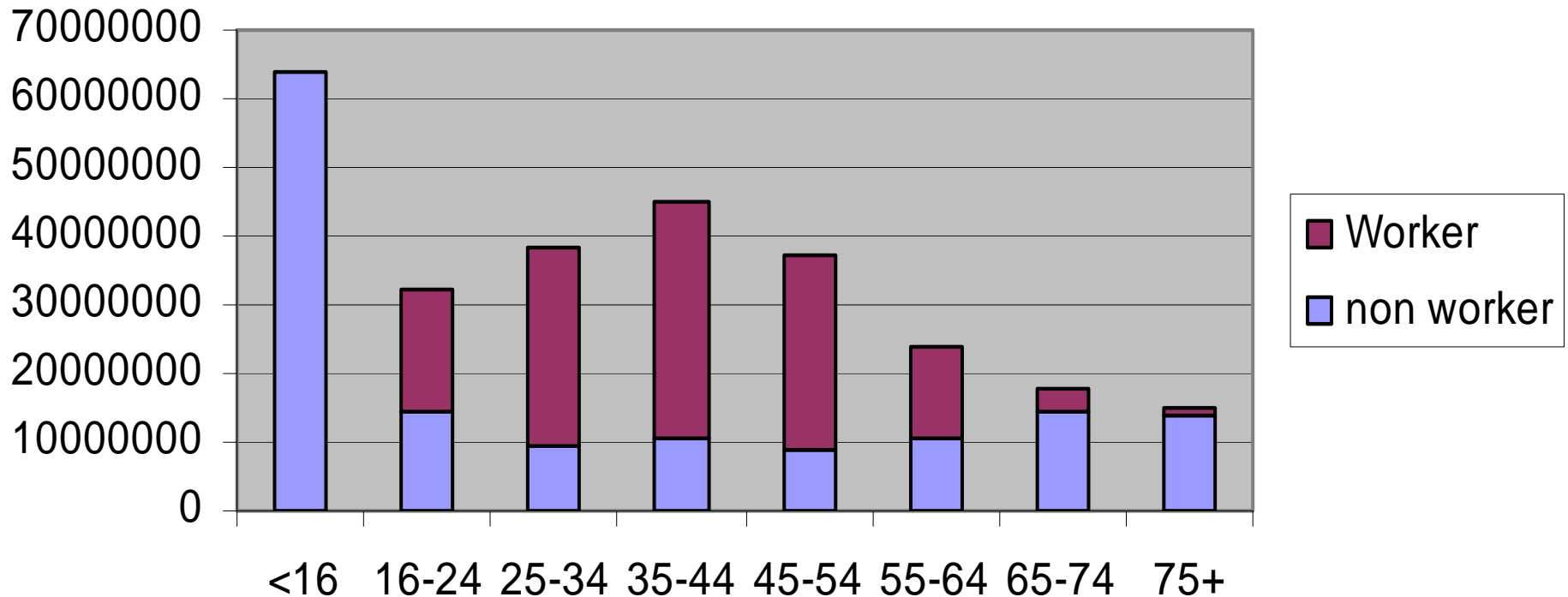


# #7 IMMIGRANT ROLES AND PATTERNS - 4



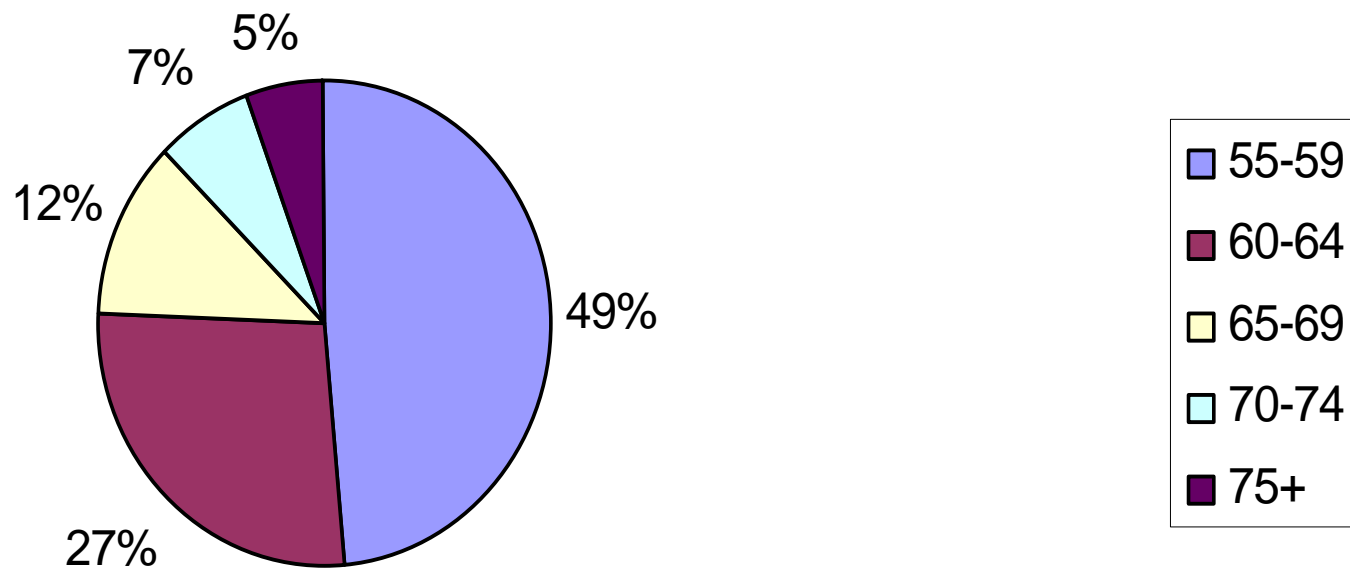
# #6 OLDER WORKERS ROLE

workers by age group 2000



# Aging out of the Boomers

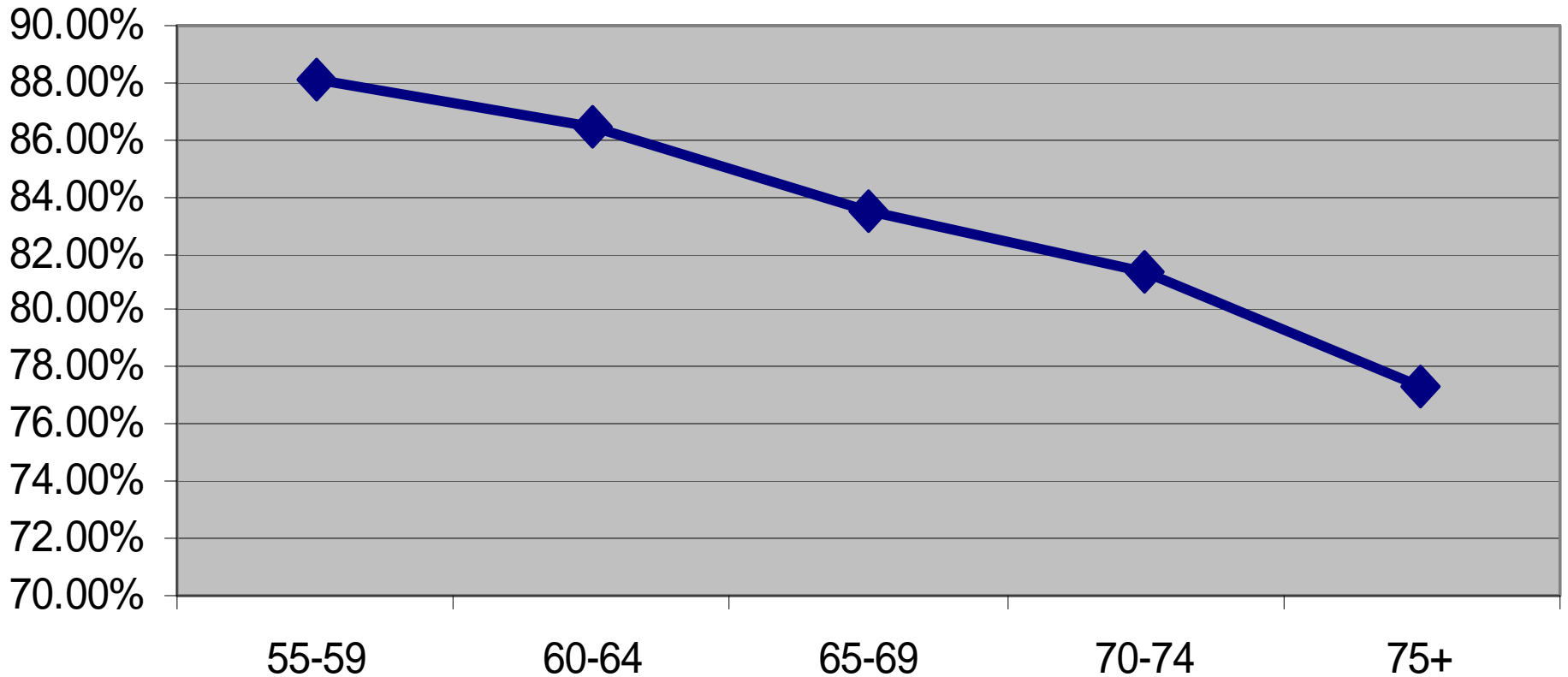
SHARES OF OVER 55 WORKERS BY AGE GROUP



# Over 55

## Aging out of the Boomers - 1

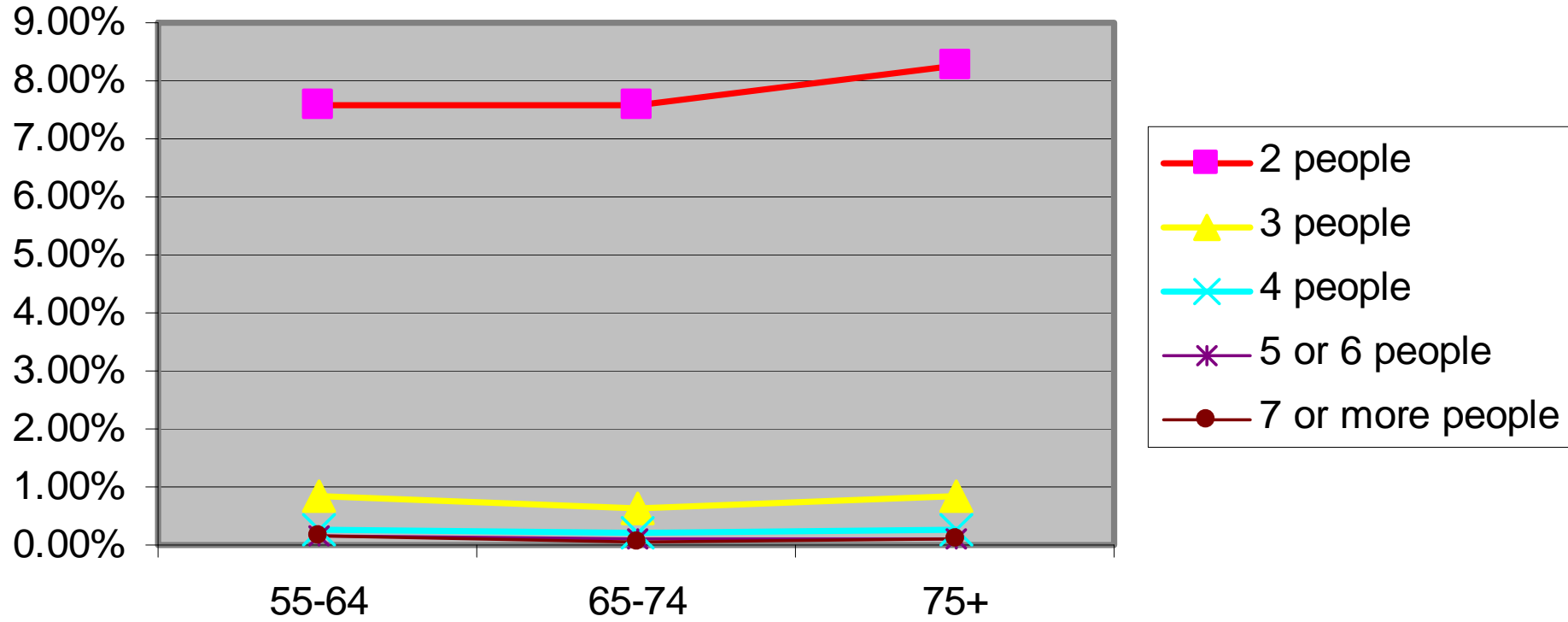
Car, truck, or van



# Over 55

## Aging out of the Boomers - 2

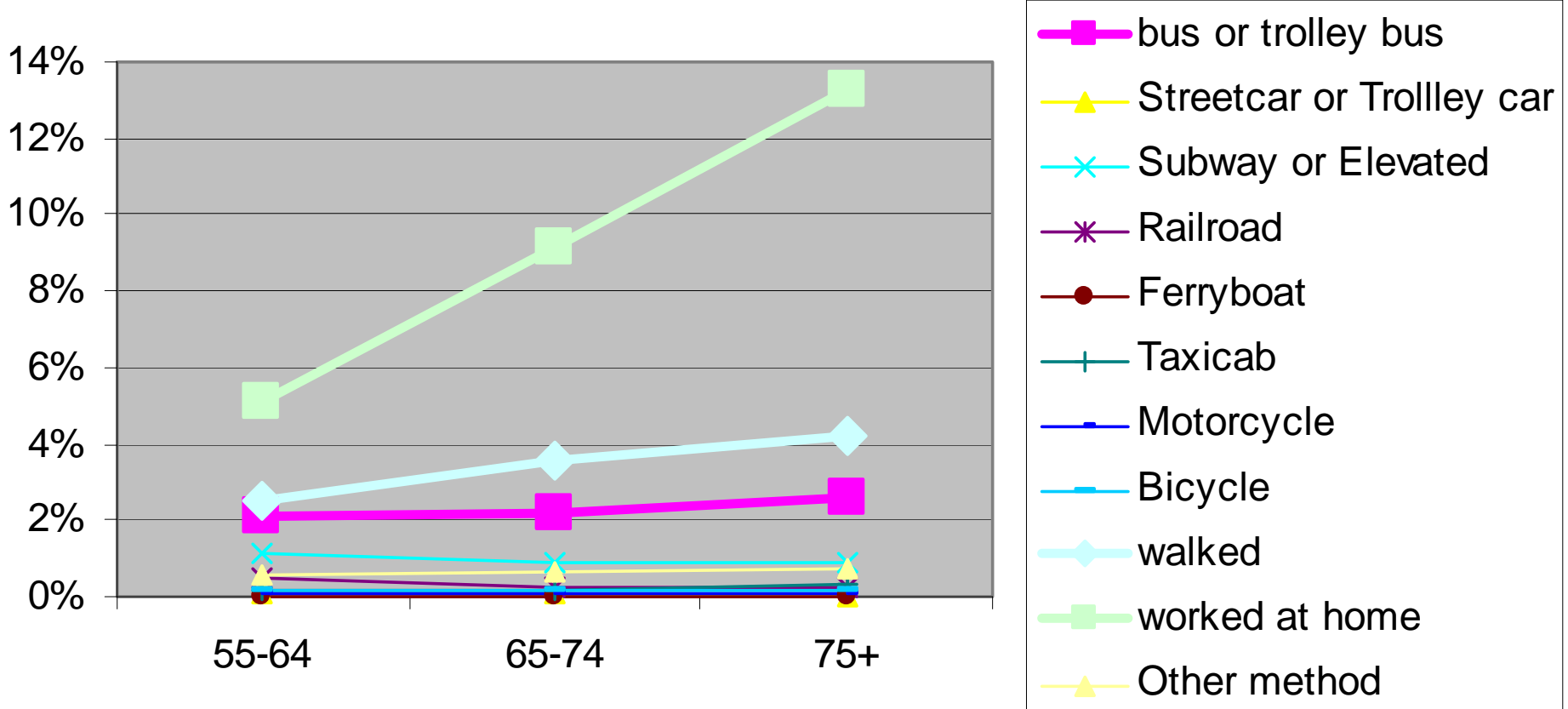
Over 55 patterns in mode use of private vehicles



# Over 55

## Aging out of the Boomers - 3

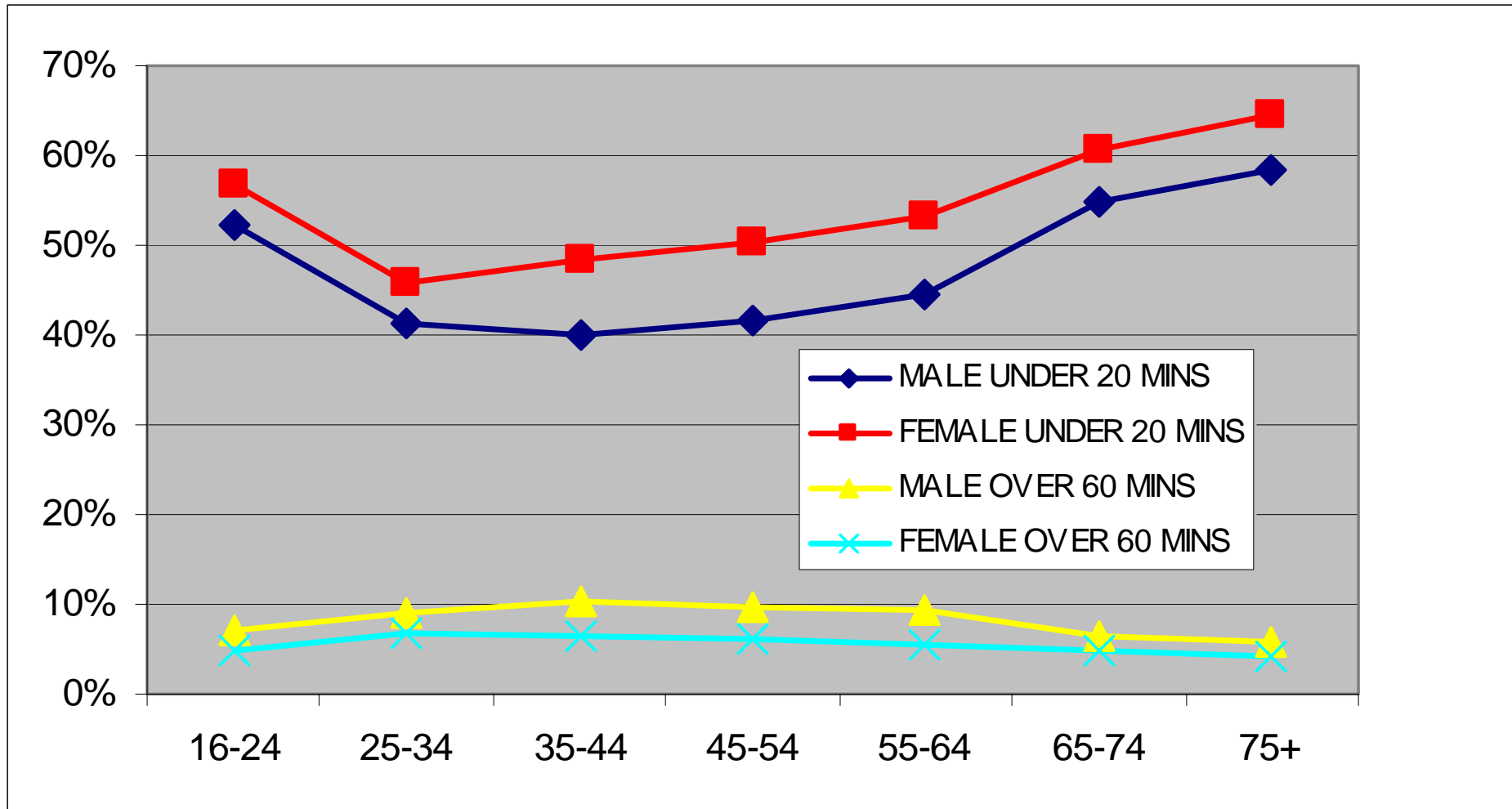
Over 55 patterns in mode use of other modes





# Over 55

## Aging out of the Boomers - 4



# THE SHIFT HAS BEGUN

<u>OVER 65</u>	<u>1990</u>	<u>2000</u>	<u>%</u>
POPULATION (millions)	31.2	35.0	12.2%
WORKERS (millions)	3.5	4.25	21.4%
SHARE AT WORK	11.2%	12.1%	

# THE SHIFT HAS BEGUN

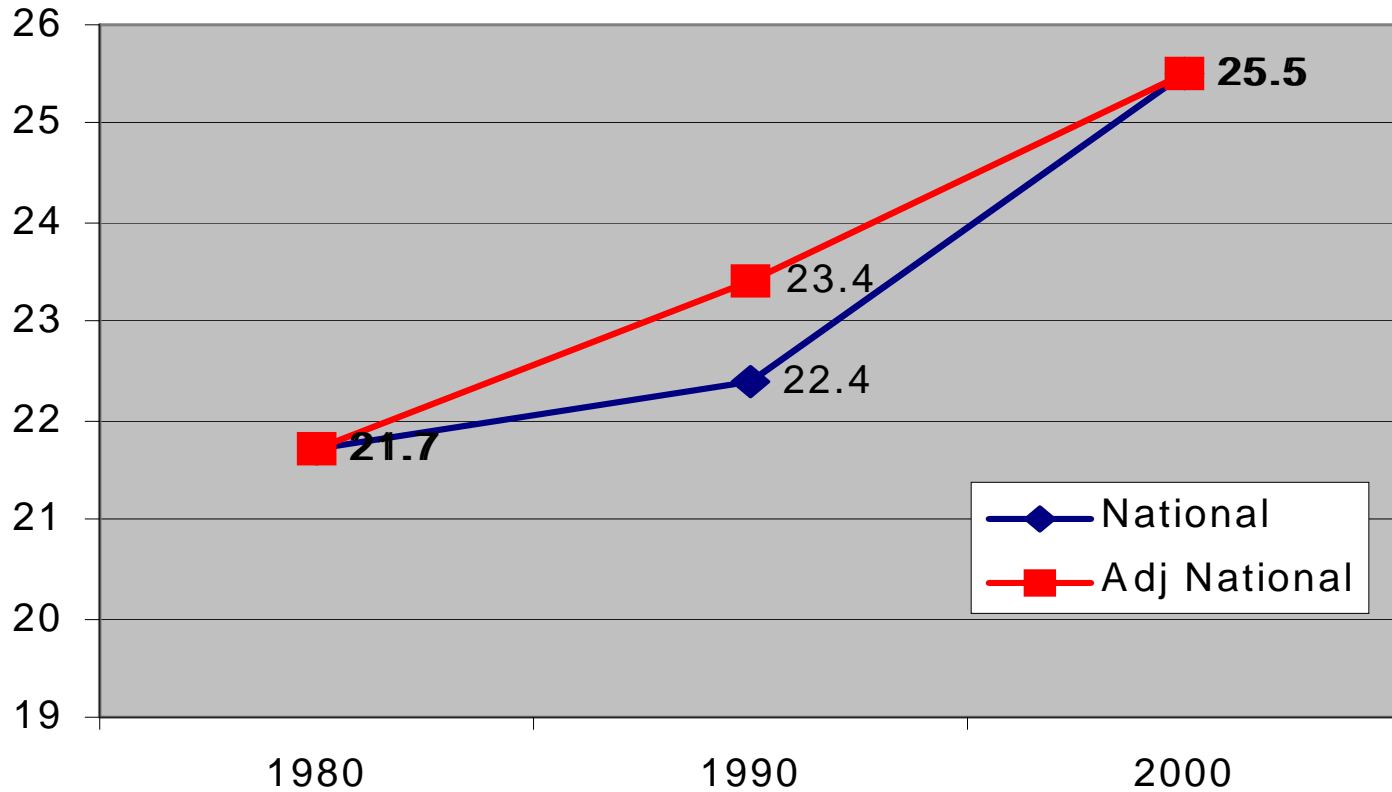
<u>OVER 65</u>	<u>1990</u>	<u>2000</u>	<u>%</u>	<u>2005</u>
POPULATION (millions)	31.2	35.0	12.2%	36.8*
WORKERS (millions)	3.5	4.25	21.4%	4.66
SHARE AT WORK	11.2%	12.1%		12.7%

\* Census estimate 2005

# THE SHIFT HAS BEGUN

<u>OVER 65</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>
POPULATION	31.2	35.0	40.2	54.6
WORKERS	3.5	4.25	5.1	6.9
SHARE AT WORK	11.2%	12.1%	12.7%	12.7%

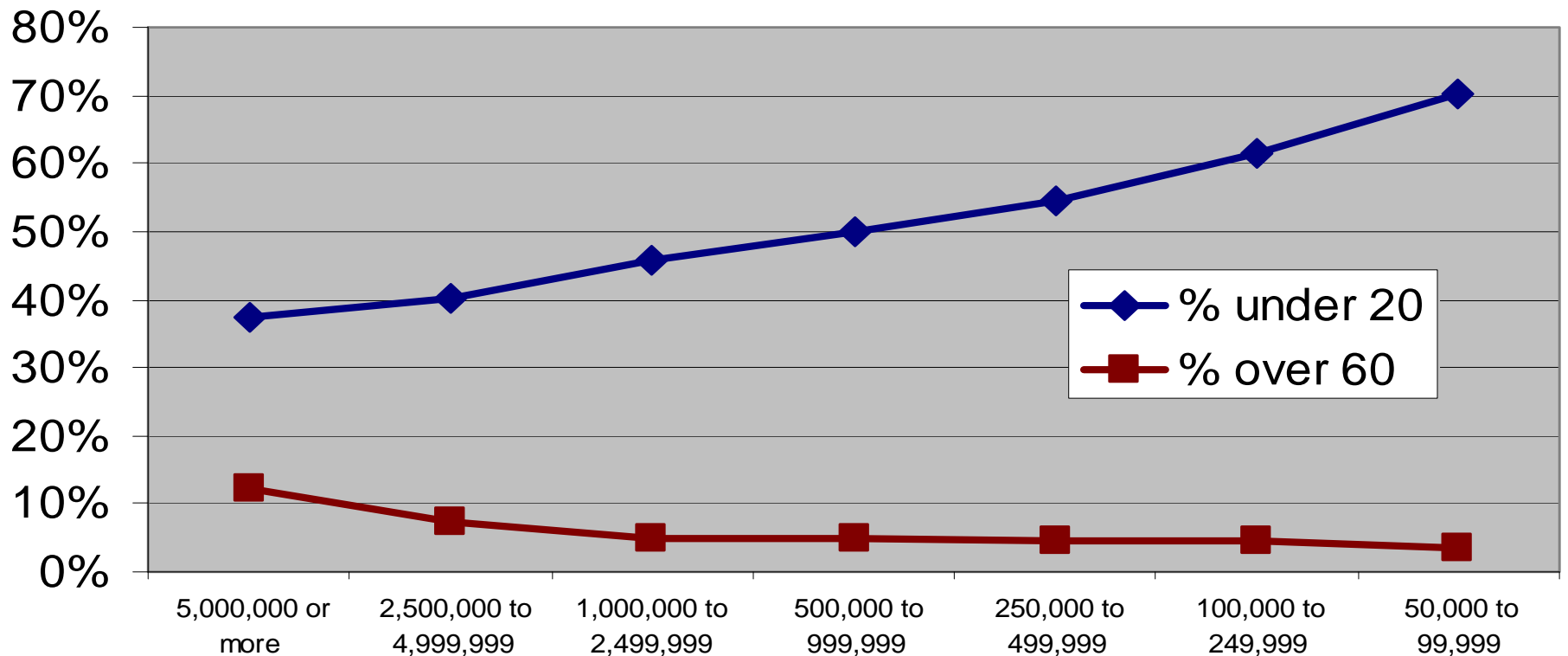
# #5 INCREASES IN EXTREME COMMUTES



# My keys on travel time

% under 20 mins / % over 60 mins

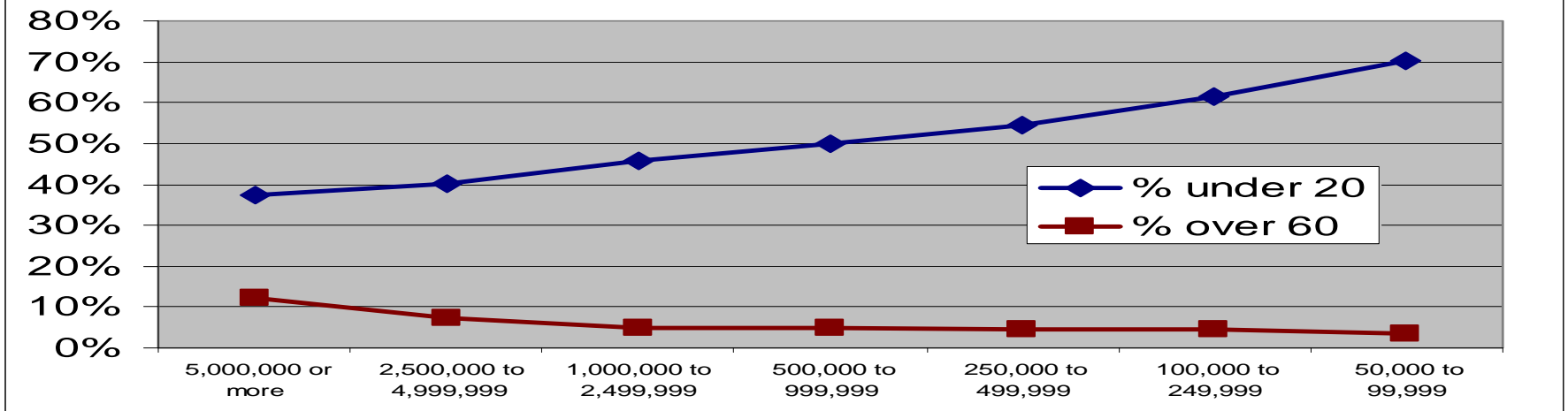
**Percent of workers commuting over 60 minutes and under 20 minutes by metro size**



# Extreme Commutes

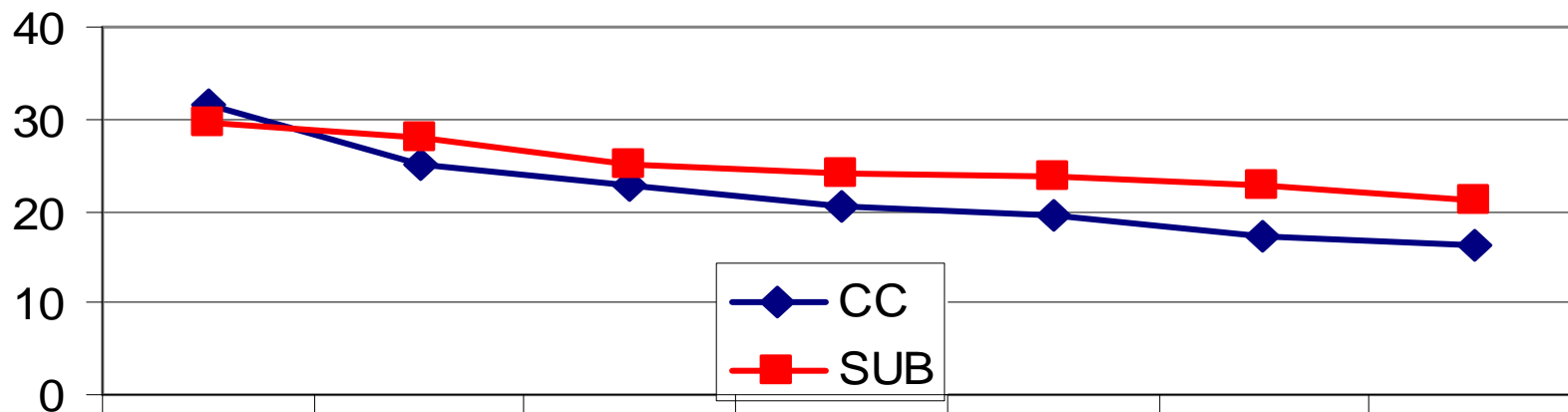
- 2005 10 million over 60 min; 1/3 90+; **av 80 min**
- 60-90 minute commute grew 2x average
- 90+ minute commute grew 5x average

**Percent of workers commuting over 60 minutes and under 20 minutes by metro size**



# Travel times over 5 million

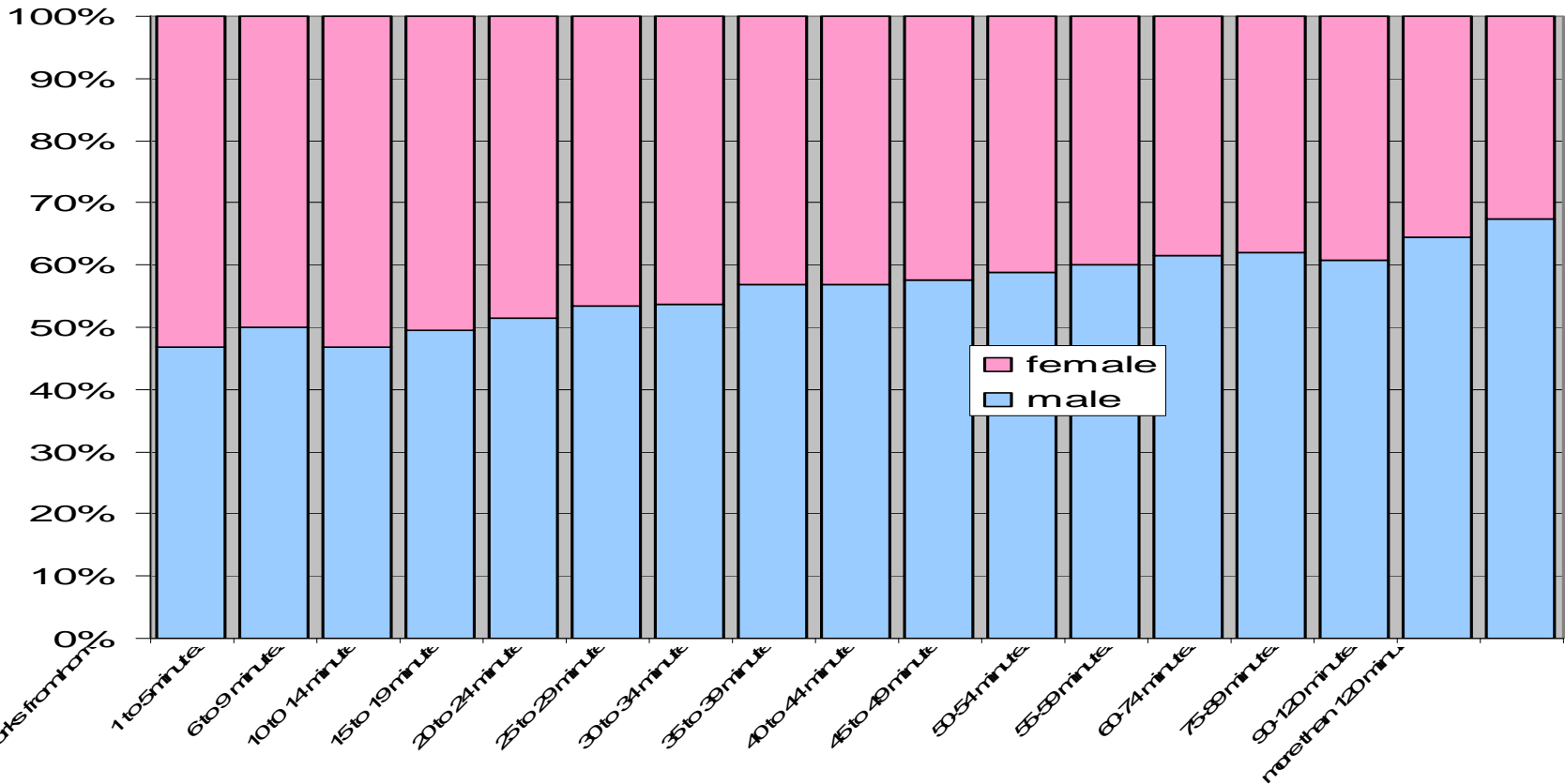
TRAVEL TIME BY METRO SIZE



	5,000,000 or	2,500,000 to	1,000,000 to	500,000 to	250,000 to	100,000 to	50,000 to 99,999
CC	31.5	24.9	22.7	20.6	19.4	17.3	16.2
SUB	29.7	28	25	24.2	23.6	22.8	21.2



# Male/female split by travel time





# STATES “Extreme Commutes”

## 2000 (only minor changes 2000-2005)

60-89

> 90 min

min

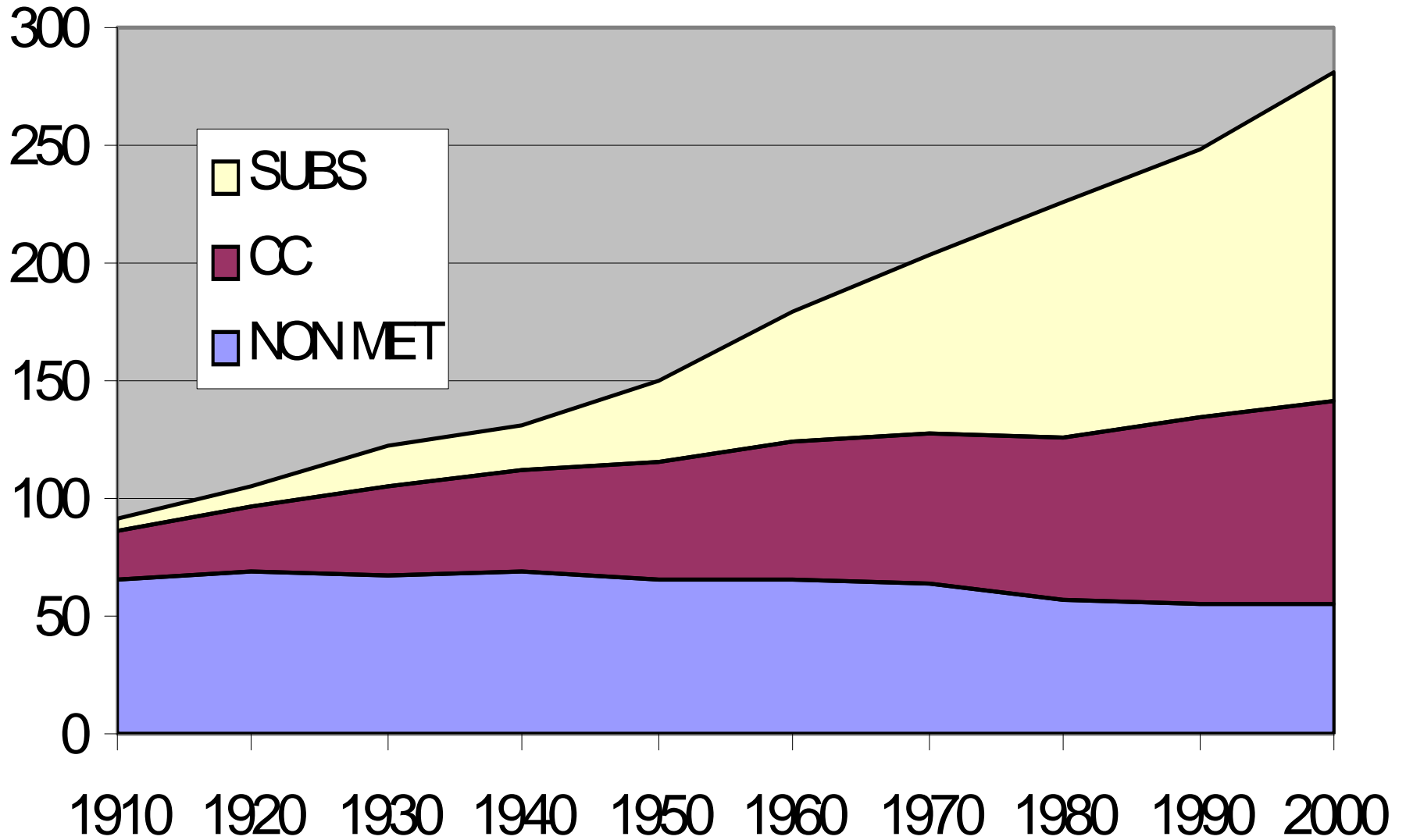
>60 min

New York	5.24%	10.65%	15.89%
New Jersey	4.65%	8.91%	13.55%
West Virginia	3.99%	5.03%	9.02%
Maryland	3.72%	8.93%	12.65%
California	3.46%	6.68%	10.14%
Louisiana	3.34%	4.26%	7.60%
Mississippi	3.19%	3.68%	6.87%
Illinois	3.03%	7.77%	10.80%
Georgia	3.02%	6.30%	9.32%

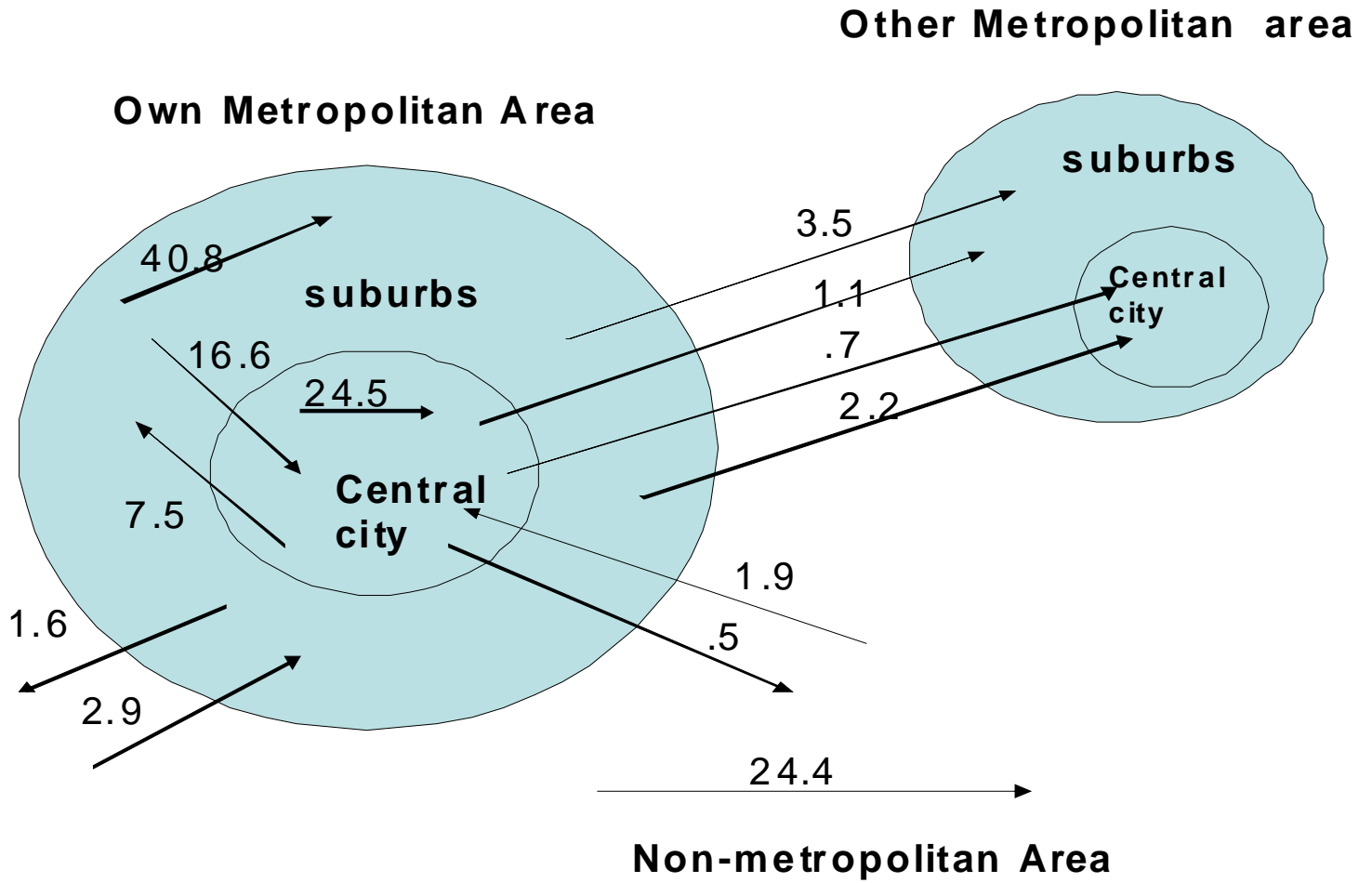
# #4 The “Donut” Metro

- Jobs and workers centered in suburbs
- 46% of commutes;
- 64% of growth 90-00
- 7.5 million coming in to the subs from exurbs and other metros each day
- 7.5 million going out to the subs from central cities
- CC to subs > Subs to CC in share of growth

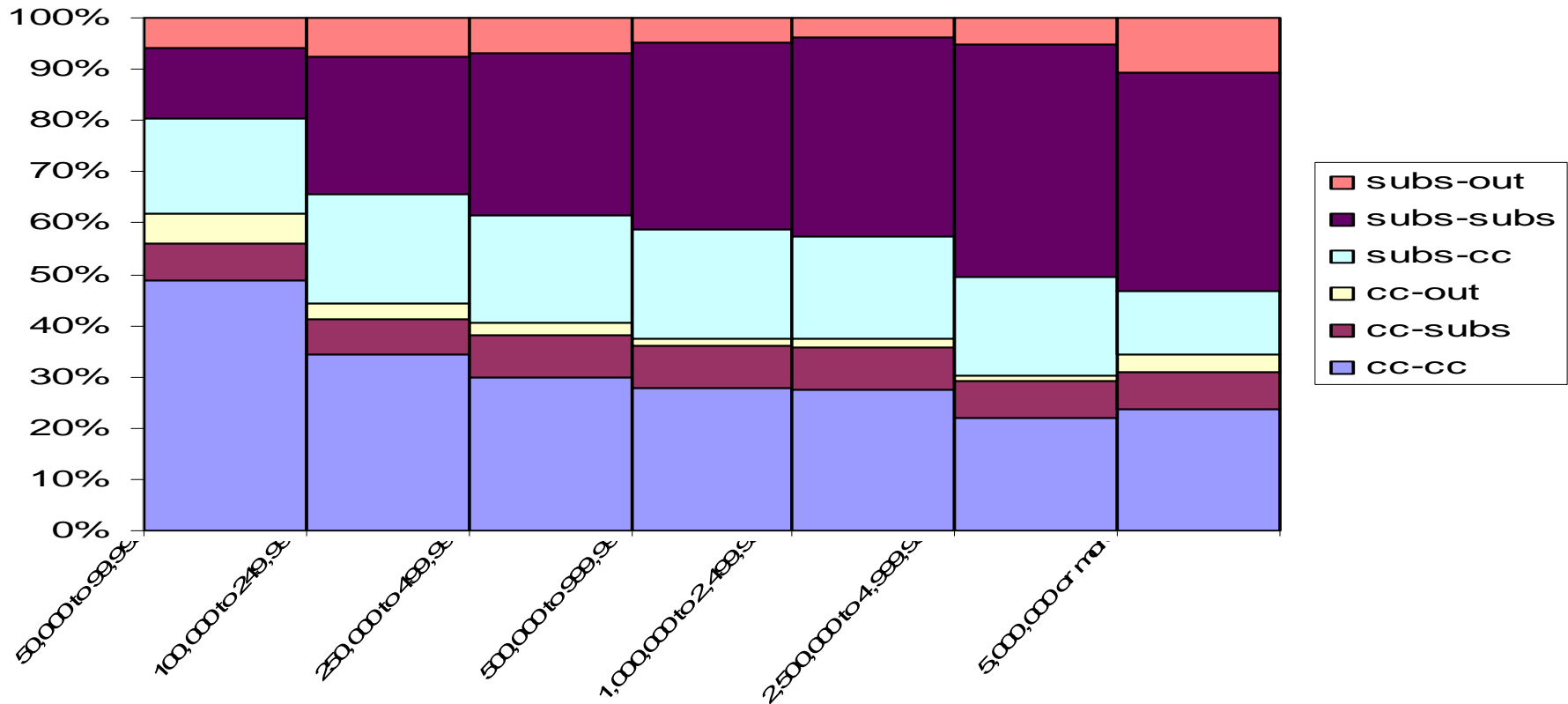
# 20th CENTURY POPULATION TREND



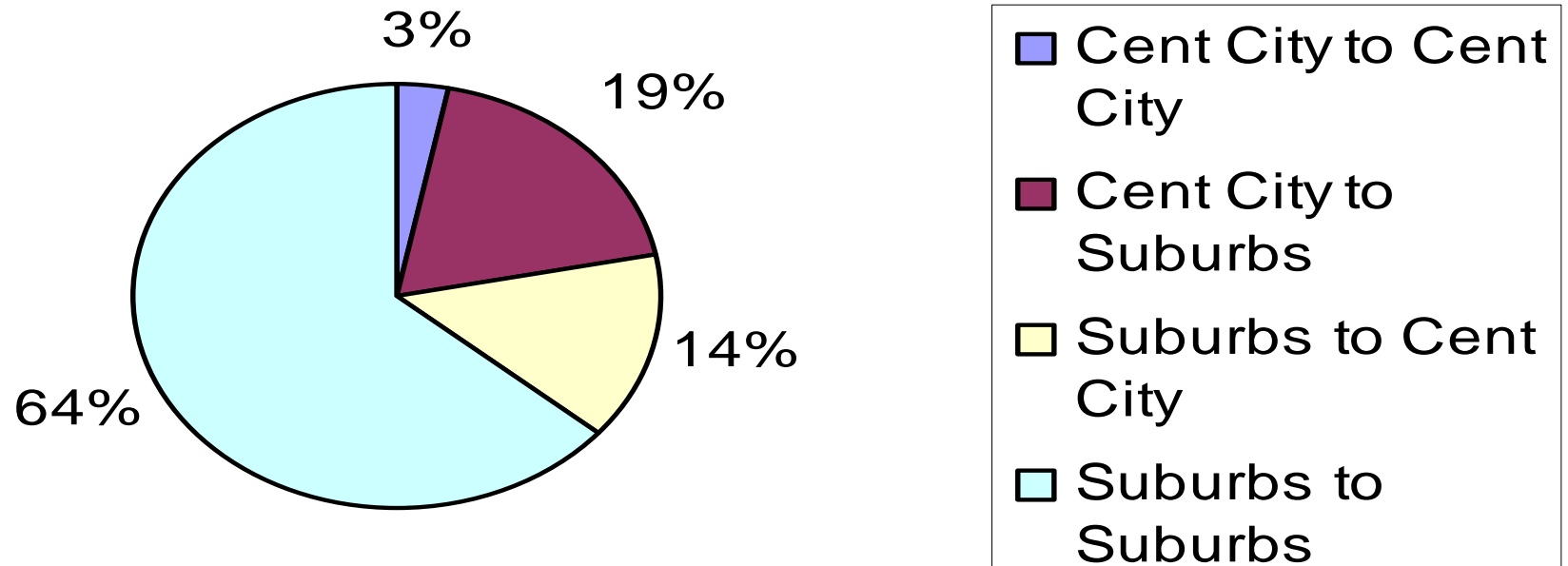
# 2000 METRO FLOW MAP



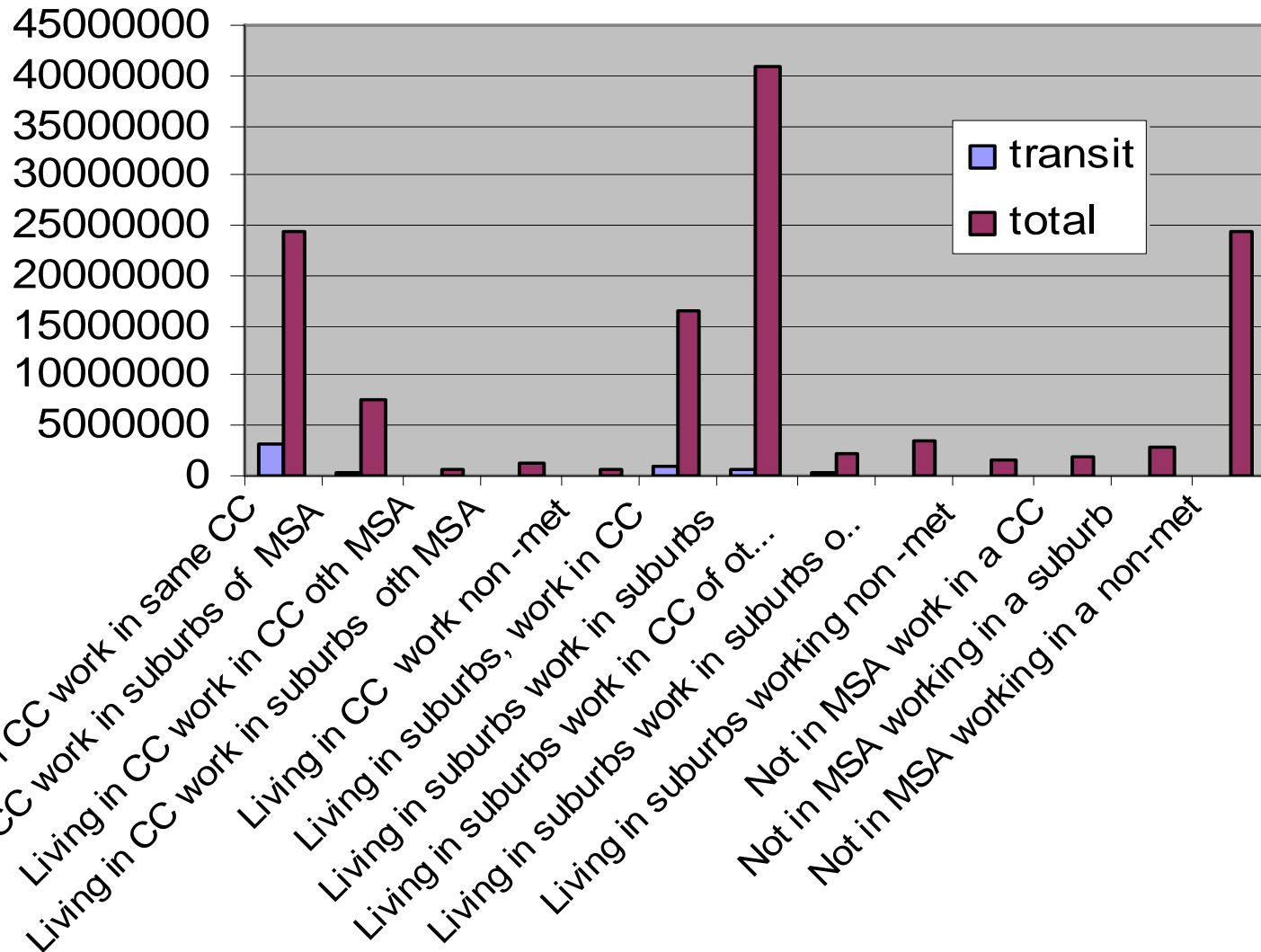
# Suburban Flows grow with metro size



# Share of Increase in Commuting Flows 1990-2000



# National commuting flows





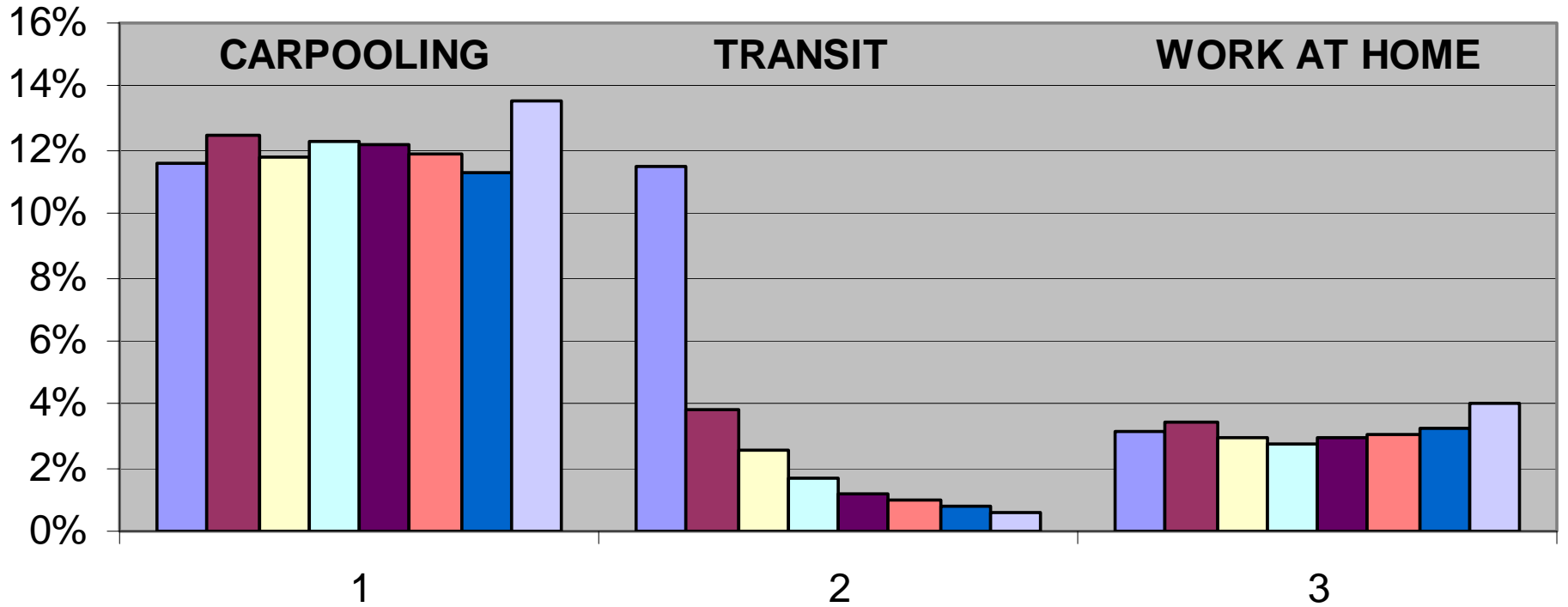


# Top Ten Commuting Markets

<b>RANK</b>	<b>FLOW TYPE</b>	<b>AREA SIZE</b>	<b>millions</b>
<b>1</b>	<b>SUB SUB</b>	<b>5 PLUS</b>	<b>16.3</b>
<b>2</b>	<b>CC-CC</b>	<b>5 PLUS</b>	<b>9.1</b>
<b>3</b>	<b>SUB-SUB</b>	<b>1-2.5</b>	<b>8.1</b>
<b>4</b>	<b>SUB-SUB</b>	<b>2.5-5</b>	<b>7.2</b>
<b>5</b>	<b>CC-CC</b>	<b>1-2.5</b>	<b>5.7</b>
<b>6</b>	<b>SUB-CC</b>	<b>5 PLUS</b>	<b>4.7</b>
<b>7</b>	<b>SUB-CC</b>	<b>1-2.5</b>	<b>4.2</b>
<b>8</b>	<b>SUBS TO XMSA</b>	<b>5 PLUS</b>	<b>4.1</b>
<b>9</b>	<b>SUB-SUB</b>	<b>.5-1</b>	<b>3.6</b>
<b>10</b>	<b>CC-CC</b>	<b>2.5-5</b>	<b>3.5</b>

# #3 CONTINUING GROWTH IN WORKING AT HOME

- Only work “mode” with Driving Alone to see continuous growth since 1980
- ALL Metros over a million saw increases except three with heavy military components
- Work at home added 2 million from 1980 to 2000 – almost doubling
- Added another 600,000 by 2005
- 2005 share 3.6%

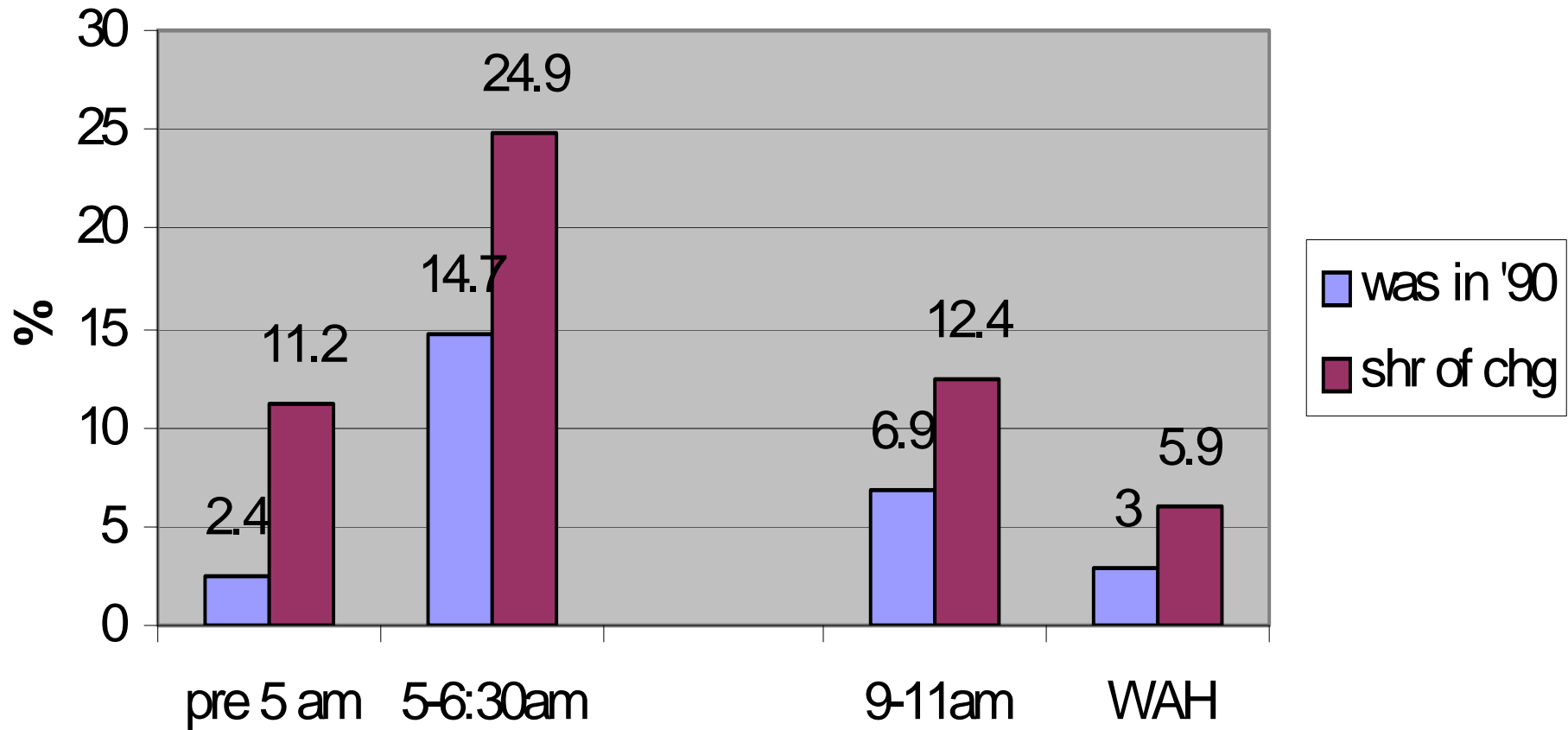


- In met area -- 5,000,000 +
- In met area -- 2,500,000 to 4,999,999
- In met area -- 1,000,000 to 2,499,999
- In met area -- 500,000 to 999,999
- In met area -- 250,000 to 499,999
- In met area -- 100,000 to 249,999
- In met area -- 50,000 to 99,999
- Not in metro area

# #2 WORKERS OUT BEFORE 6AM

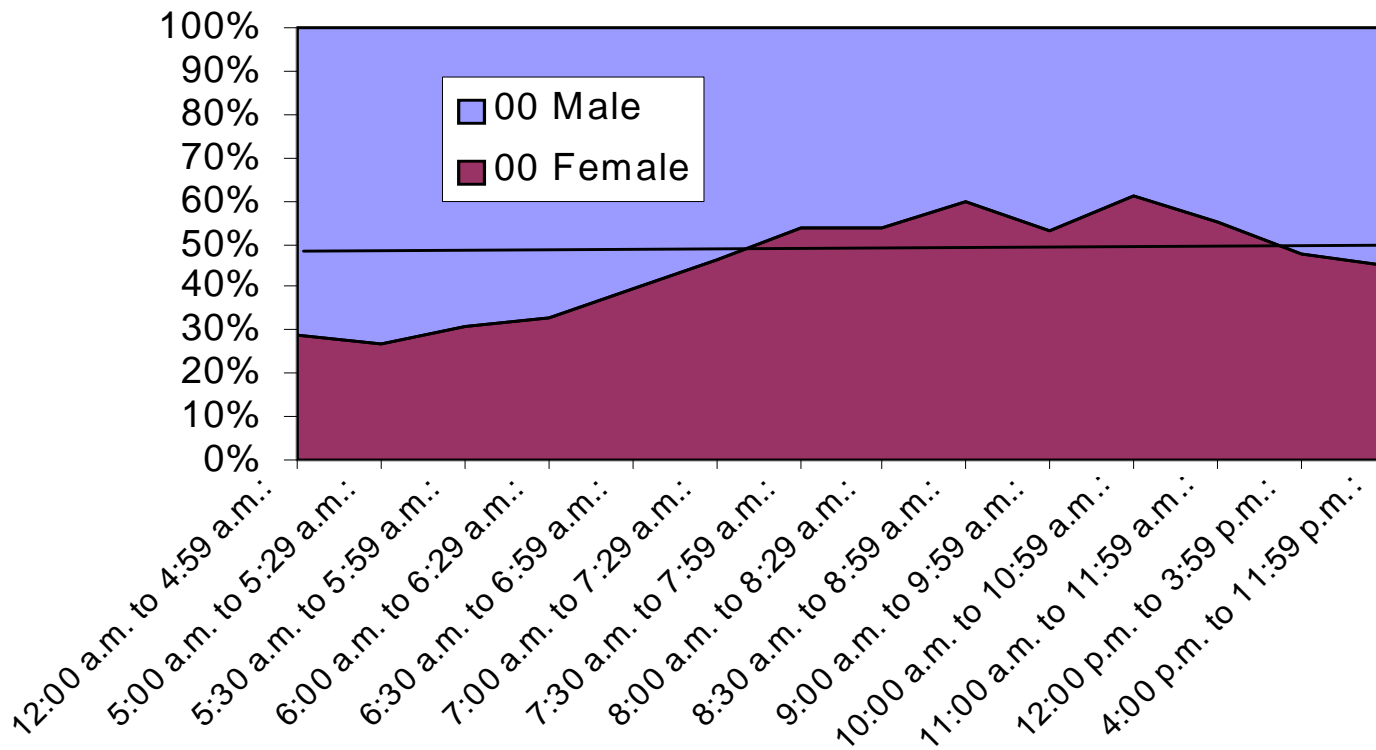
- 5-6am rose from 6.4% 1990 to 7.6% in 2000 (8.5% in 2005)
- Those starting before 5 AM were only 2.4% of travel in 1990 but gained 11% of all growth 1990-2000
- Peak period (6-9 AM) decline continues: 69% 1990; 66% in 2000; 64% in 2005

# START TIME CHANGES IN SHARE 1990-2000

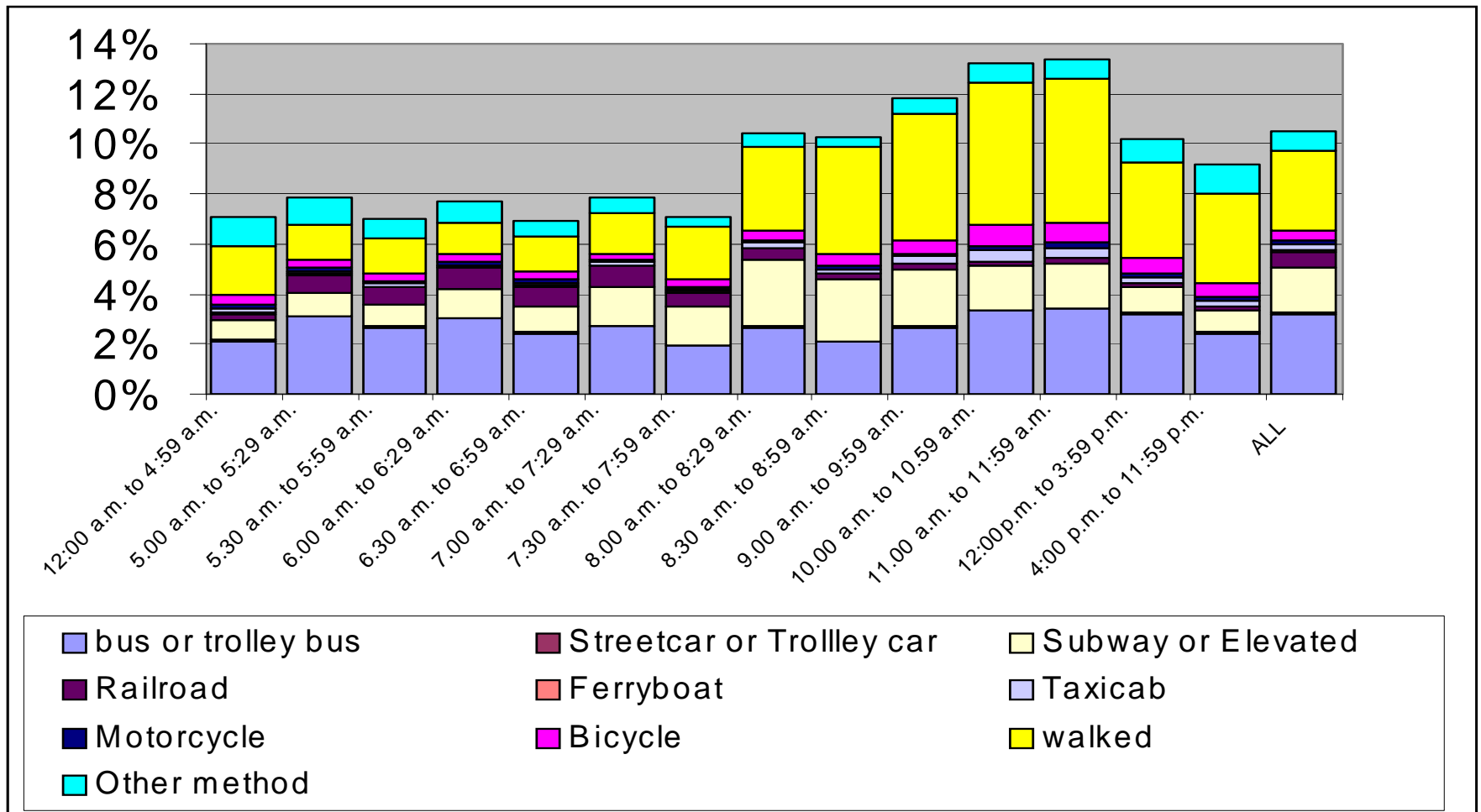


# Before 8 it's a guy-thing!

male-female commuting distribution by hour of the day  
2000



# 8 O'clock and all's well



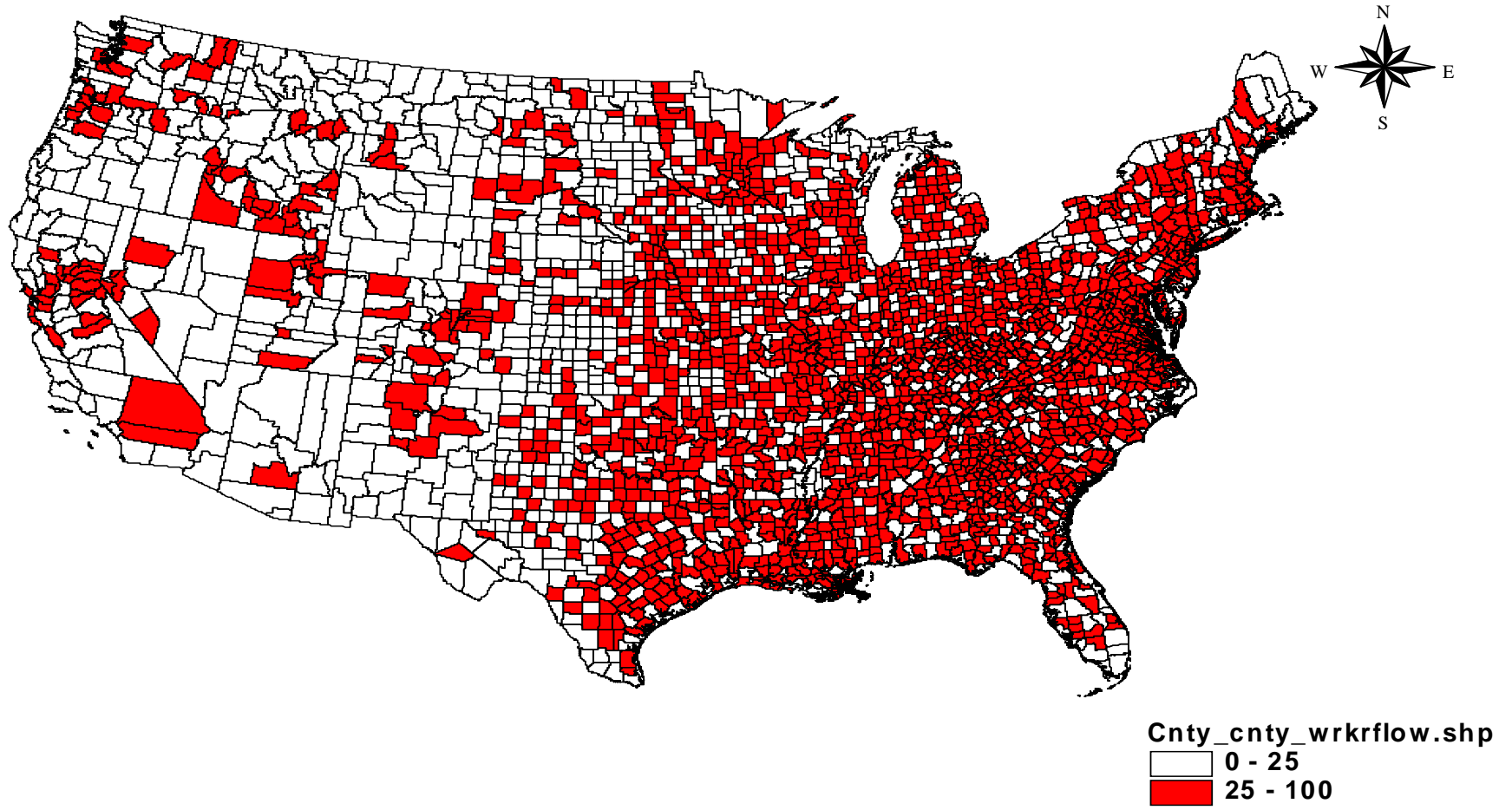


# #1 GREAT INCREASES IN WORKERS LEAVING HOME COUNTIES TO WORK

- **1990** 23.9% of workers left home county
- **2000** 26.7% (**2005** almost 28%)
- **90's** - 13.2 meg. new Workers 51% Left home county (6.7 Meg.)
- **00's** - Of 5 meg. new workers 55% left home county (2.6 Meg.)
- **ONLY 3 STATES DOWN !**
- **Wash DC Area leads nation!**



# County-to-County Worker Flow Percentage: 2000



Alan E. Pisarski

# CIA II – Unresolved Questions

- Force of Immig. Persist?
- Immig. trend to mainstream?
- Job/worker balance?
- Minorities typical?
- Will tech fixes work?
- WAH & telecom impact?
- ITS influence?
- Aging commuters change the trend?
- Growth in smaller metro areas?
- Higher densities?

# New Patterns to Watch

- Who, where will the workers be?
- Will long distance commute expand further?
- Will role of commuting decline/grow or just change?
- Will value of time still be the guiding factor?
- Value of mobility recognized?

# Thank you

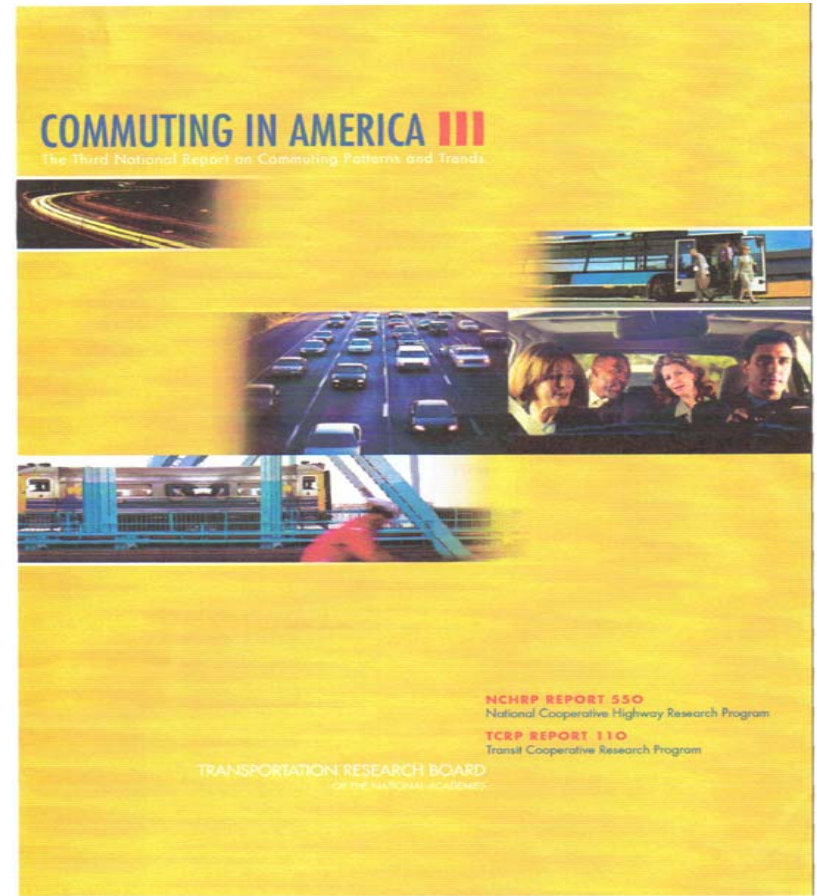
- Copies of **Commuting in America III** are available from the **Transportation Research Board**; tel. 202-334-3214 or on the Internet at <http://www.TRB.org/CIAll>

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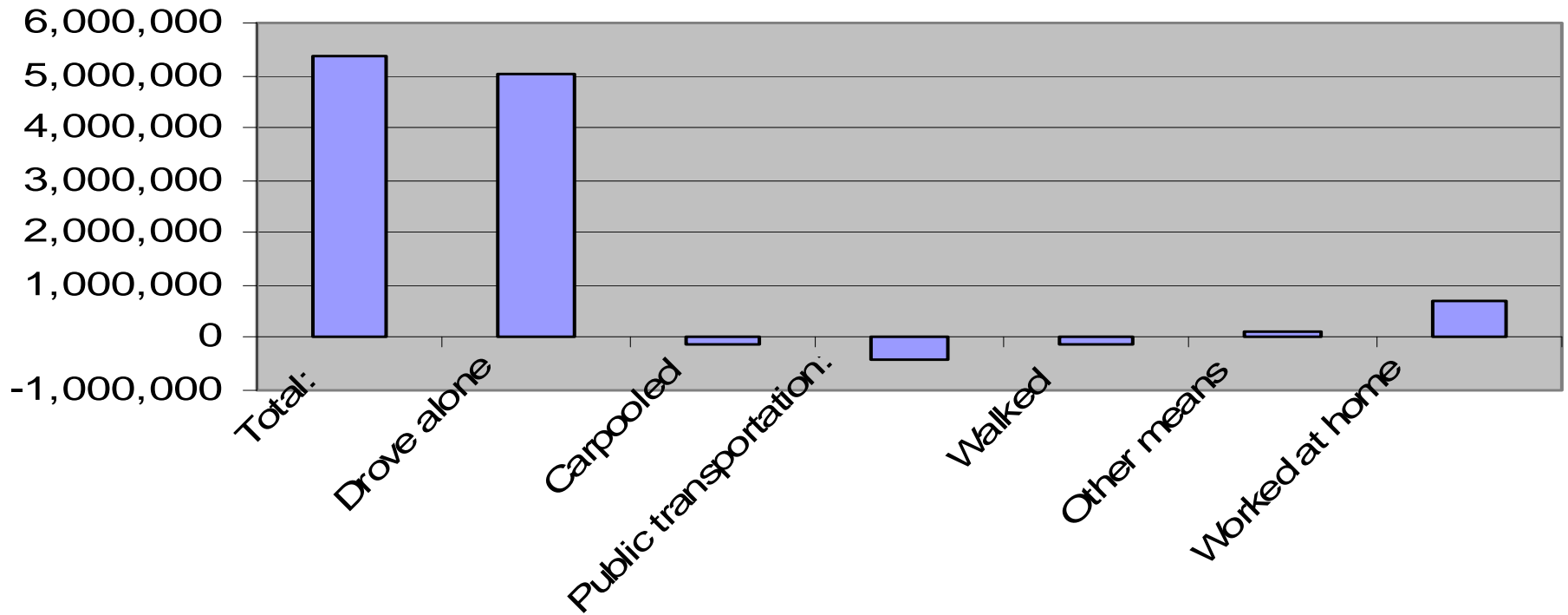
# NATIONAL SUMMARY MODE SHARES

United States	1980	1990	2000	1980	1990	2000
Total:	96617296	115070274	128279228	100.00%	100.00%	100.00%
<b>Car, truck, or van:</b>	<b>81258496</b>	<b>99592932</b>	<b>112736101</b>	<b>84.10%</b>	<b>86.55%</b>	<b>87.88%</b>
<b>Drive alone</b>	<b>62193449</b>	<b>84215298</b>	<b>97102050</b>	<b>64.37%</b>	<b>73.19%</b>	<b>75.70%</b>
<b>Carpool</b>	<b>19065047</b>	<b>15377634</b>	<b>15634051</b>	<b>19.73%</b>	<b>13.36%</b>	<b>12.19%</b>
2-person	13303701	12078175	12097346	13.77%	10.50%	9.43%
3-person carpool	3360781	2001378	2159151	3.48%	1.74%	1.68%
4-person carpool	1400527	702222	766012	1.45%	0.61%	0.60%
5-person+ carpool	1000038	595859	611542	1.04%	0.52%	0.48%
<b>Transit</b>	<b>6007728</b>	<b>5890155</b>	<b>5867559</b>	<b>6.22%</b>	<b>5.12%</b>	<b>4.57%</b>
Bus	3924787	3445000	3206682	4.06%	2.99%	2.50%
Streetcar, LRT	***	78130	72713	***	0.07%	0.06%
Subway	1528852	1755476	1885961	1.58%	1.53%	1.47%
Railroad	554089	574052	658097	0.57%	0.50%	0.51%
Ferry	***	37497	44106	***	0.03%	0.03%
Taxi	167333	179434	200144	0.17%	0.16%	0.16%
Motorcycle	419007	237404	142424	0.43%	0.21%	0.11%
Bike	468348	466856	488497	0.48%	0.41%	0.38%
Walk	5413248	4488886	3758982	5.60%	3.90%	2.93%
Other	703273	808582	901298	0.73%	0.70%	0.70%
<b>Work at home</b>	<b>2179863</b>	<b>3406025</b>	<b>4184223</b>	<b>2.26%</b>	<b>2.96%</b>	<b>3.26%</b>

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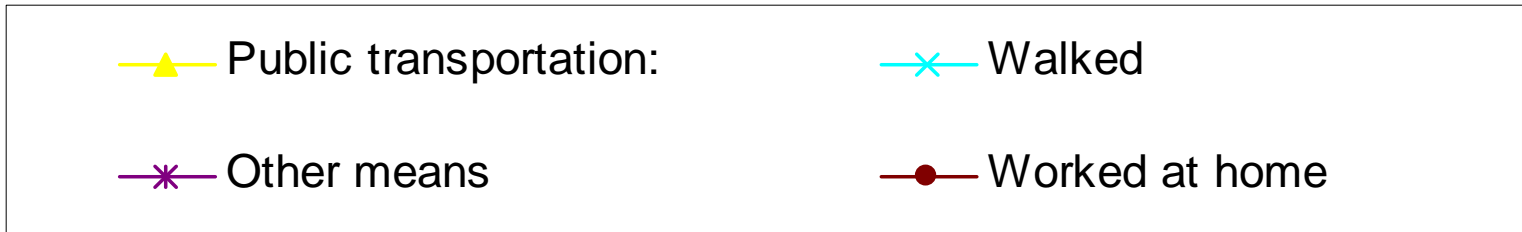
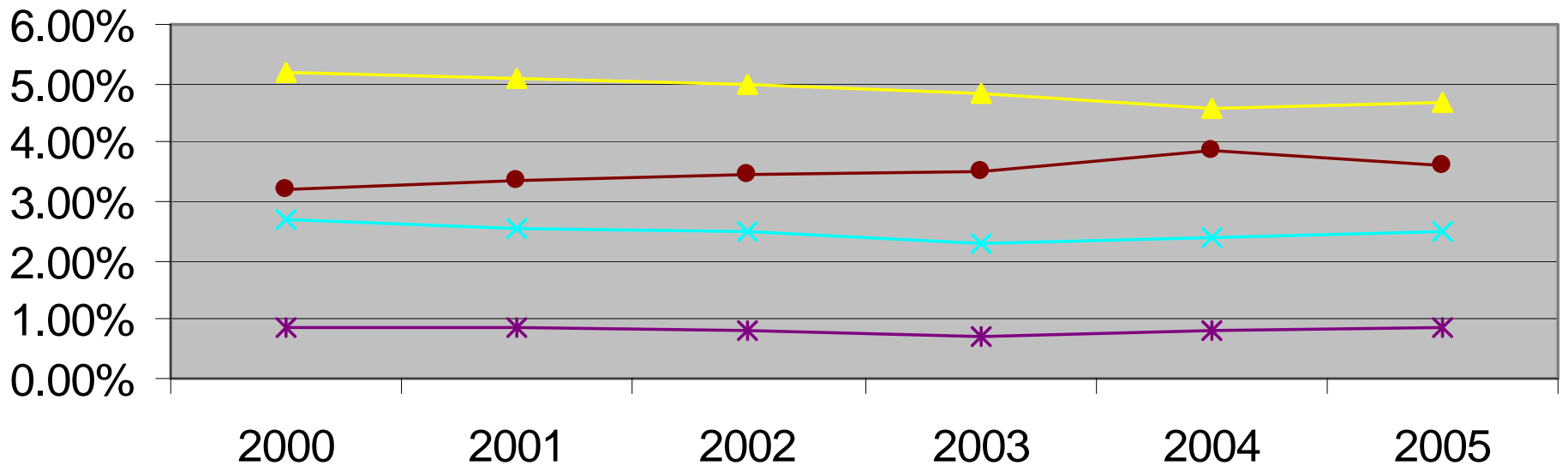
# 2000-2005 CHANGE

## BROAD MODE NET CHANGE 2000-2005



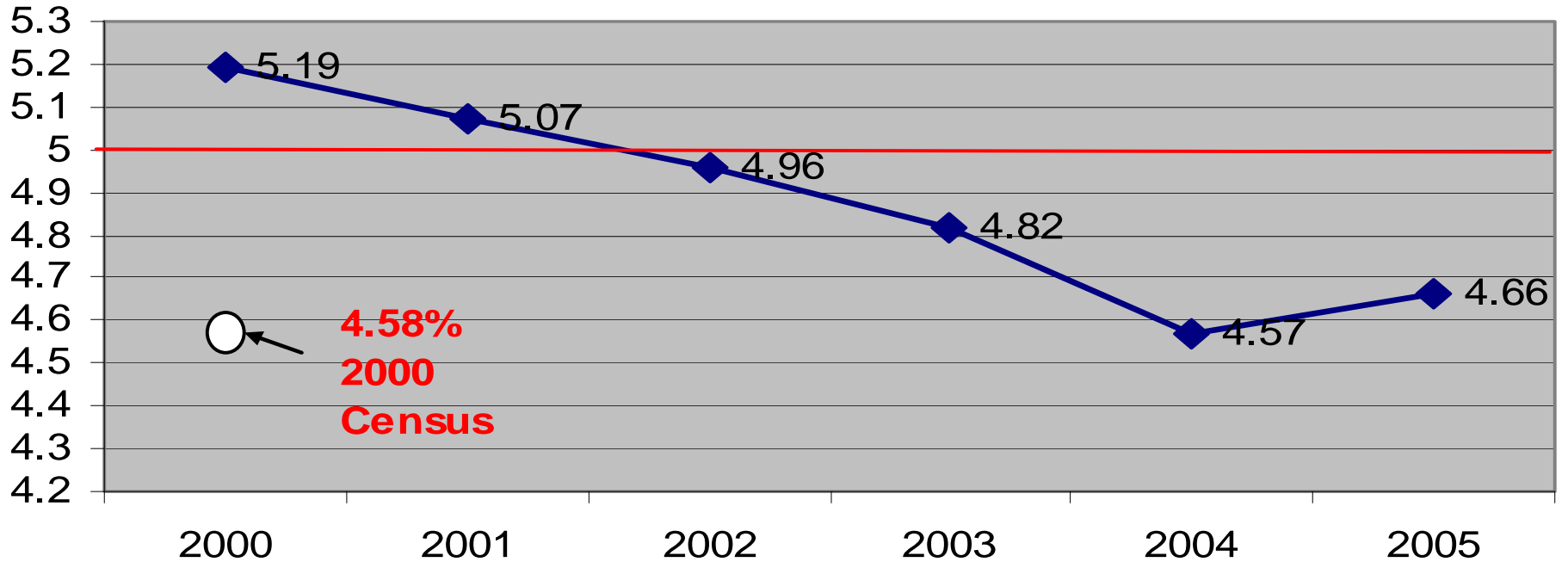
# 2000-2005 CHANGE

## BROAD MODAL TREND 2000-2005



# 2000-2005 CHANGE

ACS survey transit share trend





# State Travel Times

## STATE TRAVEL TIME TRENDS.

