

# **National Issues in the USA in Economic Development, Mobility and Income Inequality**

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**Roundtable on  
Income Equality, Social Inclusion and Mobility**

**OECD Paris**

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# Intent of this Paper

- This paper surveys U.S. trends in demography and behavior relating to issues of income inequality, social inclusion and the role of mobility to help define the context for future policies and programs
- This century is a most difficult time of change:
  - Shifting Demography
  - Erratic Economies
  - Volatile Resource Costs
  - Dramatically Changing Technologies
  - Shifting Social Patterns, Values and Attitudes

# The central fact of the future in the U.S.A.

(and for many other countries)

is the dramatic declines in the work force age group

## IN THE FUTURE

Skilled workers will be at a premium

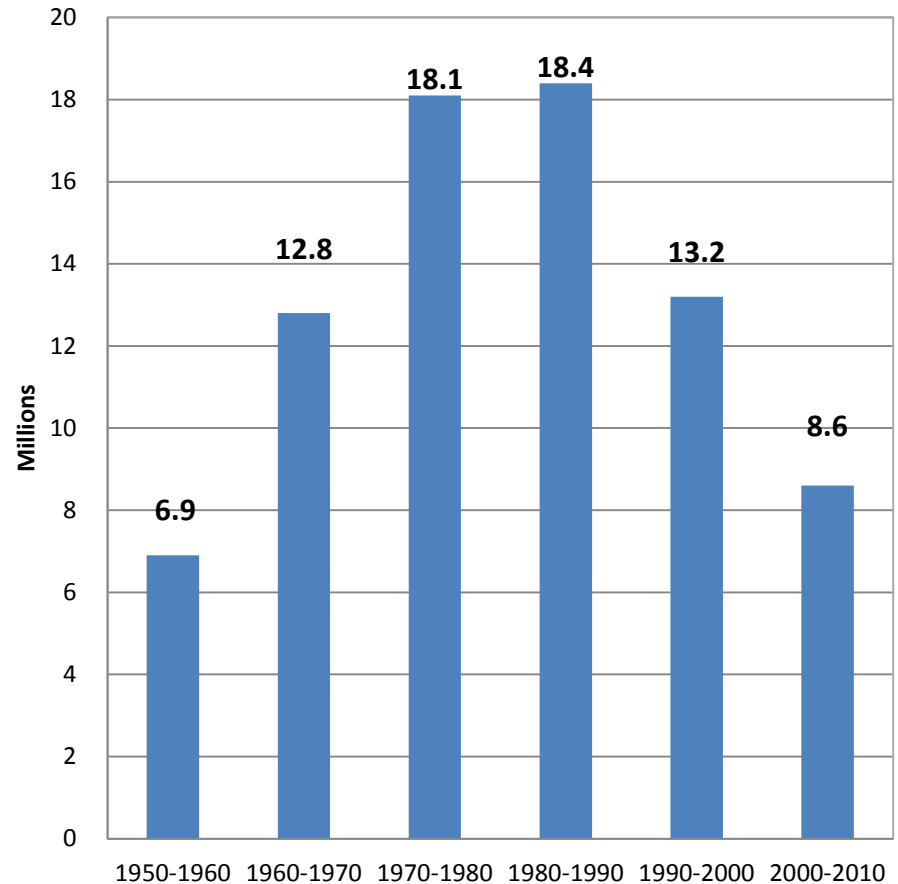
With higher dependency on them

Greater PRODUCTIVITY will be essential

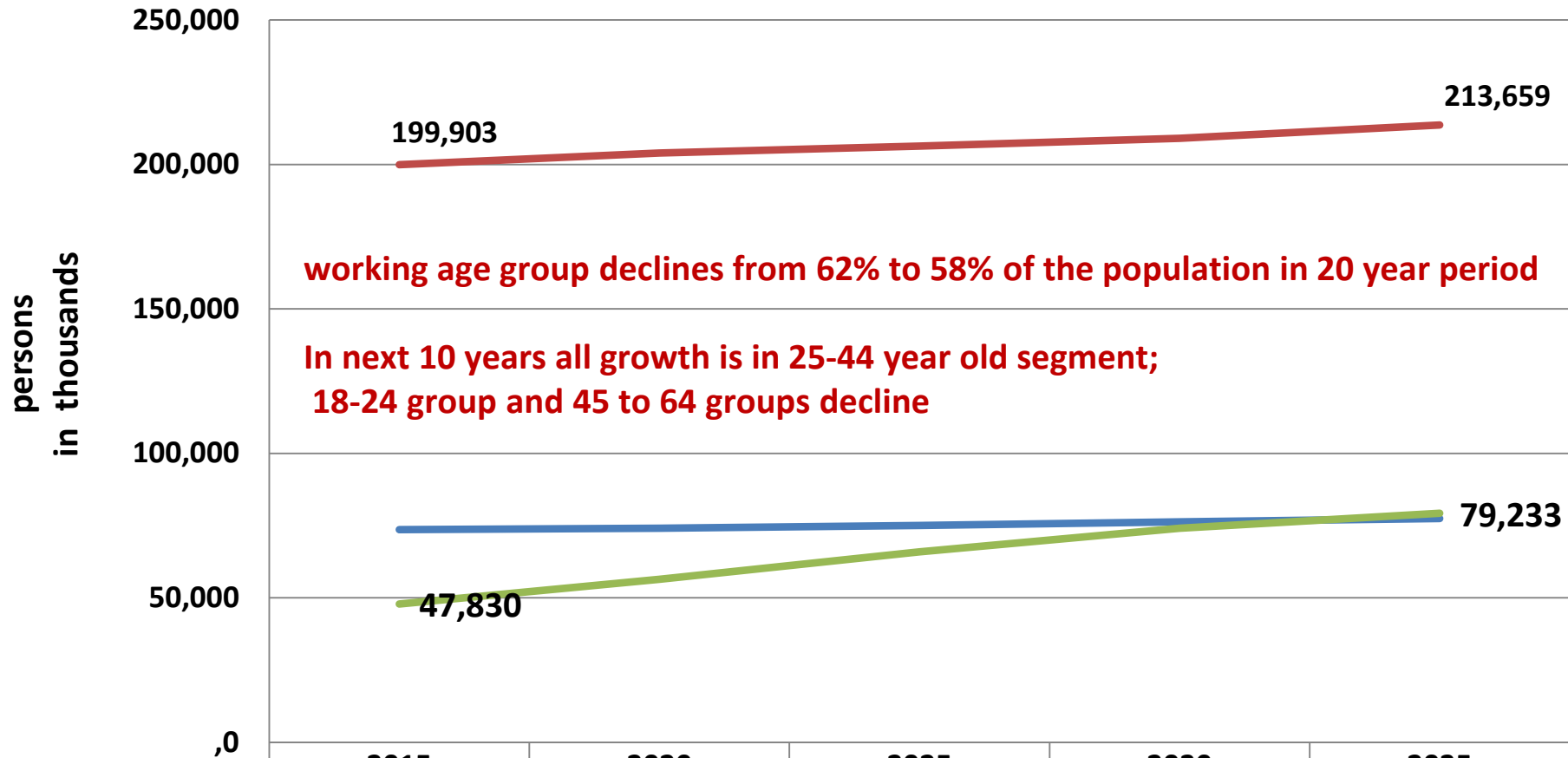
Attracting workers and holding them will be key

Larger “Market Sheds” WIN

WORKERS ADDED



# Persons of working age and dependent ages



	2015	2020	2025	2030	2035
.Under 18 years	73,635	74,128	75,015	76,273	77,446
.18 to 64 years	199,903	203,934	206,400	209,022	213,659
.65 years and over	47,830	56,441	65,920	74,107	79,233

## What commuting really is all about!

### 1980 A STANDARD BEDROOM SUBURB

300,000 jobs and 400,000 workers

Job worker ratio of .73

### 2010 JOBS = WORKERS = 580,000

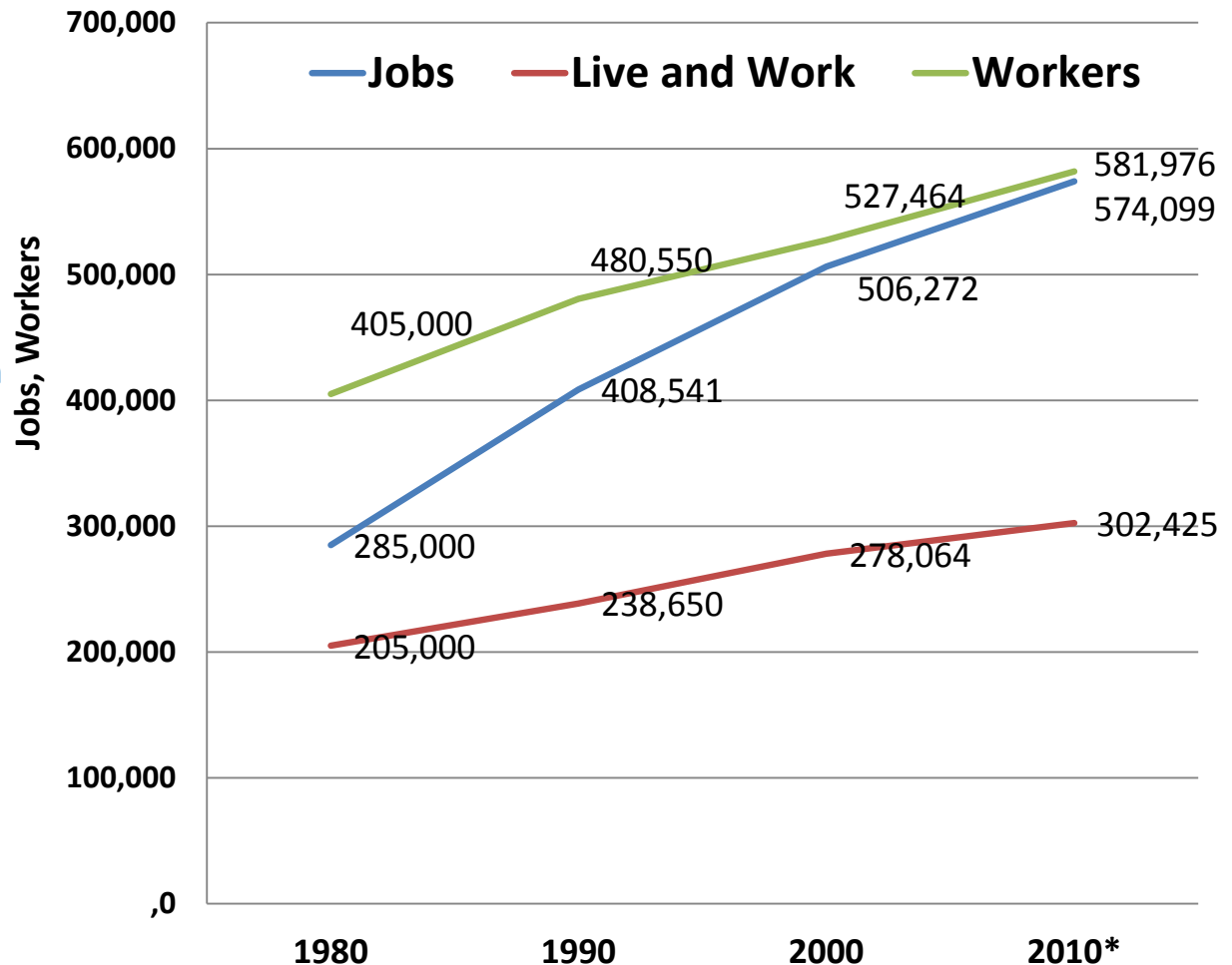
- J/W RAT10 = .99
- IDEAL Jobs- workers requires no imports; and exports of 8,000 each day
- ACTUAL daily imports 272,000
- ACTUAL daily exports 280,000
- Live and work in county 52%

### 2013 JOBS NOW EXCEED WORKERS

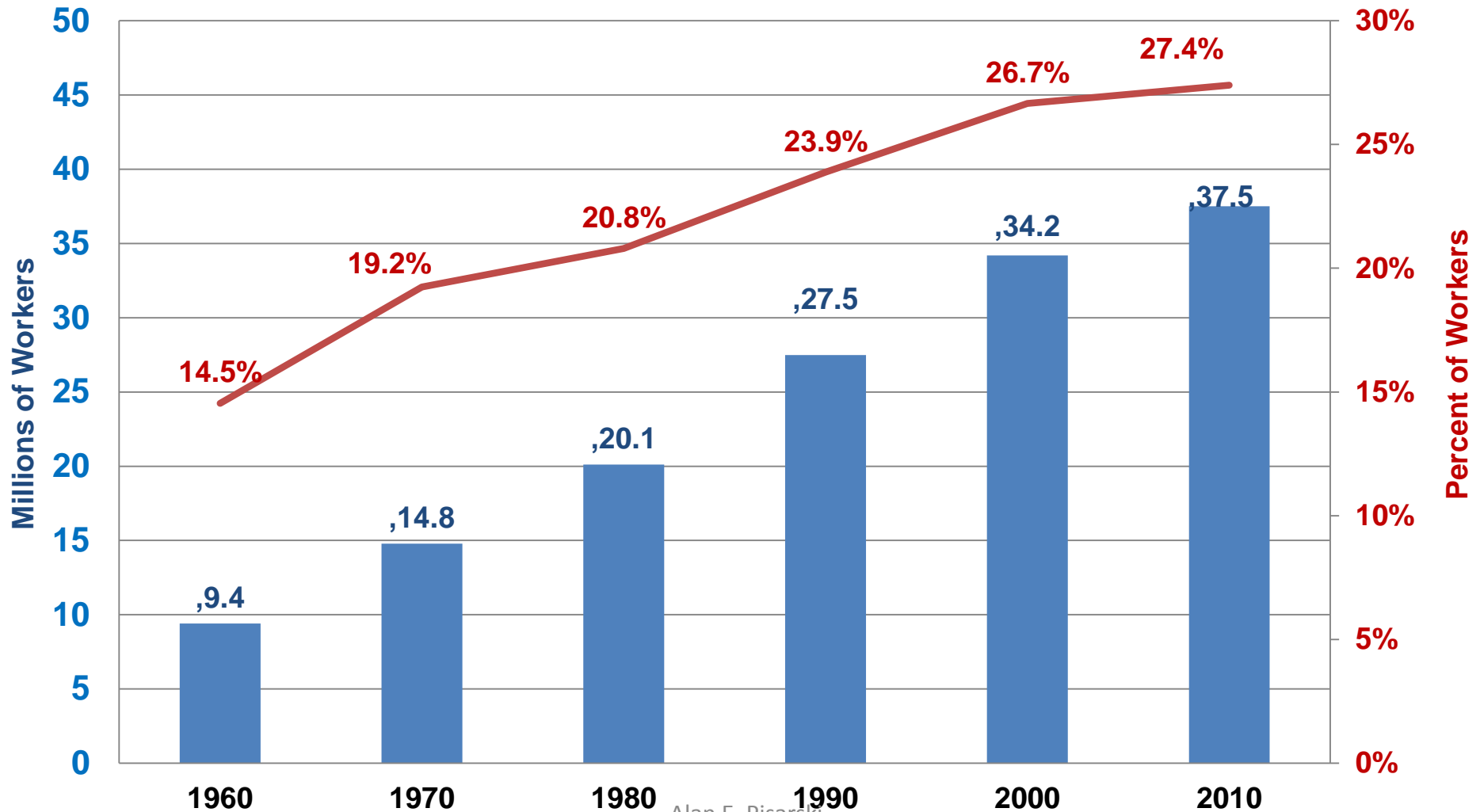
area is a net importer of workers –  
Exports down slightly; imports up big  
Total flow 572,000 across borders vs  
550,000 in 2010

## America's Story

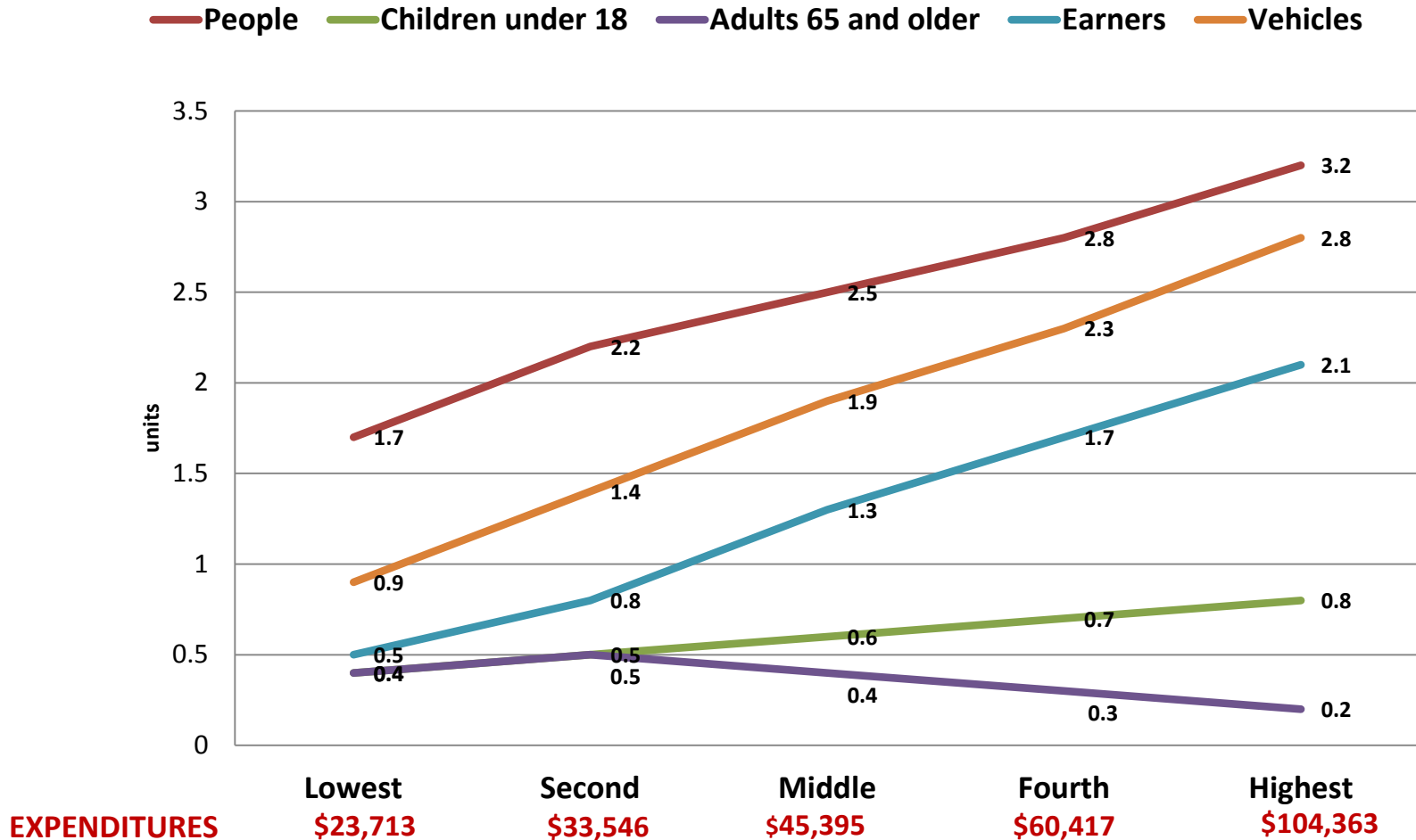
# job/worker trends Fairfax County, Virginia



# Percent of Workers Leaving their Home County to Work USA



# 2014 Consumer Demographic Characteristics by Quintile of Income



# 2014 Consumer Expenditure Survey Characteristics

## Patterns

### KEY low/ high patterns 2014

# of persons rises with income 1.7 to 3.2

# of children doubles .4 to .8

# of elders halves .4 to .2

EARNERS QUADRUPLE .5 TO 2.1

Vehicles triple .9 to 2.8

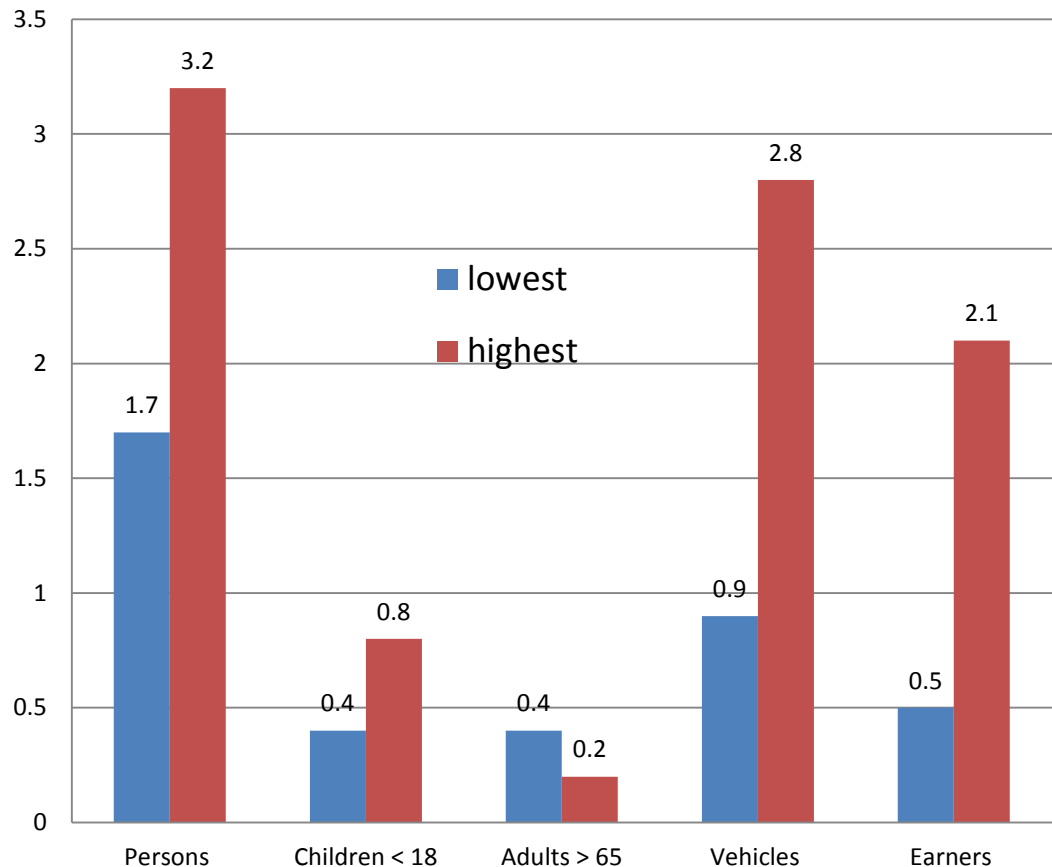
### Messages

Lowest is low in children, high in elders and low in family size

Massive difference in workers but increase in incomes greater than increase in earners

Vehicles per earner higher in lowest quintile. (retirees)

### 2014 lowest to highest quintiles change

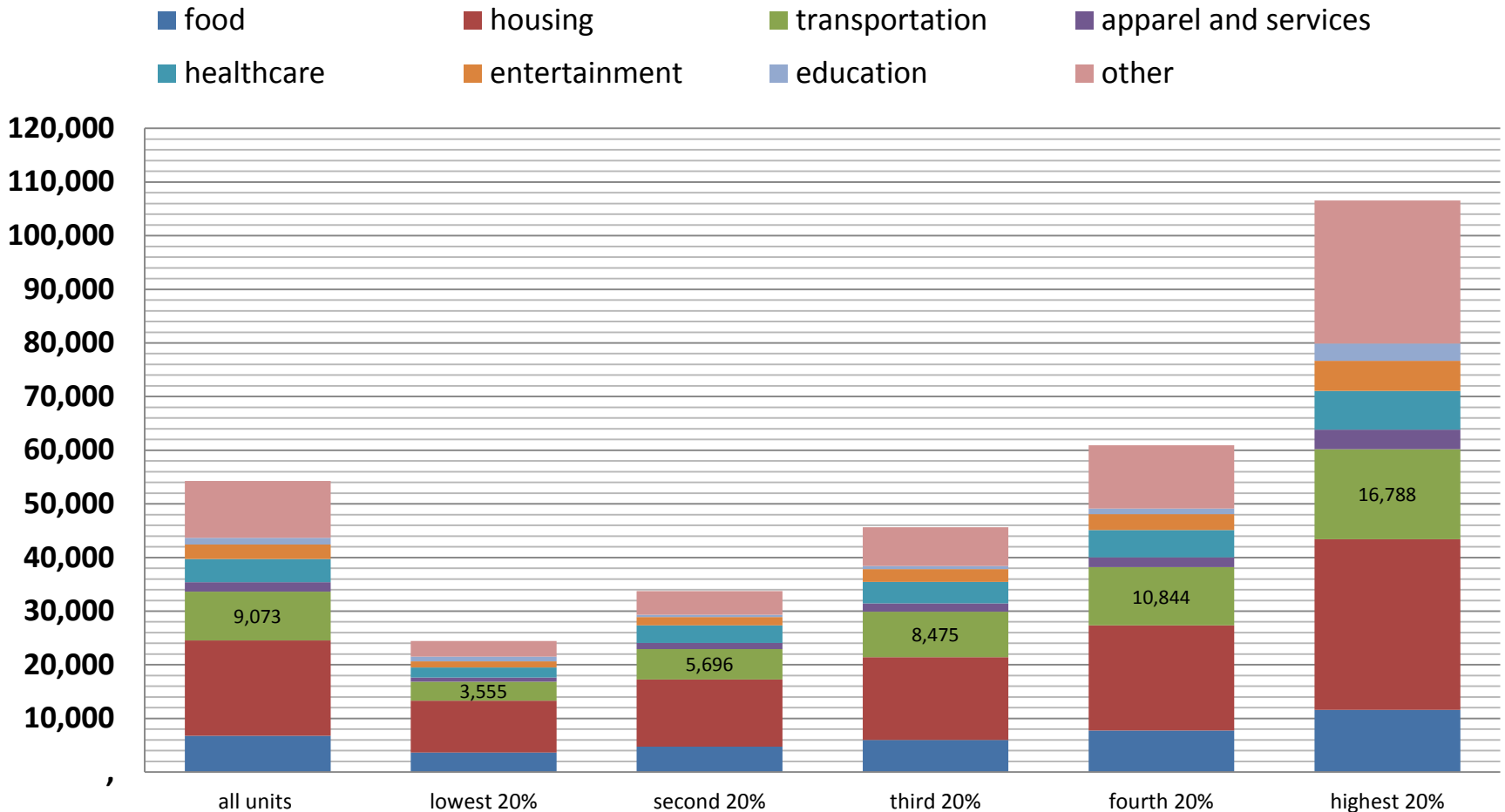




# Characteristics of Lowest Quintile

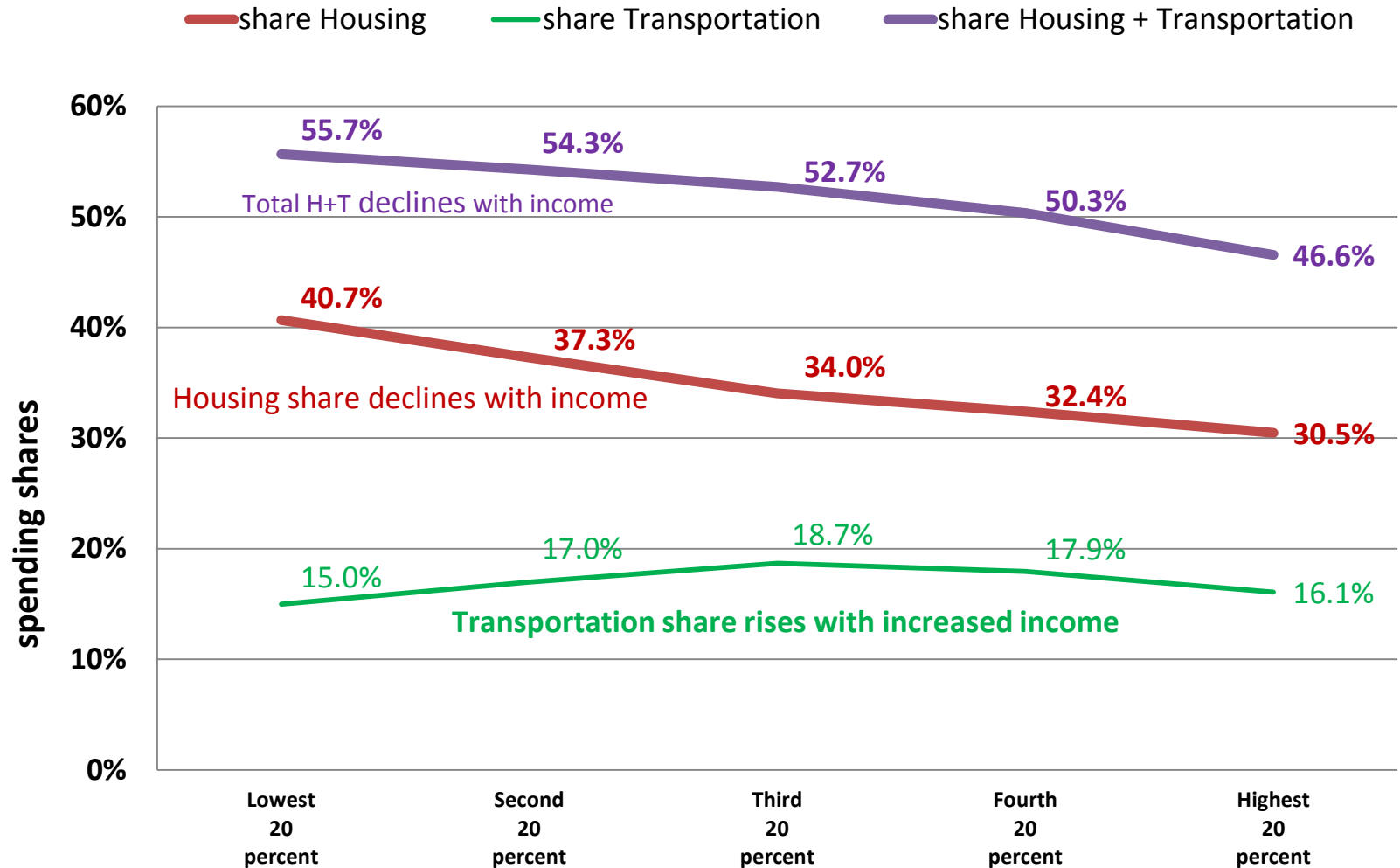
- Annual Expenditures just under \$24,000 year; more than double mean income of \$10,750 suggests students or retirees with assets
- Only .5 workers per household = unemployed, students, or retirees?
- .4 persons over 65 in households w 1.7 people and over 60% are women suggests retirees or single parent households
- .4 children under 18 suggests small group of parents
- 50% college grads suggest upper income or very young
- 39% home ownership and 63% w at least one vehicle, low for US, but could suggest young, retirees or low income population
- But 21% Af-Am in this quintile vs 13% in population indicates high minority component
- **A MIXED GROUP: STUDENTS; RETIREES; AND LOW INCOME**

# Spending by Quintile add \$\$\$



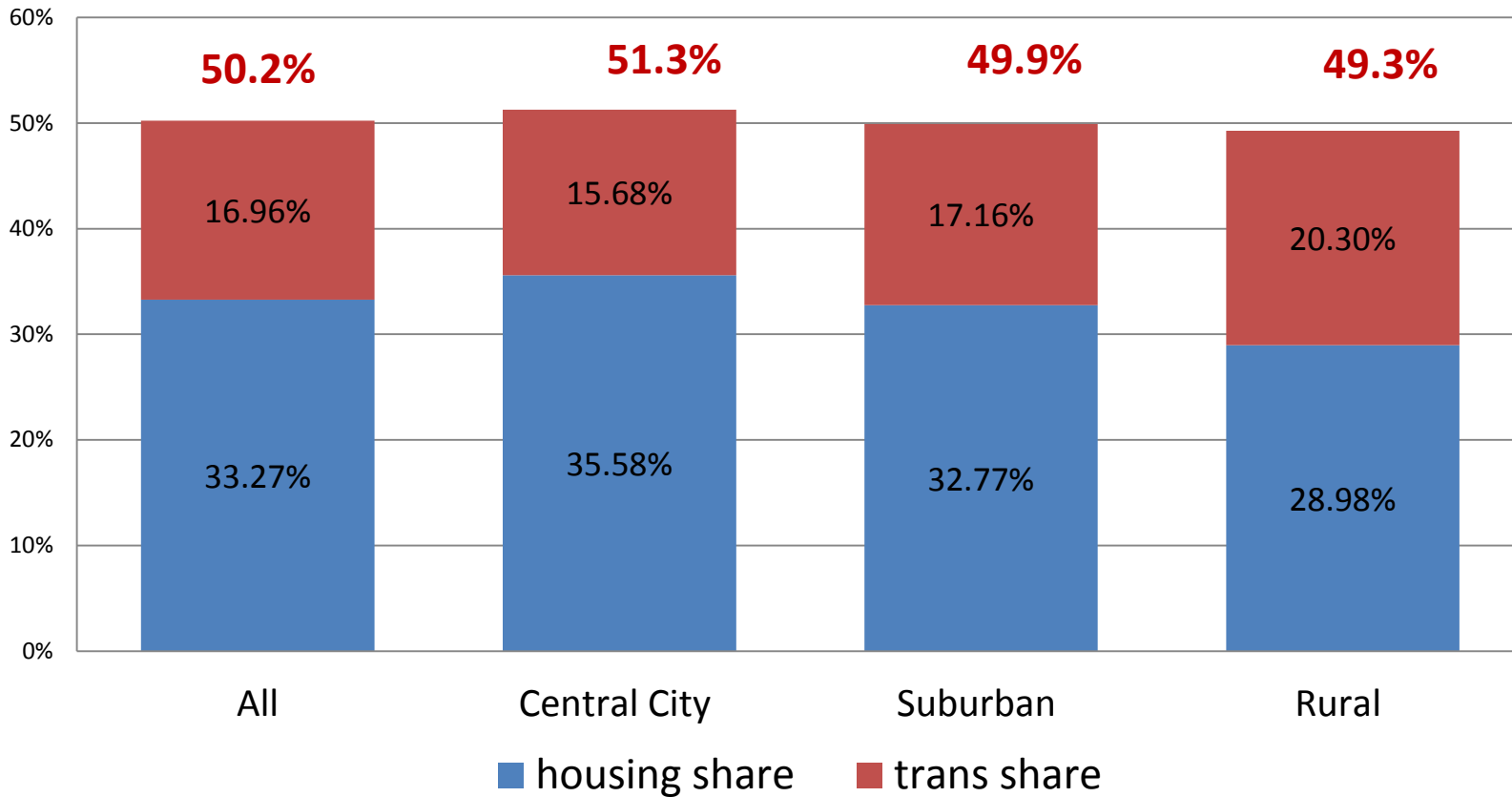
# Share of Spending for Housing + Transportation by Income Quintile

Shares to transportation rise and housing declines in higher quintiles; total declines in share

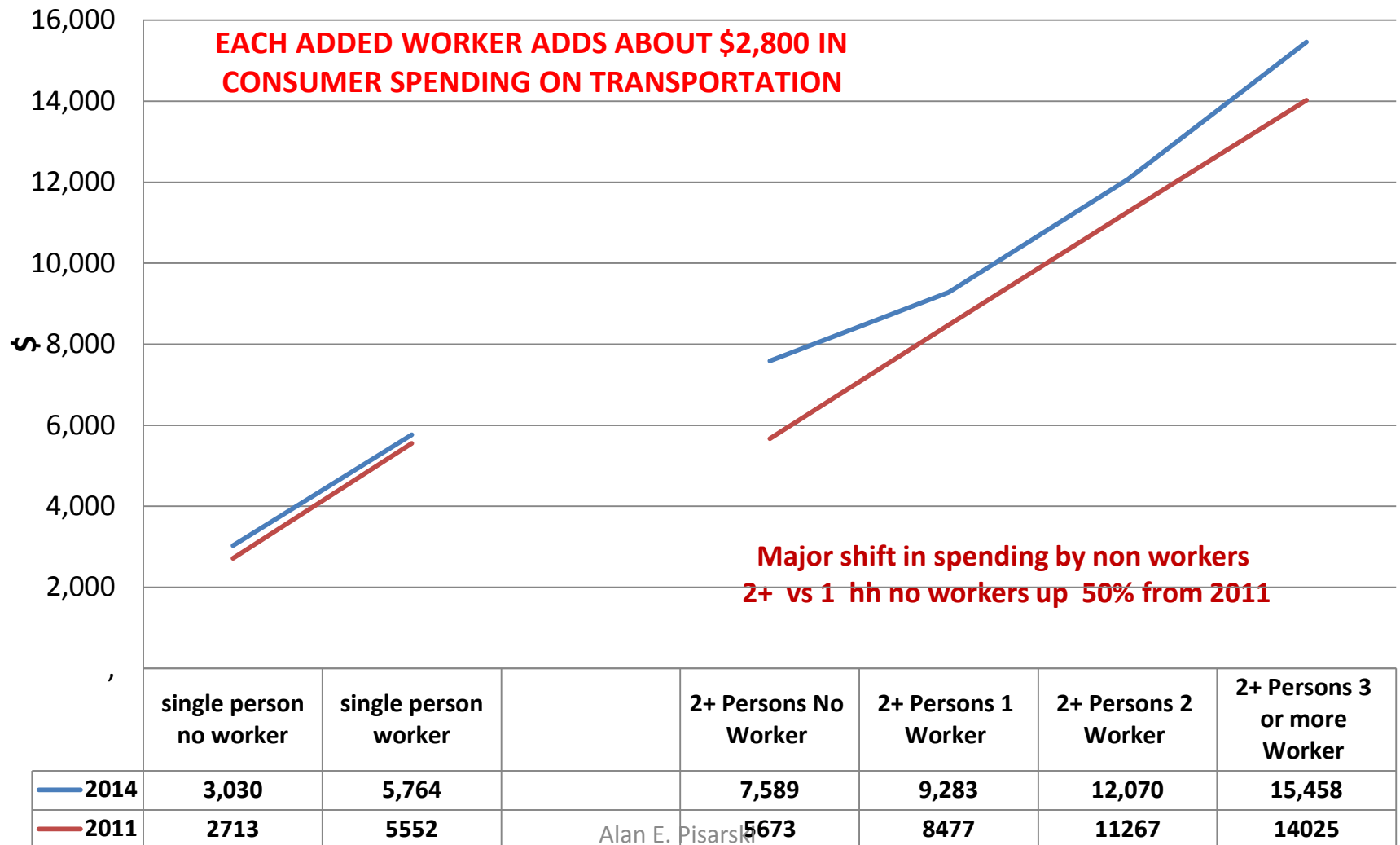


# Housing + Transportation Share of Consumer Expenditures by Location

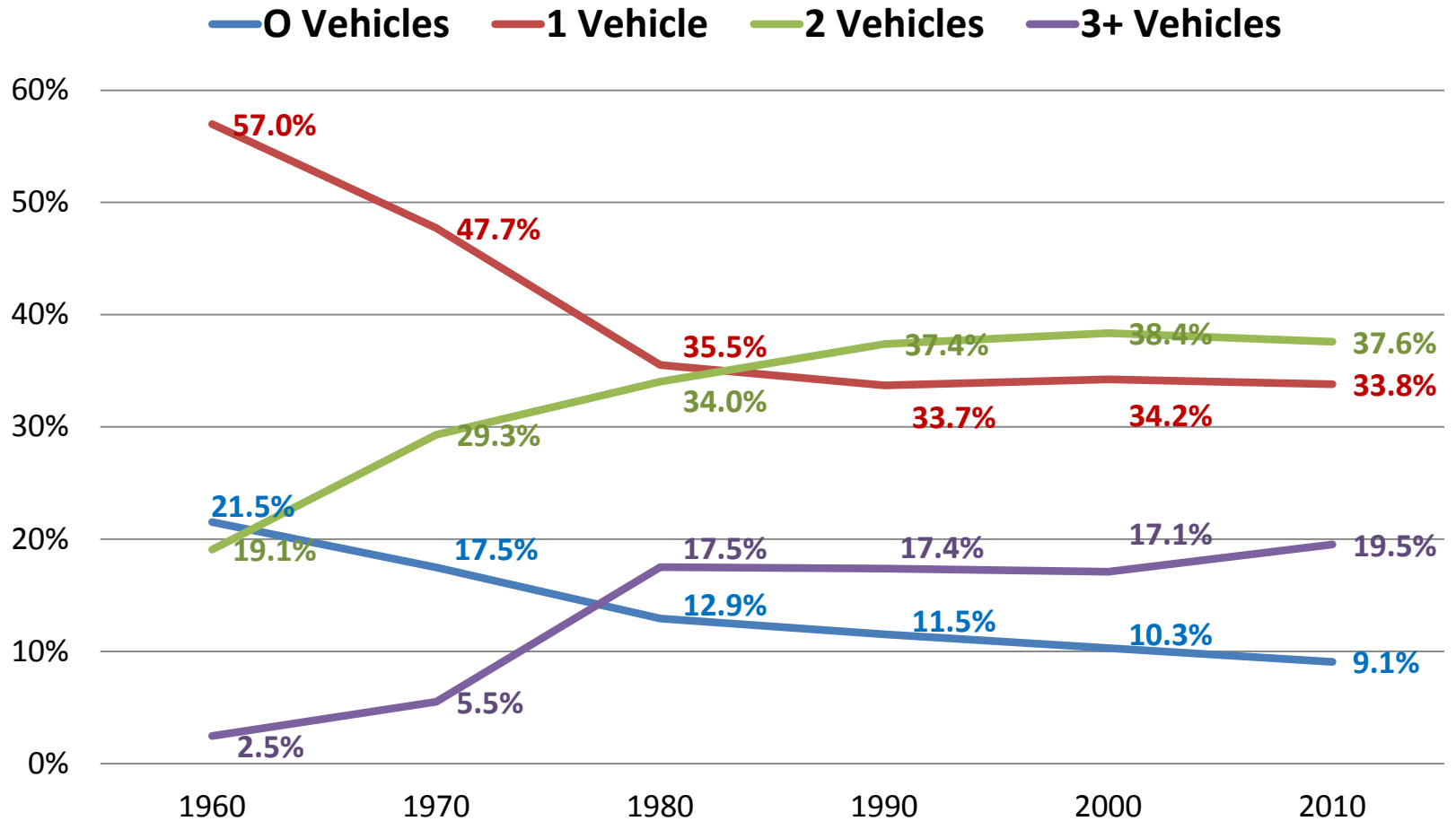
**Home ownership rate**  
 61%                      47%                      68%                      79%



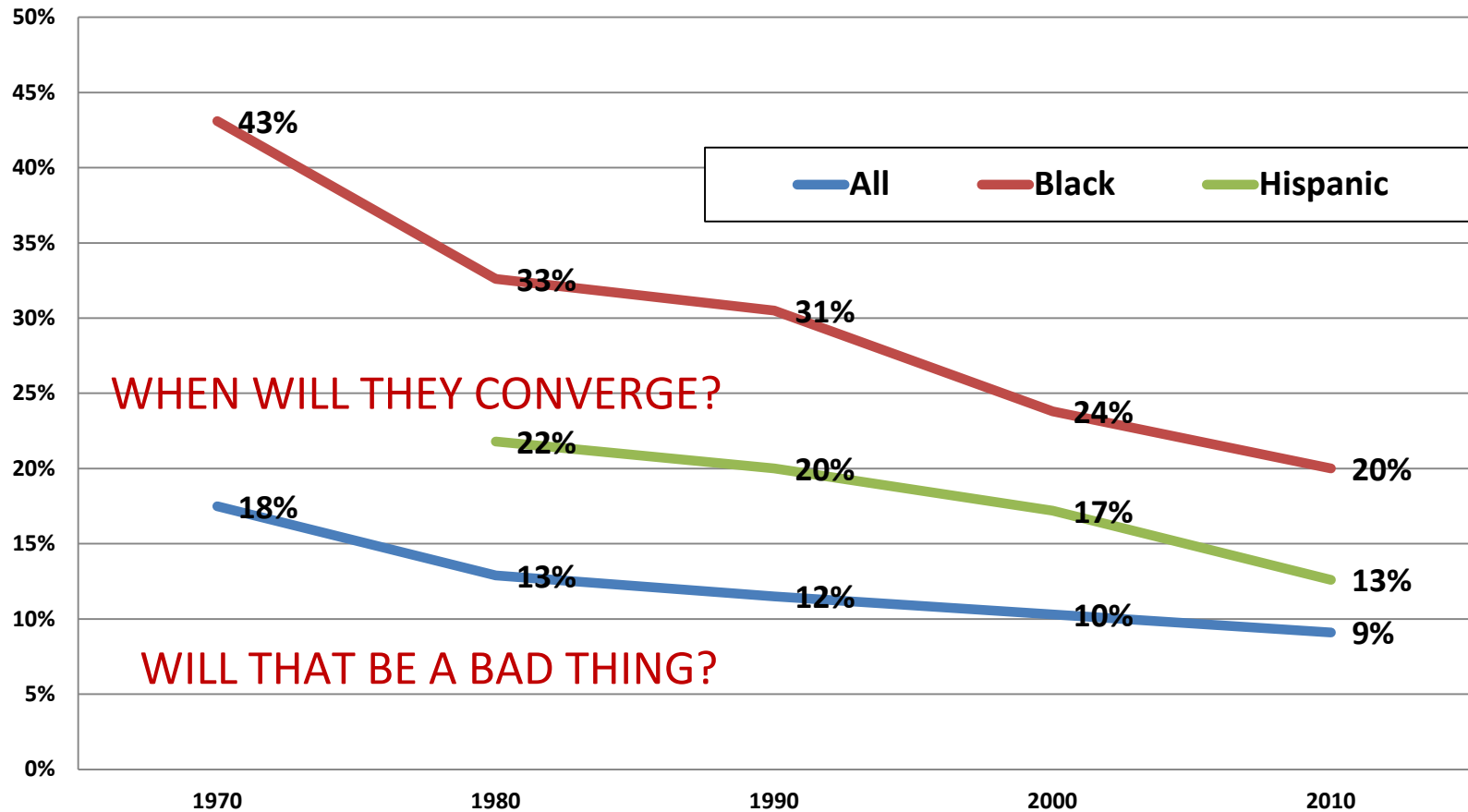
# The Key is Transportation Spending by Workers per Household 2011 to 2014



# US Trend in Share of Households by Vehicle Ownership



# US Share of households without Vehicles is declining



**2014 Nat avg 9.1% ; Af-Am 19.9%; Hisp. 11.8%**

# Mode shifts to Work by Race and Ethnicity

<b>DRIVE ALONE</b>	<b>2000</b>	<b>2010</b>
<b>Hispanic</b>	<b>60.6%</b>	<b>67.8%</b>
<b>African-American</b>	<b>67%</b>	<b>72%</b>
<b>Total US Population</b>	<b>75.7%</b>	<b>76.5%</b>
<b>CARPOOL</b>		
<b>Hispanic</b>	<b>22.7%</b>	<b>16%</b>
<b>African-American</b>	<b>16%</b>	<b>10%</b>
<b>Total US Population</b>	<b>12.2%</b>	<b>9.7%</b>
<b>TRANSIT</b>		
<b>Hispanic</b>	<b>8.6%</b>	<b>7.8%</b>
<b>African-American</b>	<b>12%</b>	<b>10.9%</b>
<b>Total US Population</b>	<b>4.6%</b>	<b>4.9%</b>



# A MAJOR FACTOR TO RECOGNIZE

## Race, Ethnicity and Gender differences melding

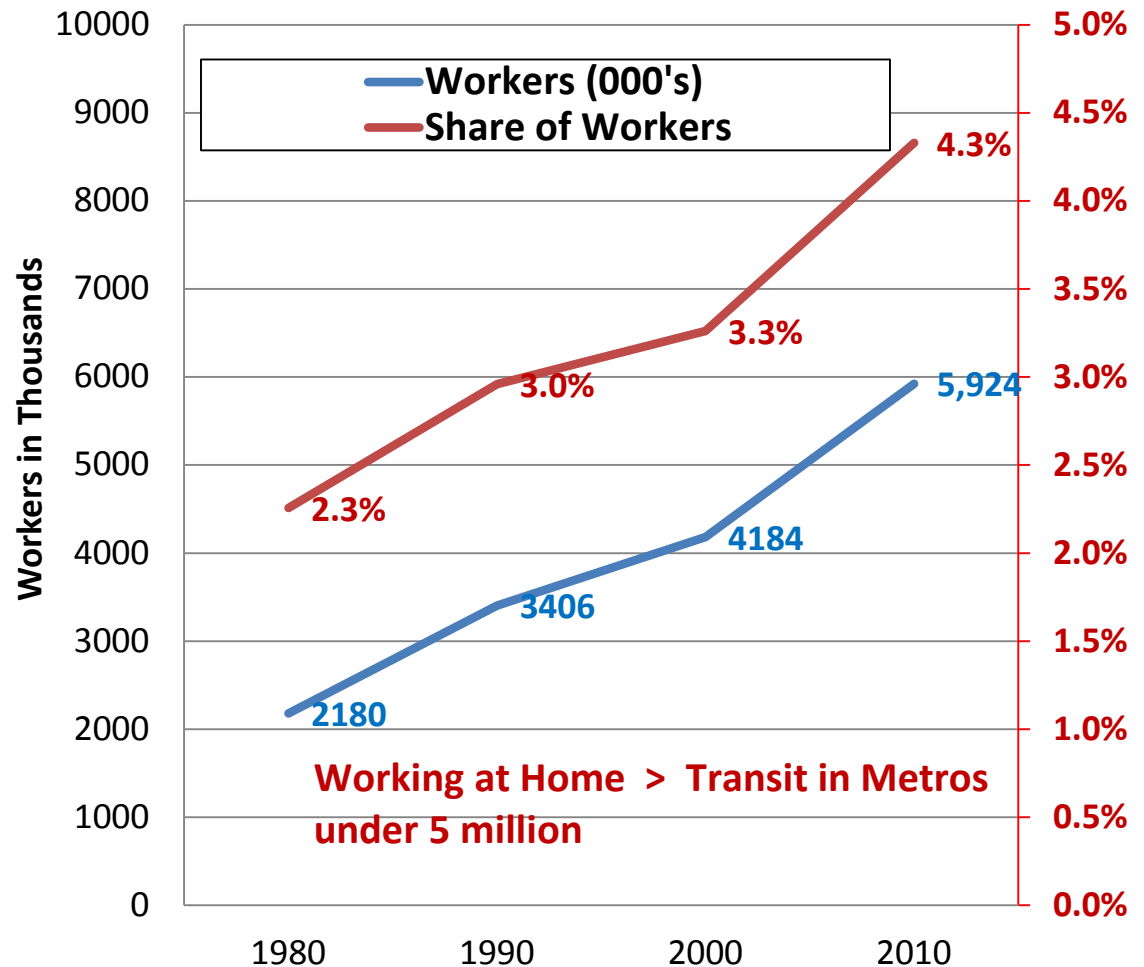
- GAPS ARE CLOSING BETWEEN MEN'S AND WOMEN'S MODE OF TRAVEL TO WORK
- GREATER SHARE OF WOMEN DRIVE ALONE THAN MEN!
- RACE & ETHNICITY DIFFERENCES ARE ALSO DIMINISHING

	male	female	F/M ratio
Car, truck, or van:	86.07%	86.47%	100.5
<b>Drove alone</b>	<b>76.19%</b>	<b>77.00%</b>	<b>101.1</b>
Carpooled:	9.88%	9.47%	95.9
In 2-person carpool	7.51%	7.52%	100.2
In 3-person carpool	1.32%	1.21%	91.9
In 4-+person carpool	1.05%	0.74%	70.3
Public transportation	4.63%	5.29%	114.4
Bus or trolley bus	2.34%	2.95%	126.4
Streetcar / trolley car	0.06%	0.07%	120.1
Subway or elevated	1.62%	1.78%	109.6
Railroad	0.58%	0.47%	80.8
Ferryboat	0.03%	0.02%	72.8
Bicycle	0.75%	0.30%	39.7
Walked	2.85%	2.68%	94.1
Taxi, motorcycle, oth	1.44%	0.86%	59.4
Worked at home	4.26%	4.40%	103.1

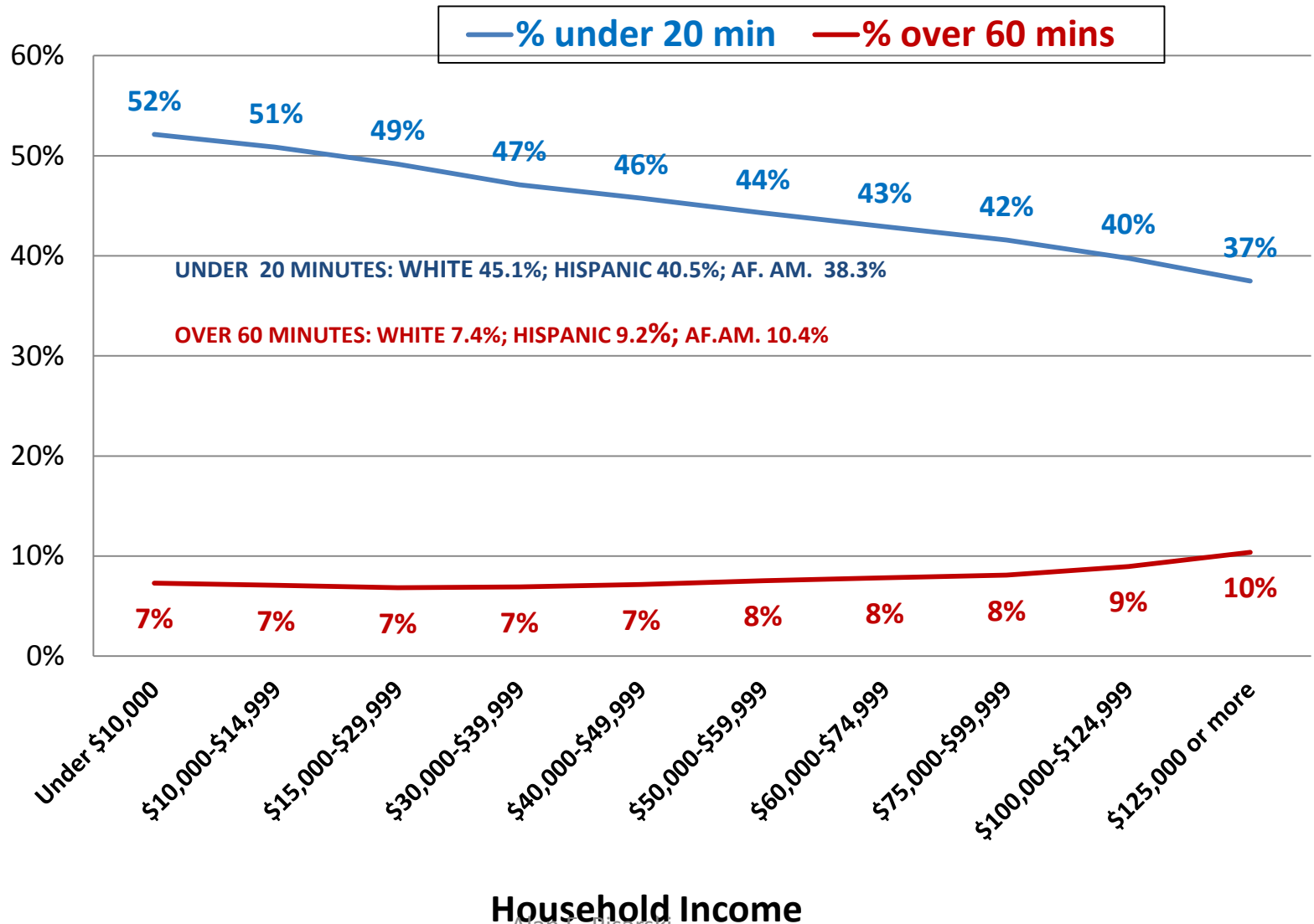
US  
Work at Home vs Transit  
2014

- **WORK AT HOME 6,543,000 & 4.5% share**
- **TRANSIT 7,600,000 & 5.2% share**
- **WAH is about 1 million less than transit**
- **Exceeds transit in almost all metros under 5 million**
- **There are 29 metros out of 550 where transit is greater than work at home**
- **If NY is excluded, work at home exceeds transit by 1.5 million workers.**

# Long Term Trend in Working at Home 1980-2010



# Morning Travel Time to Work by Income- 2011



# How will Metro travel demand be affected by autonomous vehicles?

DEMAND TYPOLOGY	IMPACT	AREAS AFFECTED
Commuting	HIGH	ALTERNATIVE USE OF TIME, STRESS REDUCTIONS, GAINS IN SPEEDS
Other Resident Travel	HIGH	MORE ACCESS FOR YOUNG, OLD, INFIRM TO SERVICES AND OPPORTUNITIES
Tourism	HIGH	INCREASED OPPORTUNITIES
Service Vehicles	LOW	DEMAND MOSTLY UNAFFECTED, FASTER ACCESS TIMES
Public Vehicles	LOW	DEMAND MOSTLY UNAFFECTED, FASTER ACCESS TIMES
Urban Goods Movement	LOW	DELIVERY FUNCTIONS UNAFFECTED, COST CHANGES
Thru Passenger Travel	HIGH	ALTERNATIVE USE OF TIME, REDUCED STRESS
Thru Freight Travel	HIGH	INCREASED EASE AND COST CHANGES

# SUMMARY OF TRAVEL DEMAND WITH AUTONOMOUS VEHICLES

## INCREASE IN VKmT

- EXPANDED USERS
- LOWER COSTS
  - TRAVEL TIME
  - OPERATION/MAINT
  - OWNERSHIP/ALTERNATIVES
  - SAFETY/RELIABILITY
  - SYSTEM CAPACITY/DESIGN
  - PERSONNEL COSTS
  - PERSONAL FOCUS
- MODE SHIFTS –
- GREATER ACCESS TO JOBS,  
WORKERS, OPPORTUNITIES,  
SERVICES, SUPPLIERS

## DECREASE OR UNCERTAIN

- RETURN TRIPS?
- SHARING OF TRIPS?
- TRIP LENGTHS?
- PKmT OR VKmT?
- LONG TERM LAND USE?

# SUMMARY

## Defining Trends of the Period

### What to watch for

**#1 Diminished growth in available work force**

**#2 older workers will be needed and will remain in the work force because of better health and financial needs**

**#3 Increased specialization of demands in everything – attracting skilled workers**

**It will be a worker-supply driven world in which employers will go where the skilled prefer to be; the unskilled will have to follow. Health care an exception?**

**#4 Diminishing differences between men and women and among racial and ethnic groups in travel behavior**

*differences will be occupation/industry based; also income, education and geographically based*

**#5 Big, Bigger, BIGGER METROS**

# SUMMARY

## Defining Trends of the Period

### More to watch for

- **#6 Job/Worker ratios in suburbs and center cities moving toward 1.0**
- **#7 Housing costs pushing people to region's edges**
- **#8 More flexible, tech-assisted “semi-modes” will challenge conventional modes**
- **#9 More flexible “part-time-ish” work schedules**
- **#10 Advent of autonomous vehicles will expand personal autonomy and access to opportunities**

# Planning for this new world

- *EXPANDING ACCESS TO OPPORTUNITIES – HEALTH, JOBS, SERVICES – THROUGH GREATER MOBILITY WILL BE KEY TO SOCIAL INCLUSION GREATER INCOME EQUALITY.*
- *FLEXIBILITY AND A NIMBLE TRANSPORTATION PLANNING PROCESS WILL BE NEEDED*
- 
- *WILL NEW TRANSPORTATION INFRASTRUCTURE INVESTMENTS BE OBSOLETE BEFORE THEY ARE FINISHED?*



**THANK YOU**

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# Statistical Appendix

For reference

# THE US – a VERY limited century – so far

## LIMITED GROWTH

POPULATION

JOBS

WORKERS

INCOMES

INFRASTRUCTURE

MILES OF TRAVEL

TRAVEL TIMES

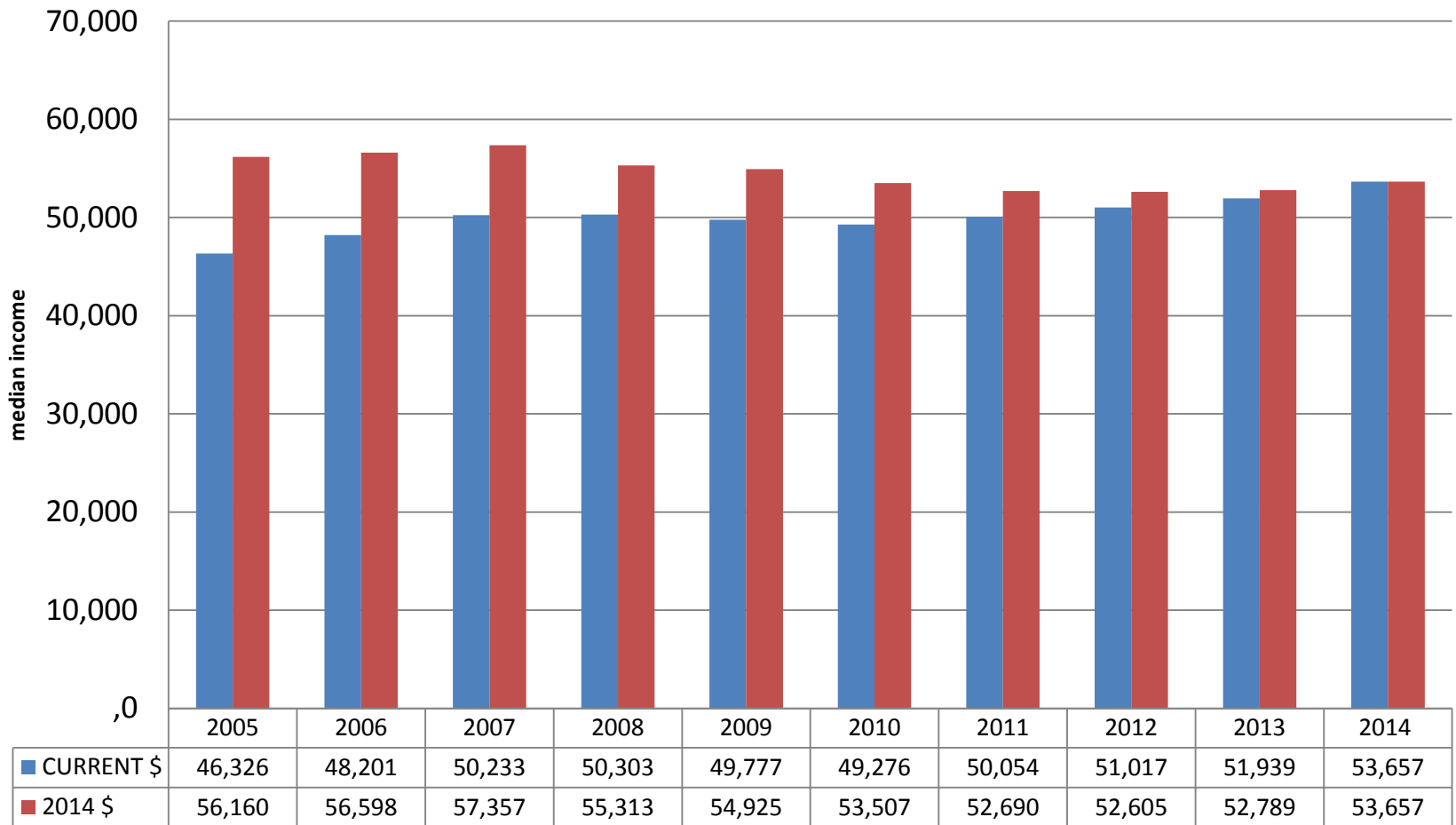
	2000	2015	Change	% chg
Population (millions)	281.4	321.4	40	14.2%
Vehicles (millions)	221.4	260.4	39	17.6%
Road System miles* (millions)	3.936	4.177	0.241	6.1%
Lane Miles (millions)*	8.224	8.766	0.542	6.6%
Vehicle Miles of Travel (trillions)	2.764	3.148	0.384	13.9%
VMT/ lane mile (thousands)	336	359	23	6.8%
Average Travel time (minutes)	25.5	26	0.5	1.96%

\* 2014 data

# THE US – a VERY limited century – so far

## INCOME LEVELS MAY JUST BE BACK TO 2007

### RECESSION PERIOD MEDIAN INCOME TRENDS 2005-2014



# 2014 Consumer Demographic Characteristics by Quintile of Income

## trends

### ONLY SLIGHT SHIFTS from 2010

- 2 lower quintiles are smaller
  - More children except in lowest quintile
  - More over 65 especially in high incomes
  - Fewer earners in 3 lowest quintiles
- Expenditures exceed income in bottom 3 quintiles

Average number in consumer unit:	All	Lowest 20%	Second 20%	Middle 20%	Fourth 20%	Highest 20%
People	2.5	1.7	2.2	2.5	2.8	3.2
Children under 18	0.6	0.4	0.5	0.6	0.7	0.8
Adults 65 and older	0.4	0.4	0.5	0.4	0.3	0.2
Earners	1.3	0.5	0.8	1.3	1.7	2.1
Vehicles	1.9	0.9	1.4	1.9	2.3	2.8
Annual Expenditures	\$53,495	\$23,713	\$33,546	\$45,395	\$60,417	\$104,363
After Tax Income	\$58,364	\$10,750	\$27,597	\$44,686	\$69,084	\$139,658
Bottom of Range	X	X	\$18,362	\$35,681	\$59,549	\$99,620

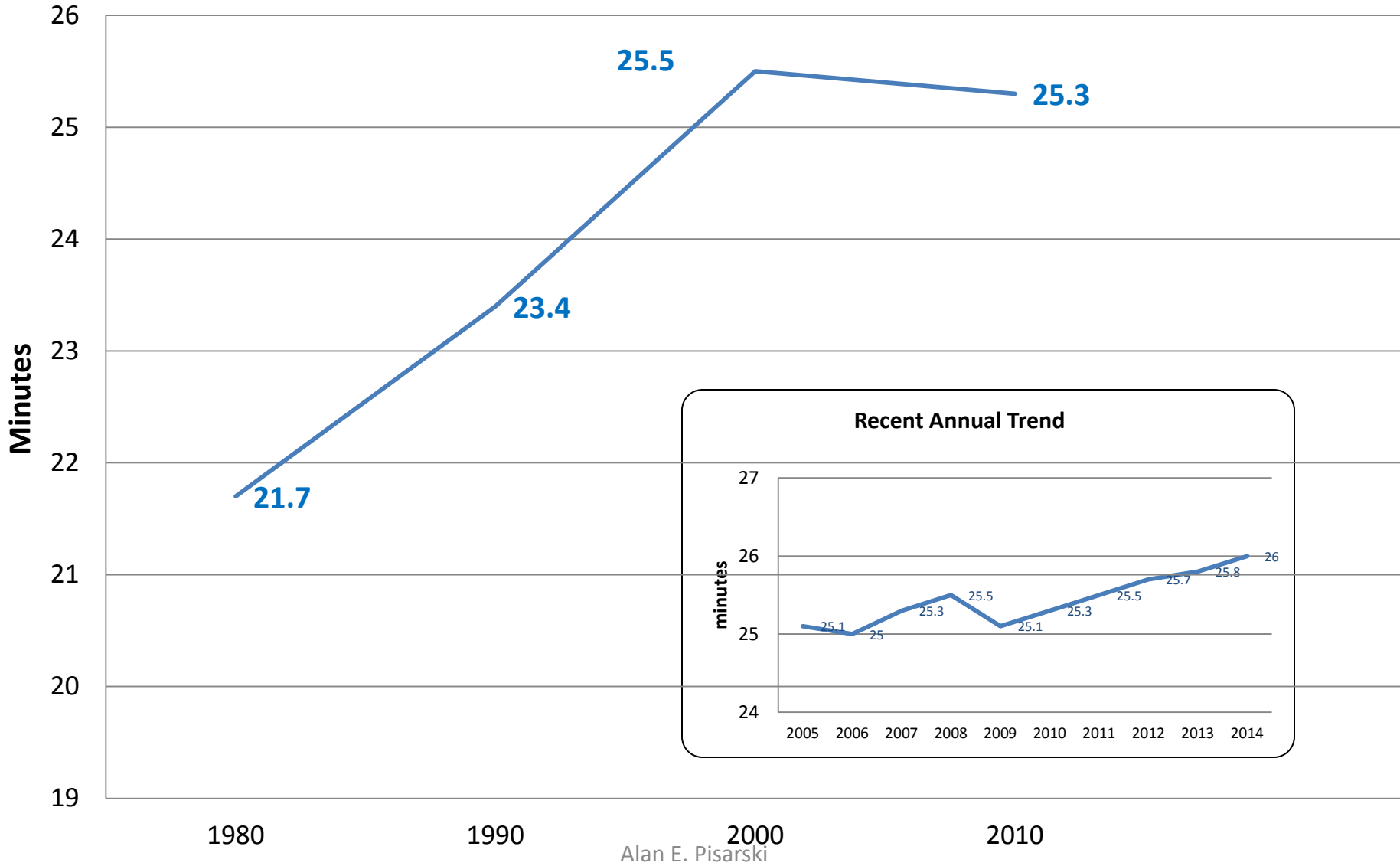
# Consumer Units without workers

## KEY ELEMENTS

- 46 MILLION PERSONS IN UNITS WITHOUT A WORKER
- 16 million in single person CU and 30 million in multi-person CU without worker
- high in persons over 65
- High in females
- High in vehicle ownership
- High in home ownership
- Single CU's have low transportation spending share; multiperson more typical share

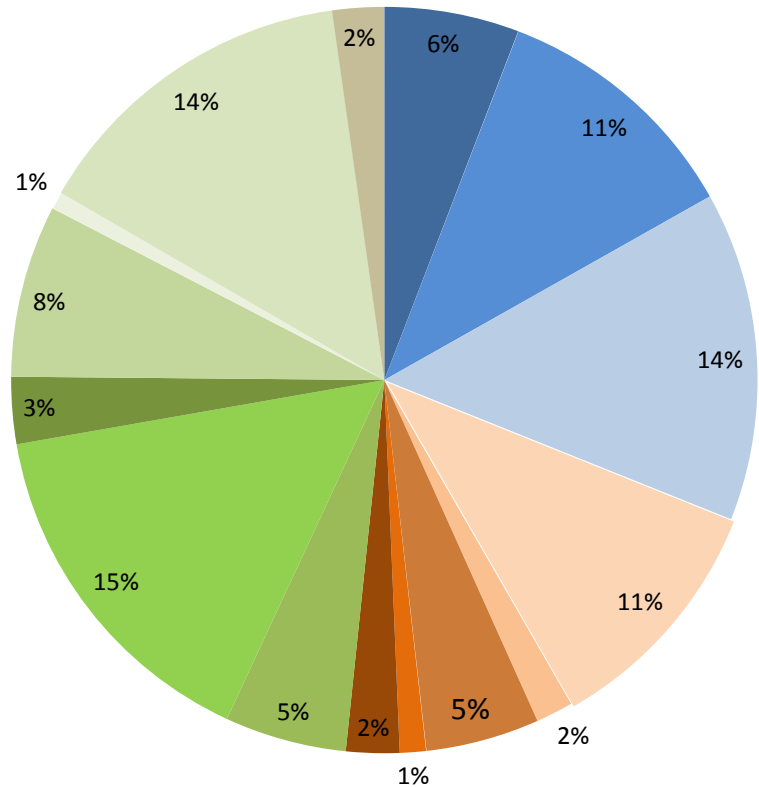
	single person CU	multi-person CU
Consumer Units (000's)	15,880	13,107
persons/CU	1	2.3
persons (000's)	15,880	30,146
persons > 65	0.6	1.3
% female	61%	53%
One or more Vehicles	65%	86%
% homeowners	57%	75%
Trans Spending	\$3,030	\$7,589
All Spending	\$25,565	\$43,418
Trans Share	11.9%	17.5%

# THE LOST DECADE – ZERO CHANGE IN TRAVEL TIMES 2000 TO 2011 EXTREME COMMUTES STABILIZED



# Geographic mobility 2014-2015

**Why Do People Move?**  
**Persons moving declined during the recession**  
**Only now slowly recovering**



- Change in marital status
- To establish own household
- Other family reason
- New job or job transfer
- To look for work or lost job
- To be closer to work/easier commute
- Retired
- Other job related reason
- Wanted own home, not rent
- Wanted new or better home/apartment
- Wanted better neighborhood /less crime
- Wanted cheaper housing
- Foreclosure/eviction
- Other housing reason
- other



## HIGHEST TO LOWEST RATIOS

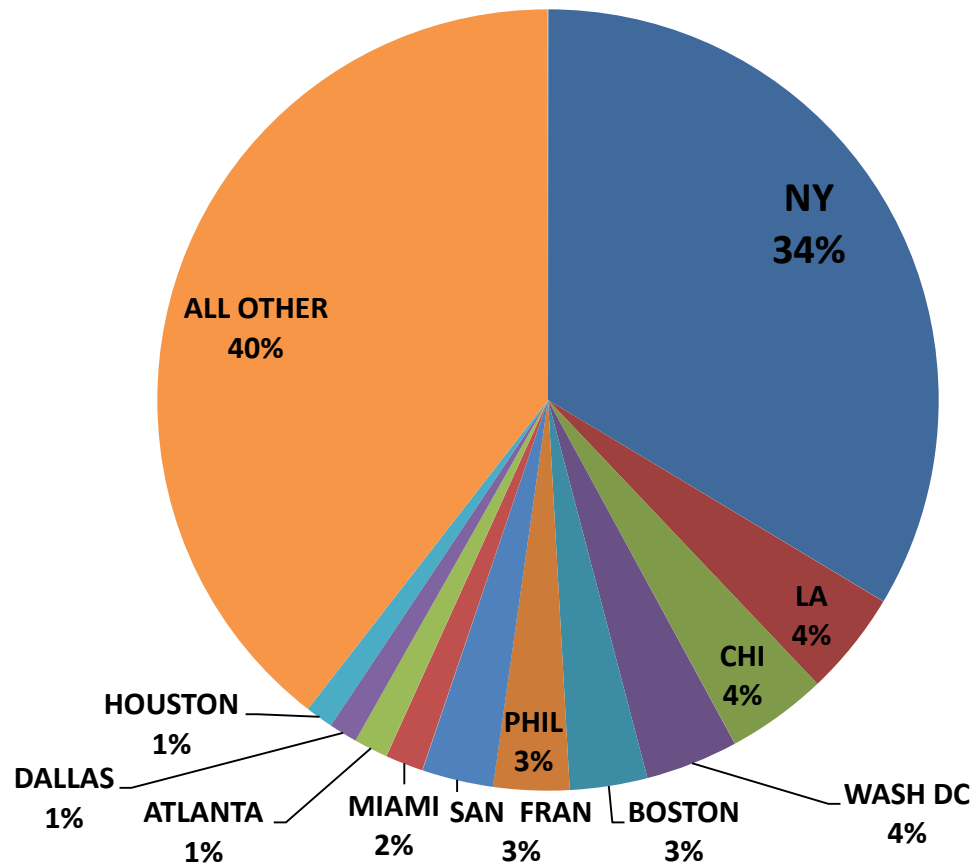
- Population ratio Up
- Sharp decline in children under 18
- Big increase in adults over 65
- **Big jump in earner ratio due to decline in lowest quintile from .7 to .5**
- **Increases in vehicle ratios due to drop in lowest quintile**
- Lowest income grew by 32%
- Highest income grew by 39%
- Dollar differences were 5/1

hi/lo ratios	2000	2014
People	1.8	1.9
Children under 18	2.3	2.0
Adults 65 and older	0.3	0.5
<b>Earners</b>	3.0	4.2
Vehicles	2.9	3.1
Annual Expenditures	4.2	4.4

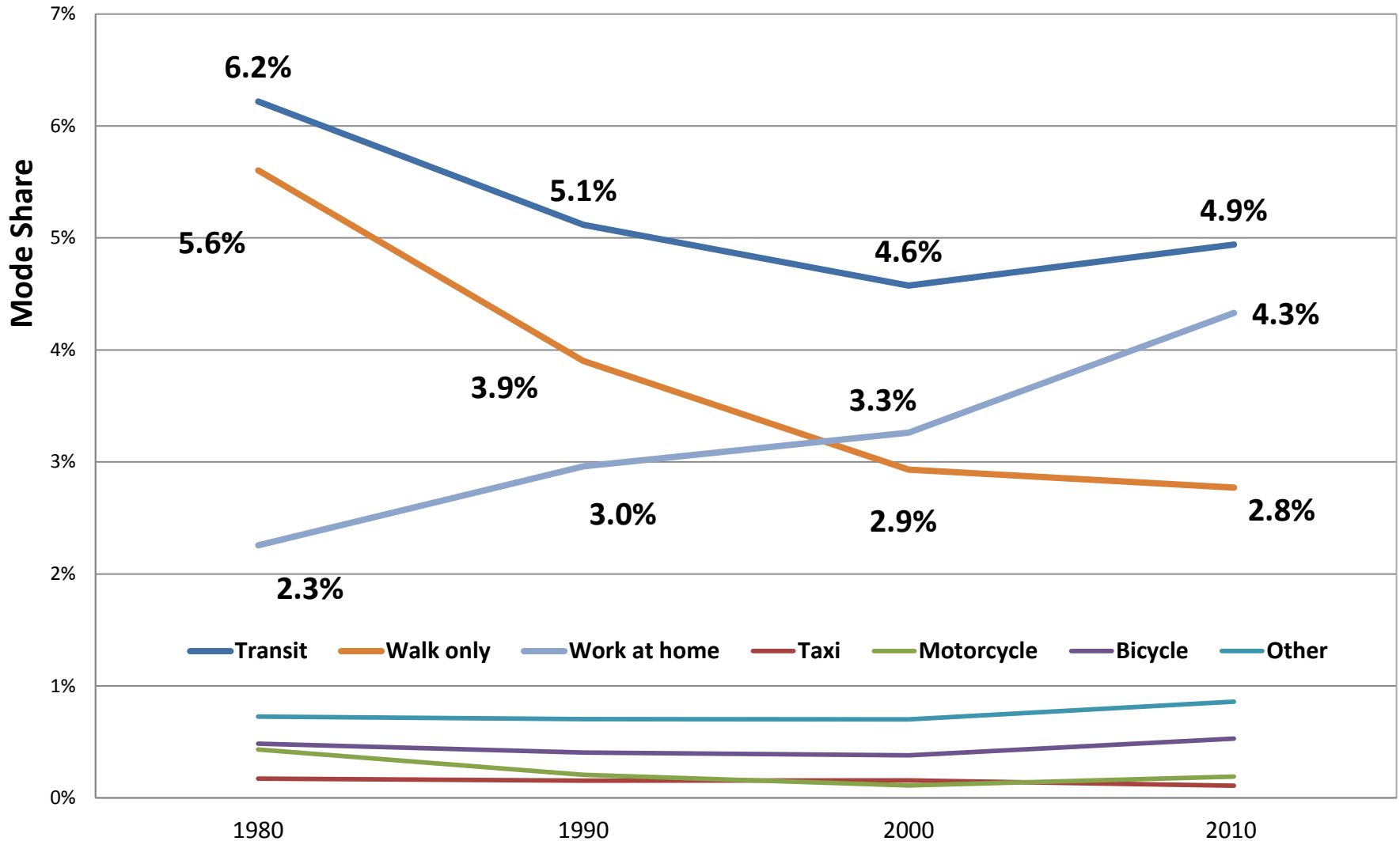
# HI/LO Expenditure ratios trends

	2000			2014		
Main Expenditure	Lowest Quintile	Highest Quintile	Ratio	Lowest Quintile	Highest Quintile	Ratio
Food	2,673	8,679	3.25	3,667	11,595	3.16
Housing	6,509	22,611	3.47	9,643	31,812	3.30
Apparel	844	3,989	4.73	786	3,625	4.61
Transportation	3,212	13,315	4.15	3,555	16,788	4.72
Health	1,470	2,864	1.95	1,868	7,219	3.86
Entertainment	837	3,866	4.62	1,108	5,629	5.08
Other	2,395	19,778	8.26	2,909	26,646	9.16
Total	17,940	75,102	4.19	23,713	104,363	4.40

# Where are the households without Vehicles



# Middle and Minor Modes Trend ES-11



# Main Modes Trend

