



UNITED STATES
DEPARTMENT OF TRANSPORTATION

Future Demographic Changes and Their Impact

Erica L. Groshen

Commissioner of Bureau of Labor Statistics
U.S. Department of Labor

Howard Hogan, Ph.D.

Chief Demographer
US Census Bureau



Labor Force Trends and Projections

Erica L. Groshen

Commissioner of Bureau of Labor Statistics
U.S. Department of Labor

Speaking with One Voice: Connecting the DOTs
2015 Civil Rights Symposium
February 5, 2015



About Bureau of Labor Statistics

- **Independent federal statistical agency in Department of Labor**
- **Mission:** Principal agency responsible for tracking labor market activity, working conditions, and price changes
 - ▶ Support public and private decision-making
 - ▶ Serve diverse users by providing products and services that are accurate, objective, relevant, timely, and accessible
- **Vision:** Meet information needs of a rapidly changing U.S. and global economy by
 - ▶ Continuously improving products and services
 - ▶ Investing in work force
 - ▶ Modernizing business processes

Employment Projections Program

Product: Estimated trends for labor force, employment and occupations

- Medium term (10-year) projections every 2 years
 - ▶ Latest--2012- 2022 projections
- For whole nation, by industry and occupation
 - ▶ State labor market information offices develop State-level projections
- Why do this? To help
 - ▶ People choose careers
 - ▶ Education and training officials track future workforce needs

Presentation overview

- Source of our projections
- Overview of national trends in population, labor force and labor force participation rates
- Risks to projections and challenges ahead

BLS labor force projections reflect two factors

■ Labor Force = Population * LFPR

▶ Population = US residents
– By age, sex, race, ethnicity

▶ Labor Force Participation Rate (LFPR) =
Share of people who are active in labor
market

– By age, sex, race, ethnicity

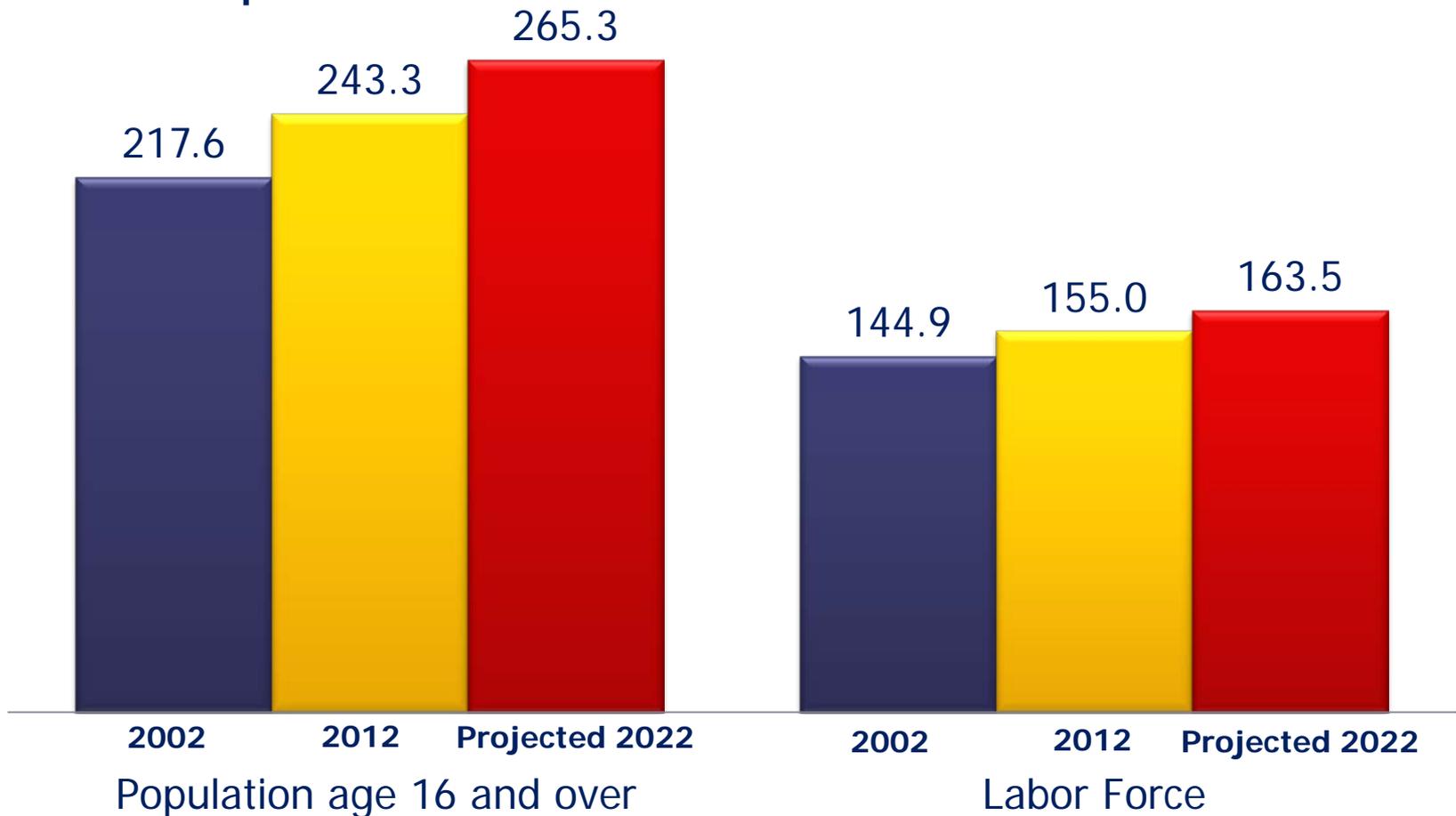
Inputs to projections

- Population
 - ▶ Census Bureau projections

- Labor force participation rate
 - ▶ Sum of employed workers and unemployed job seekers
 - ▶ BLS projections
 - ▶ Based on recent trends in Current Population Survey
 - Monthly survey of about 60,000 households
 - Source of key indicators, including labor force participation rate and unemployment rate

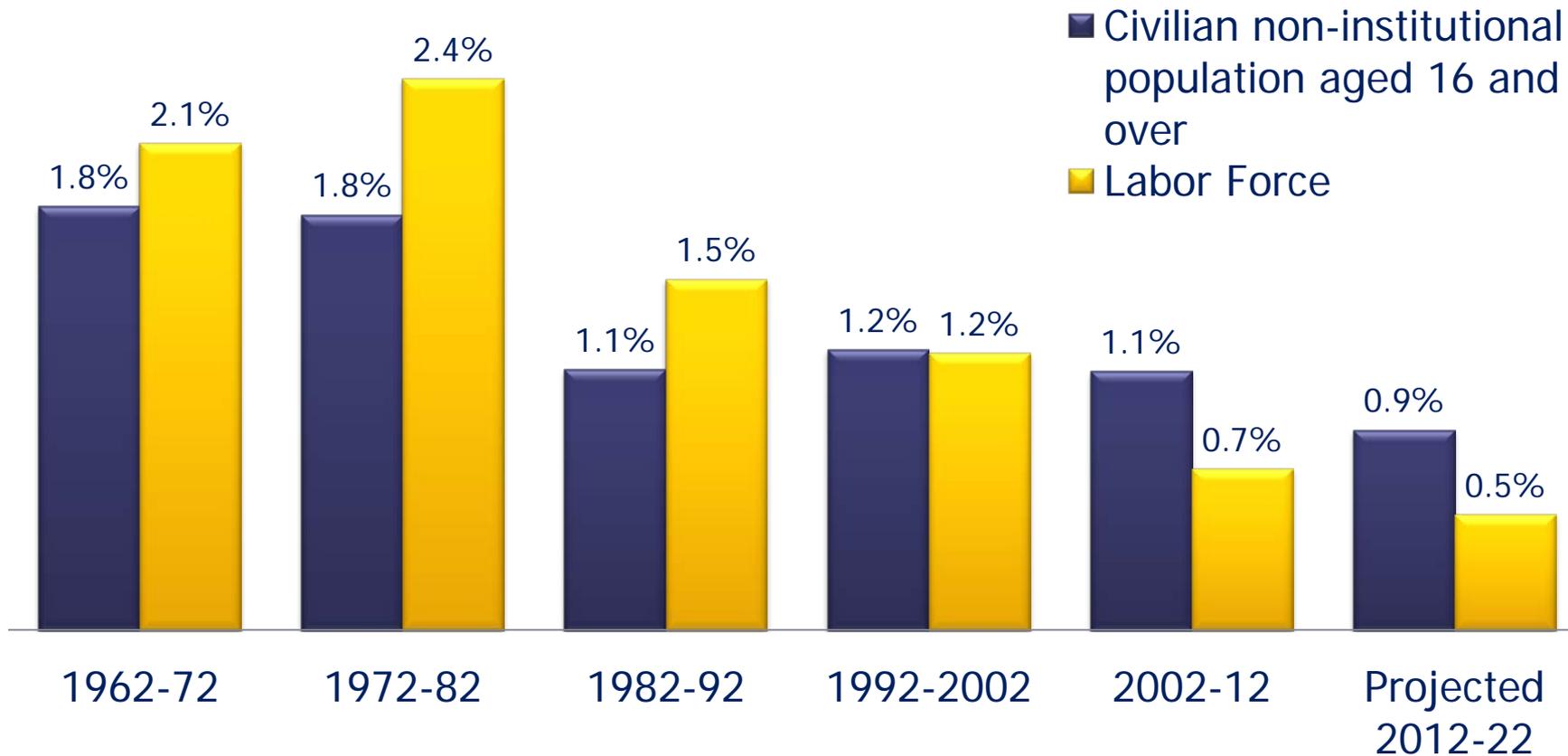
Population and labor force are growing

Millions of persons

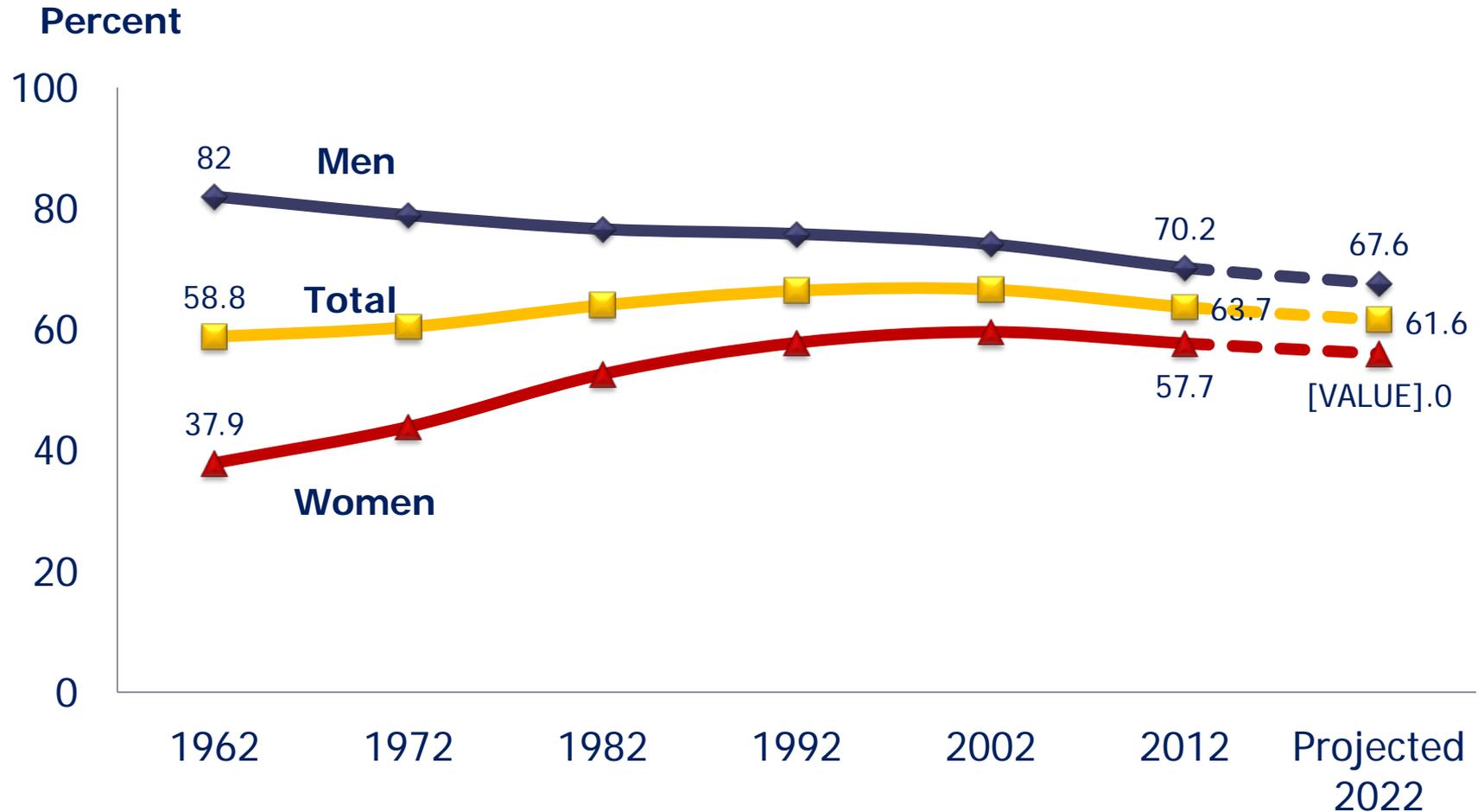


Population and labor force growth rates are declining

Annual rates of change



Labor force participation rates are declining



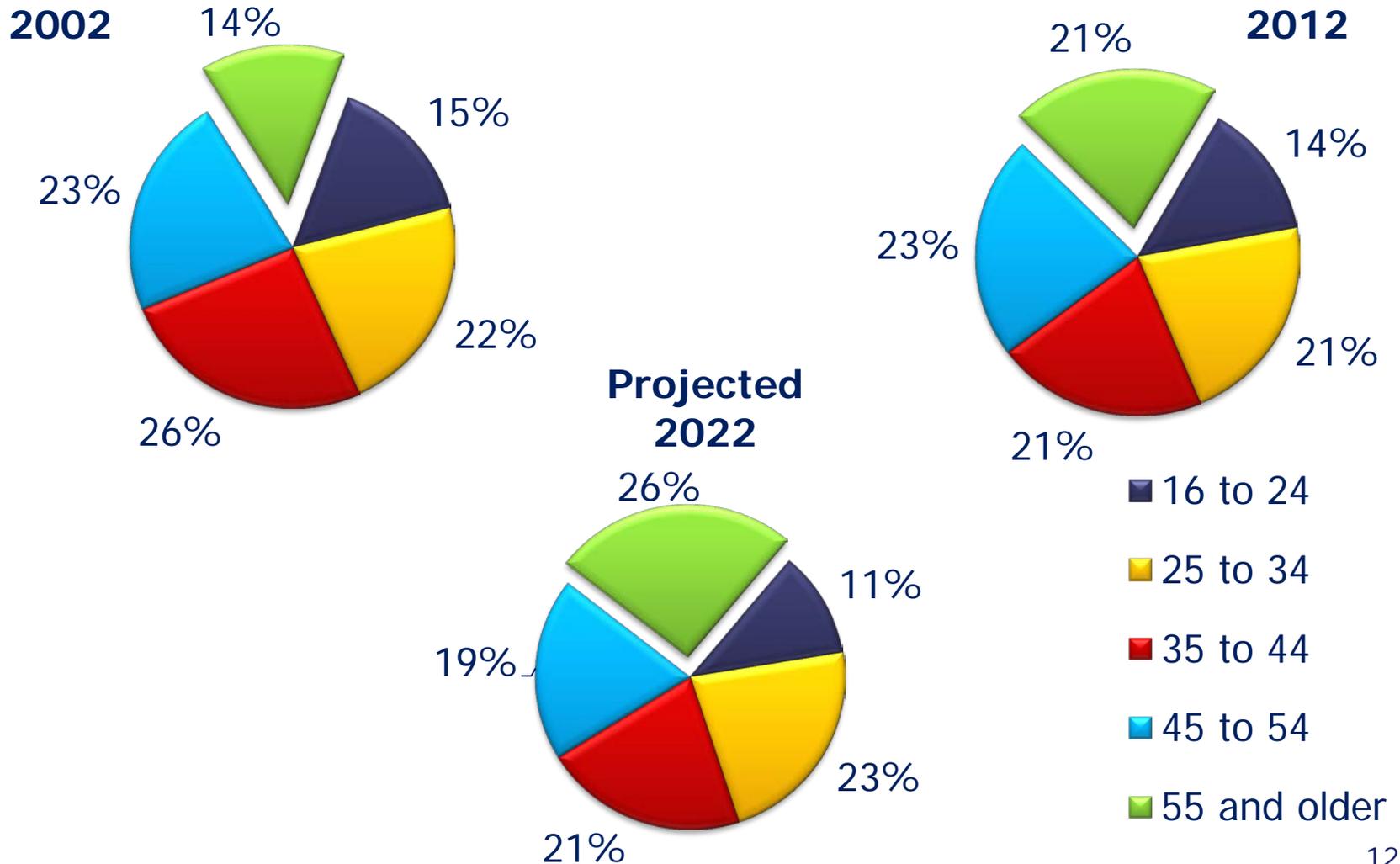
Why participation has been declining lately

■ Demographic trends

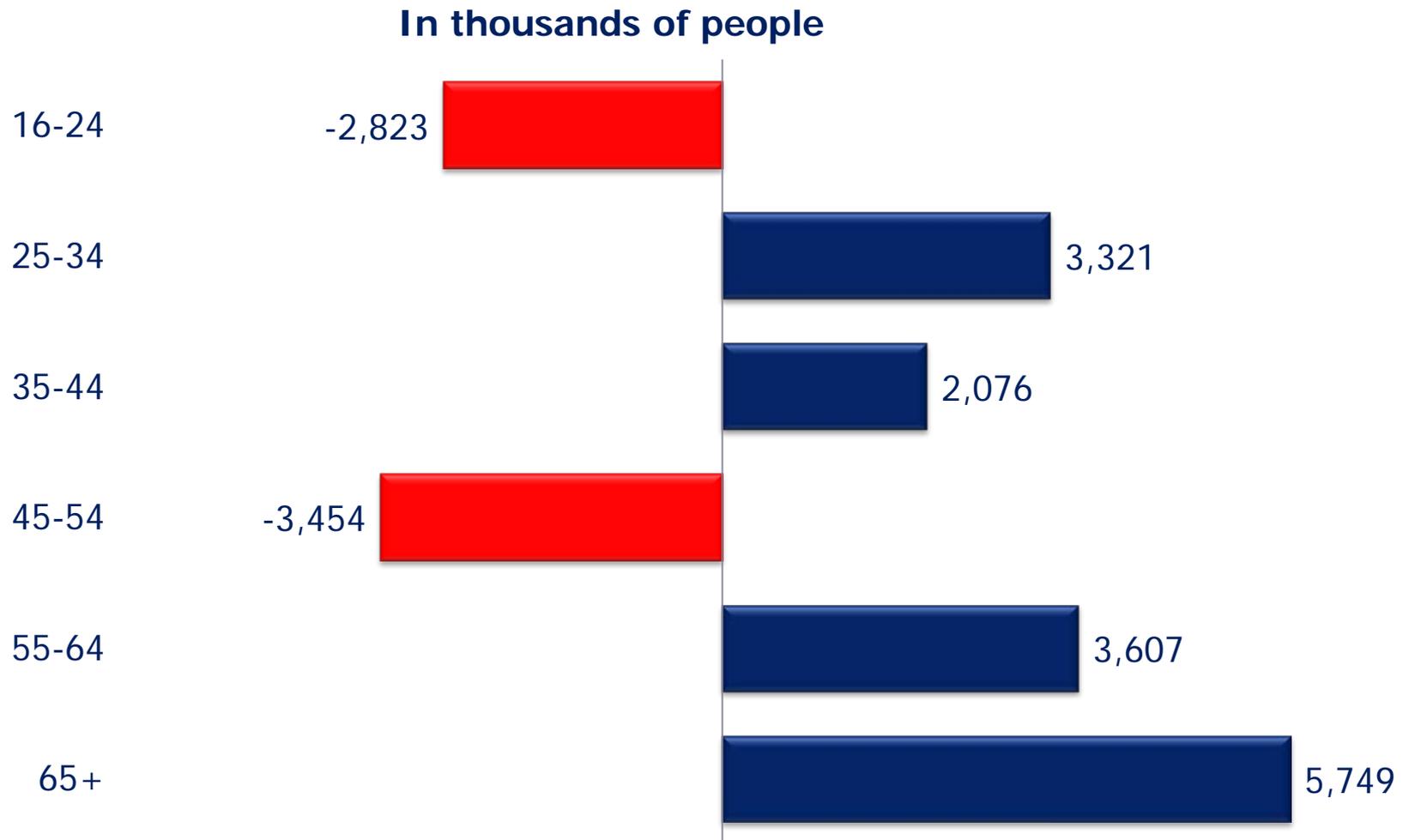
- ▶ Baby boomers: As large cohort ages into retirement, overall LFPR declines
- ▶ Women: After decades of growth, LFPR peaked in 1999 and decreased since then
- ▶ Men: LFPR declining since 1940s
- ▶ Teenagers and youth: LFPR decreasing for several decades
- ▶ Prime age: LFPR declining slightly
- ▶ 55-years-and-older: LFPR increasing since 1996

■ Lingering effects of Great Recession

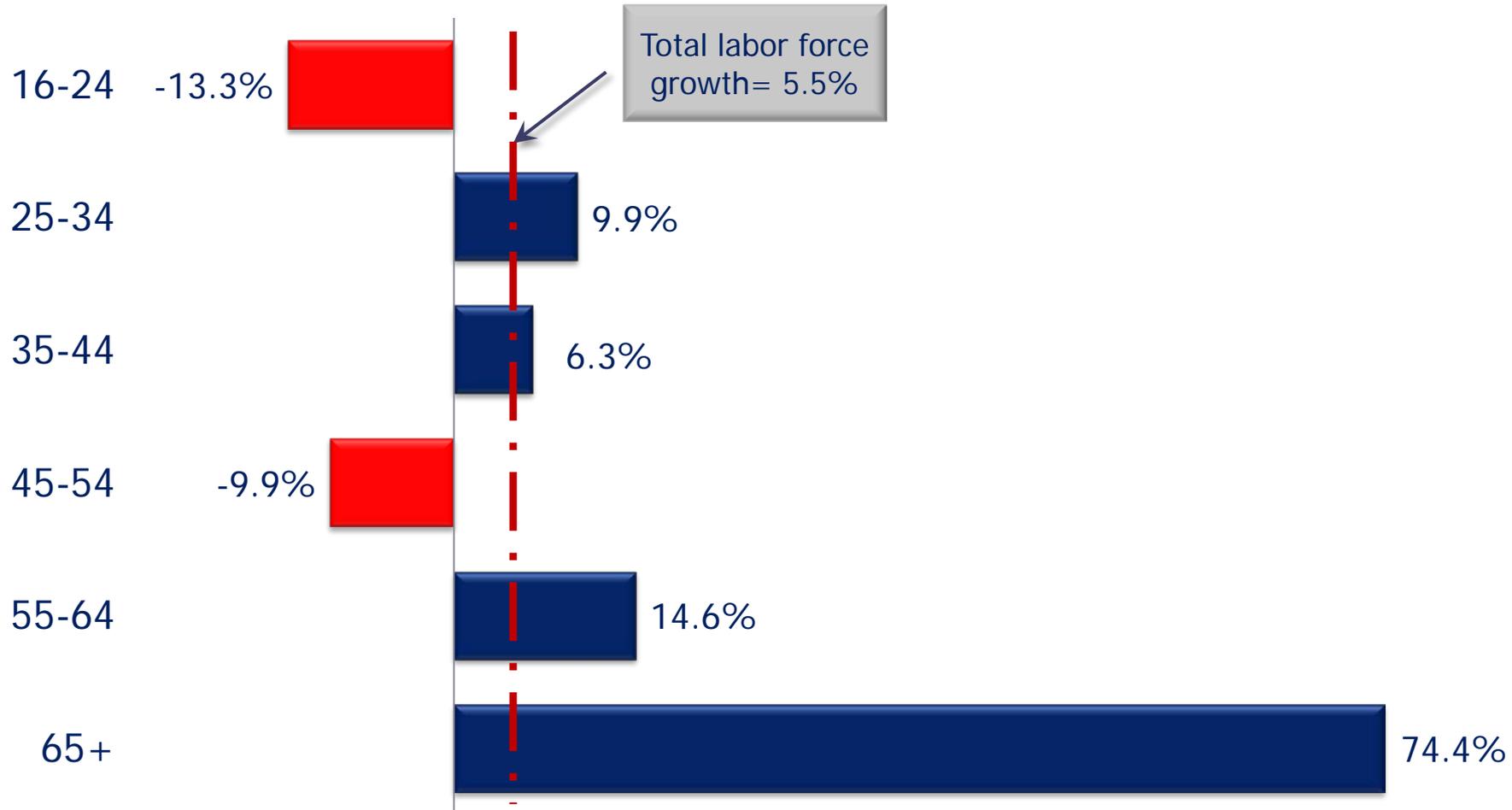
Labor force is getting older



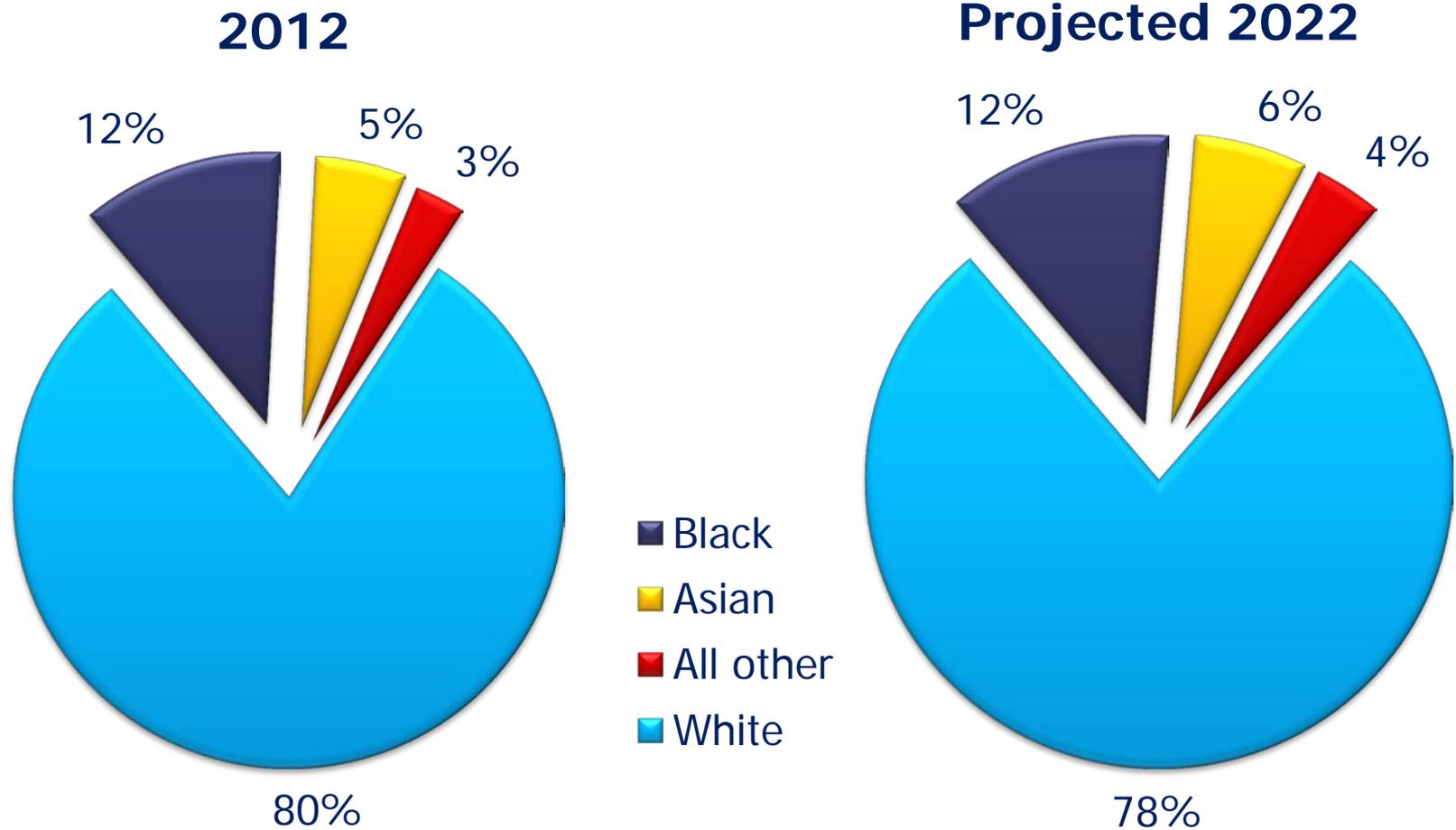
Labor force change by age group: projected 2012-22



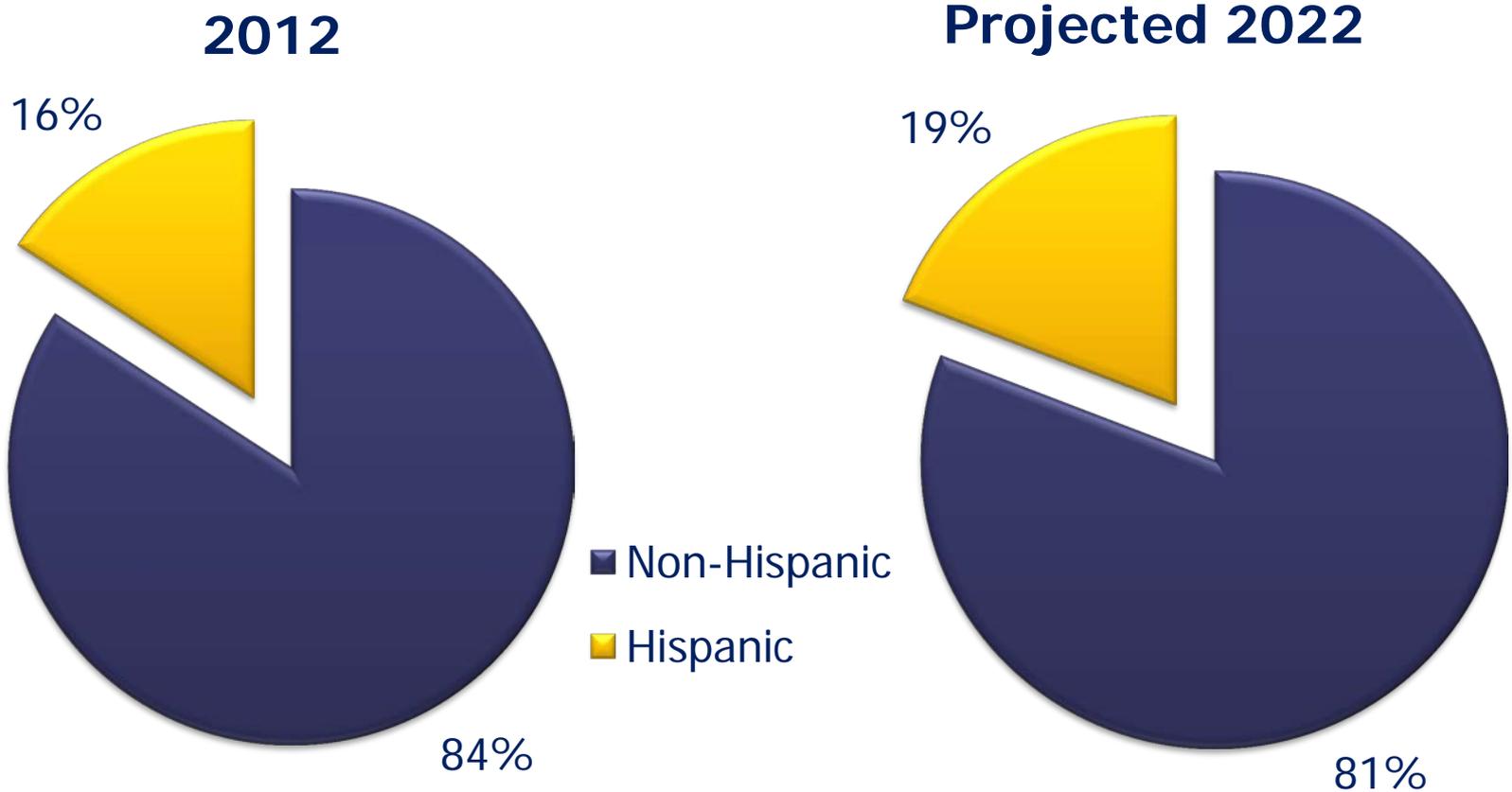
Youngest workers shrink most while oldest workers grow fastest



Labor force will be more diverse by race

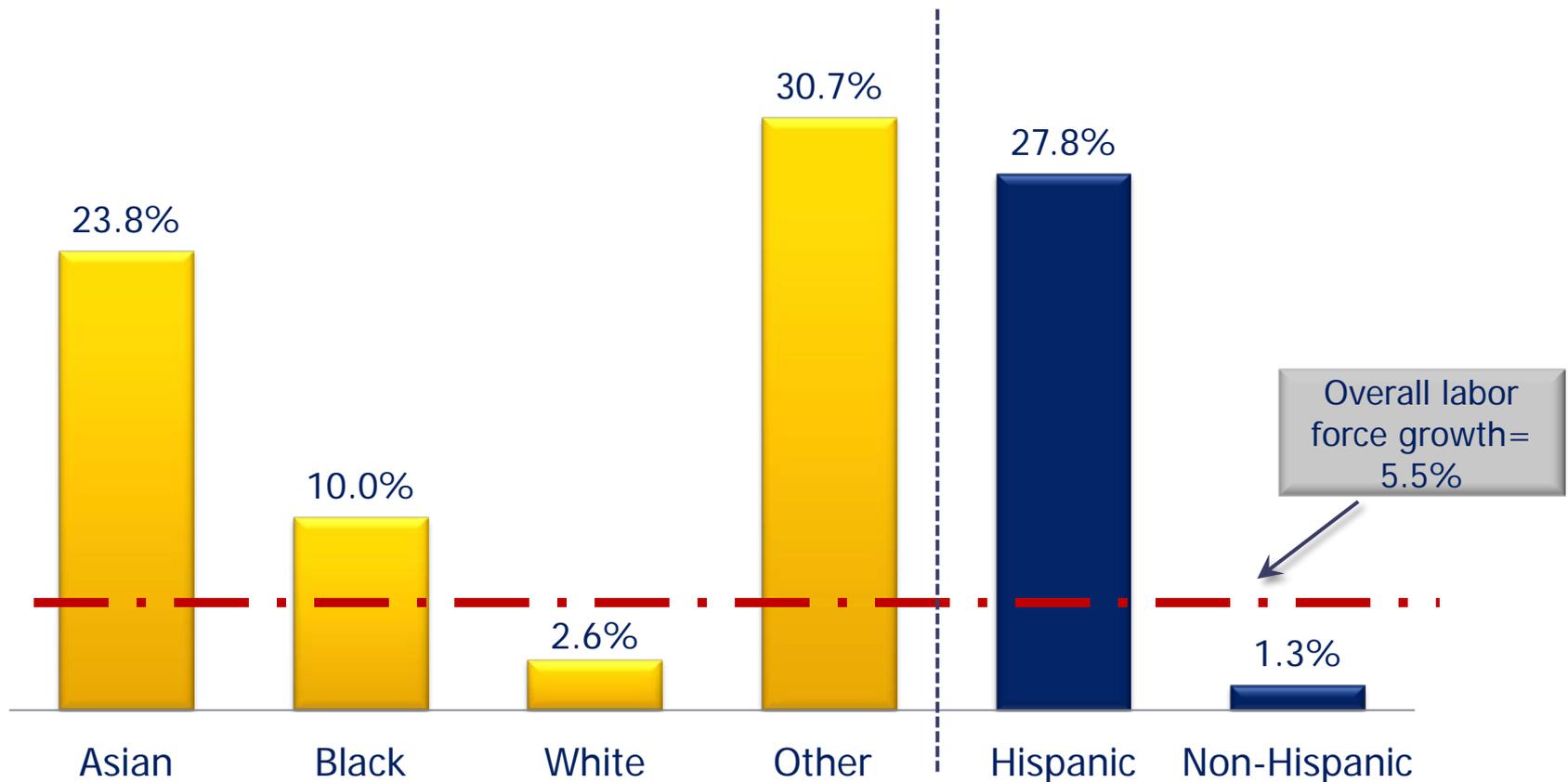


Labor force will be more Hispanic



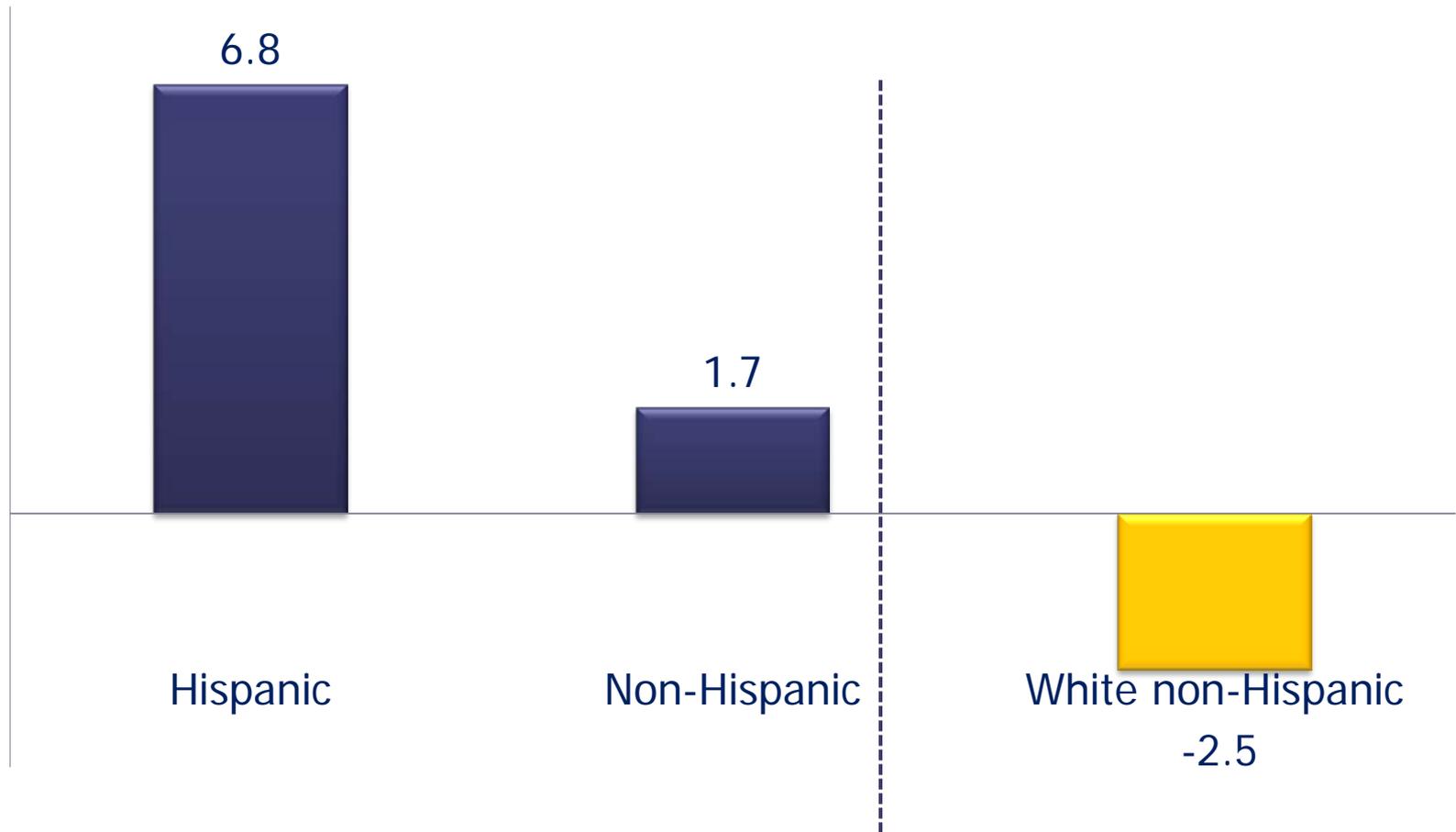
Labor force growth lowest for non-Hispanics and whites

Projected 2012-22



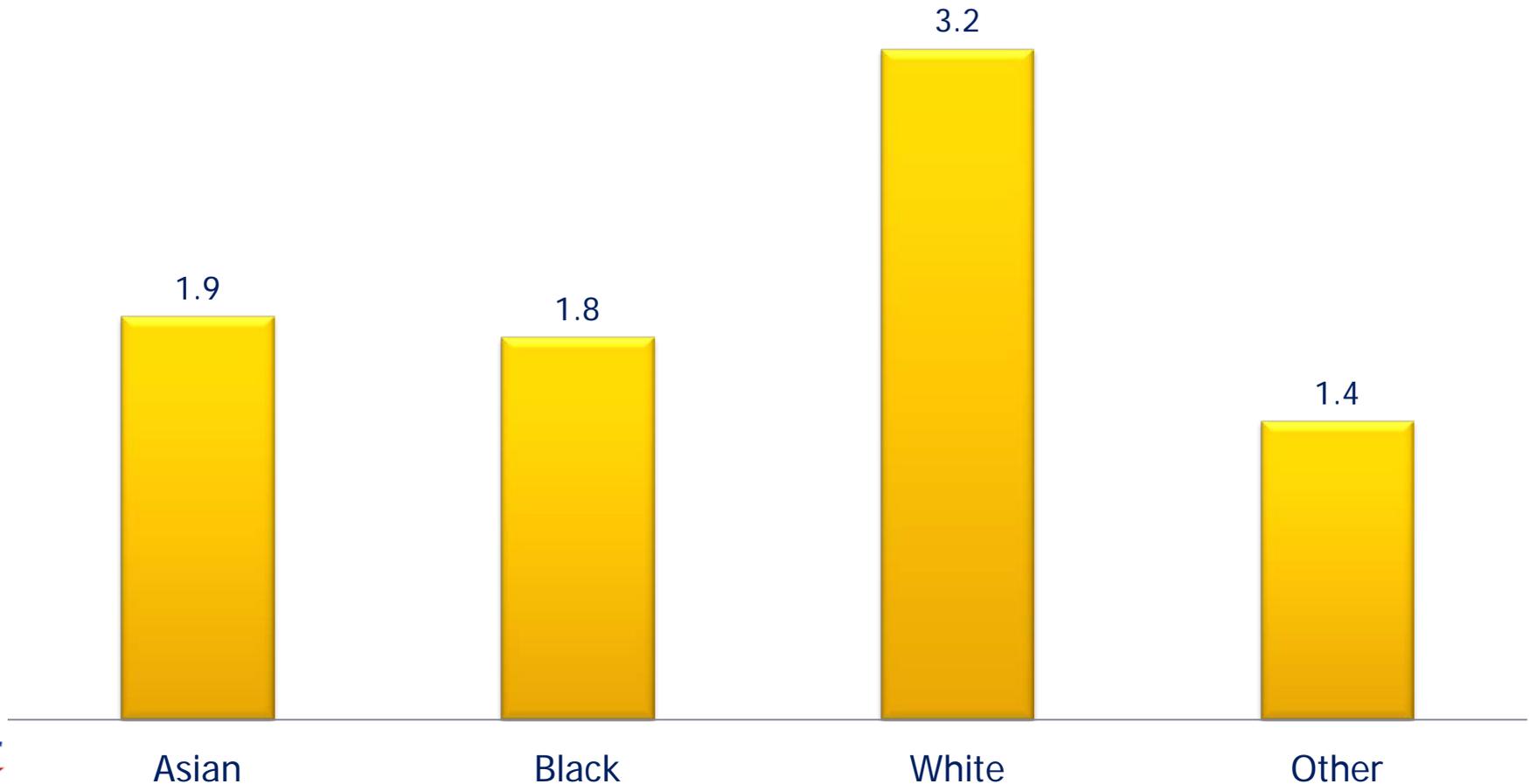
More Hispanics joining labor force than non-Hispanics

Change in millions, projected 2012-22



Majority of additions to labor force will be non-white

Change in millions, projected 2012-22



Period of demographic change ahead

- What we project for U.S. economy
 - ▶ Slowing population and labor force growth
 - ▶ Declining participation rates
 - ▶ Retirement of baby boomers
 - ▶ Increasing diversity of U.S. workforce

Risks to projections

- BLS projections rely on
 - ▶ Understanding history
 - ▶ Using understanding to project the future
- We do not factor in “unknowns”
 - ▶ Unanticipated disruptions--e.g., new wars and natural disasters
 - ▶ Changes in current laws and policies regarding
 - Social Security and Medicare
 - immigration

Summary

- Labor force of the future (2022) will be
 - ▶ Older
 - ▶ More racially and ethnically diverse
- Labor force will grow more slowly
 - ▶ Baby boomers retire
 - ▶ Labor force participation rates decline
- BLS labor force, industry and occupational employment projections can help guide training choices
 - ▶ Visit www.bls.gov

Projecting Diversity:

The Methods, Results, Assumptions and Limitations of the U.S. Census Bureau's Population Projections

Howard Hogan, Ph.D.

Chief Demographer
US Census Bureau

Prepared for the
2015 U.S. Department of Transportation
Civil Rights Virtual Symposium
**Future Demographic Changes and
Their Impact**

THE VIEWS EXPRESSED ARE THOSE OF THE AUTHOR AND DO NOT NECESSARILY REFLECT THOSE
OF THE US CENSUS BUREAU

Outline

- Introduction
- 2014 Projections: Results
- Demographic Assumptions
- Issues in projecting diversity
- Learning more

Outline

- **Introduction**
- 2014 Projections: Results
- Demographic Assumptions
- Issues in projecting diversity
- Learning more

Understanding the OMB Race and Ethnic Standards

The U.S. Office of Management and Budget (OMB) is responsible for issuing standards for the classification of federal data on race and ethnicity.

OMB's standards include:

- 2 minimum categories for data on ethnicity
- 5 minimum categories for data on race

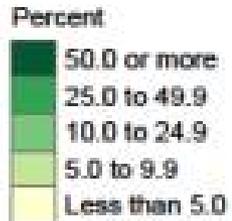
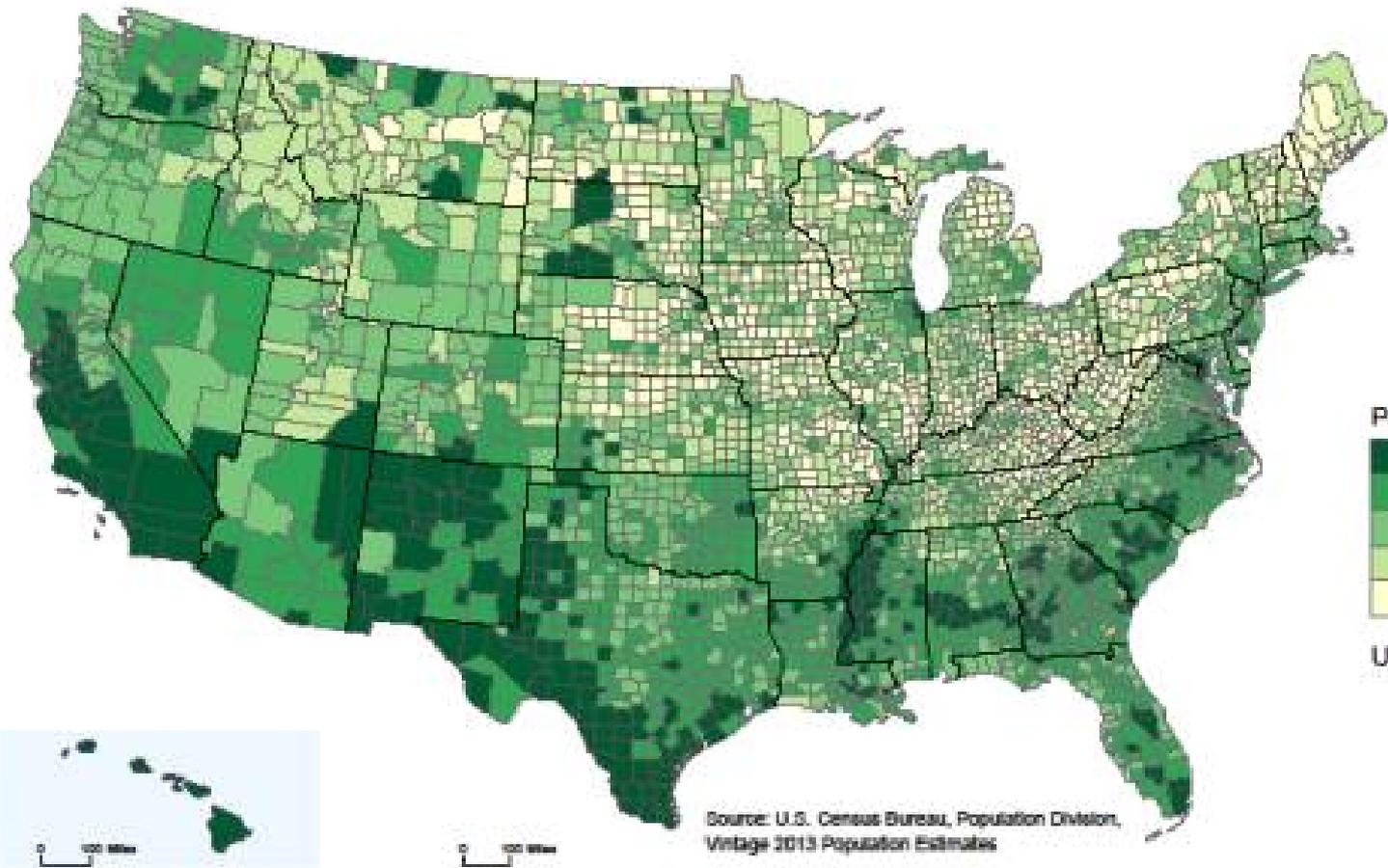
OMB Directive No. 15 first issued in 1977 & revised in 1997

Modifying Responses of "Some Other Race"

The Census Bureau developed a procedure to assign an OMB race to those who reported "Some other race" because of needs to have data comparable with the reporting categories used by state and local agencies and for compiling other administrative data used in producing population estimates and projections.



Minority Population as a Percent of County Population: 2013



U.S. percent: 37.4

Source: U.S. Census Bureau, Population Division,
Vintage 2013 Population Estimates

Ten Largest “Minority/Majority” Counties

2013 Population Estimates Population in Millions

	% “Minority”
Los Angeles	73
Cook	57
Harris	68
San Diego	53
Orange	57
Miami-Dade	85
Kings	64
Dallas	68
Queens	73
Riverside	62

Outline

- Introduction
- **2014 Projections: Results**
- Demographic Assumptions
- Issues in projecting diversity
- Learning more

Projection Groups

5 race groups "Alone"

5 race groups "Alone or in
combination"

Two or more races

Each by:

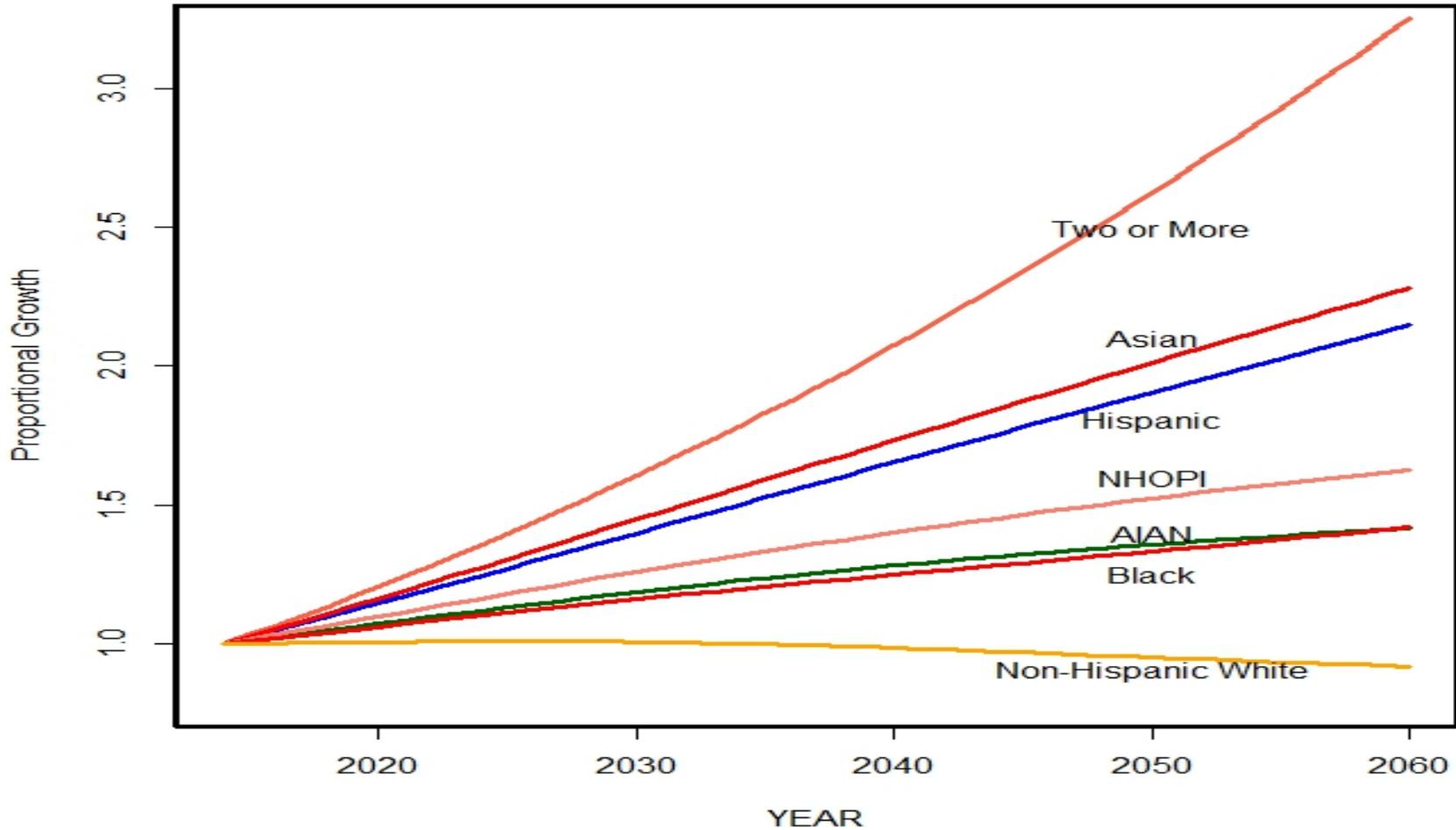
Hispanic / Non-Hispanic

Available at [Census.gov](https://www.census.gov)

Population Growth in Millions

	2014	2044	% Growth
TOTAL	319	388	22
White	247	278	12
Not Hispanic	198	193	-3
Black	42	54	28
AIAN	4	5	31
Asian	17	32	85
NHOPI	1	1	45
Two or more	8	18	128
Hispanic	55	97	76

Proportional Growth



Percent Distribution by Group

	Percentage		Change
Total	100	100	
White	77	72	-6
Not Hispanic	62	50	-12
Black	13	14	1
AIAN	1	1	0
Asian	5	8	3
NHOPI	0	0	0
Two or More races	3	5	2
Hispanic	17	25	8

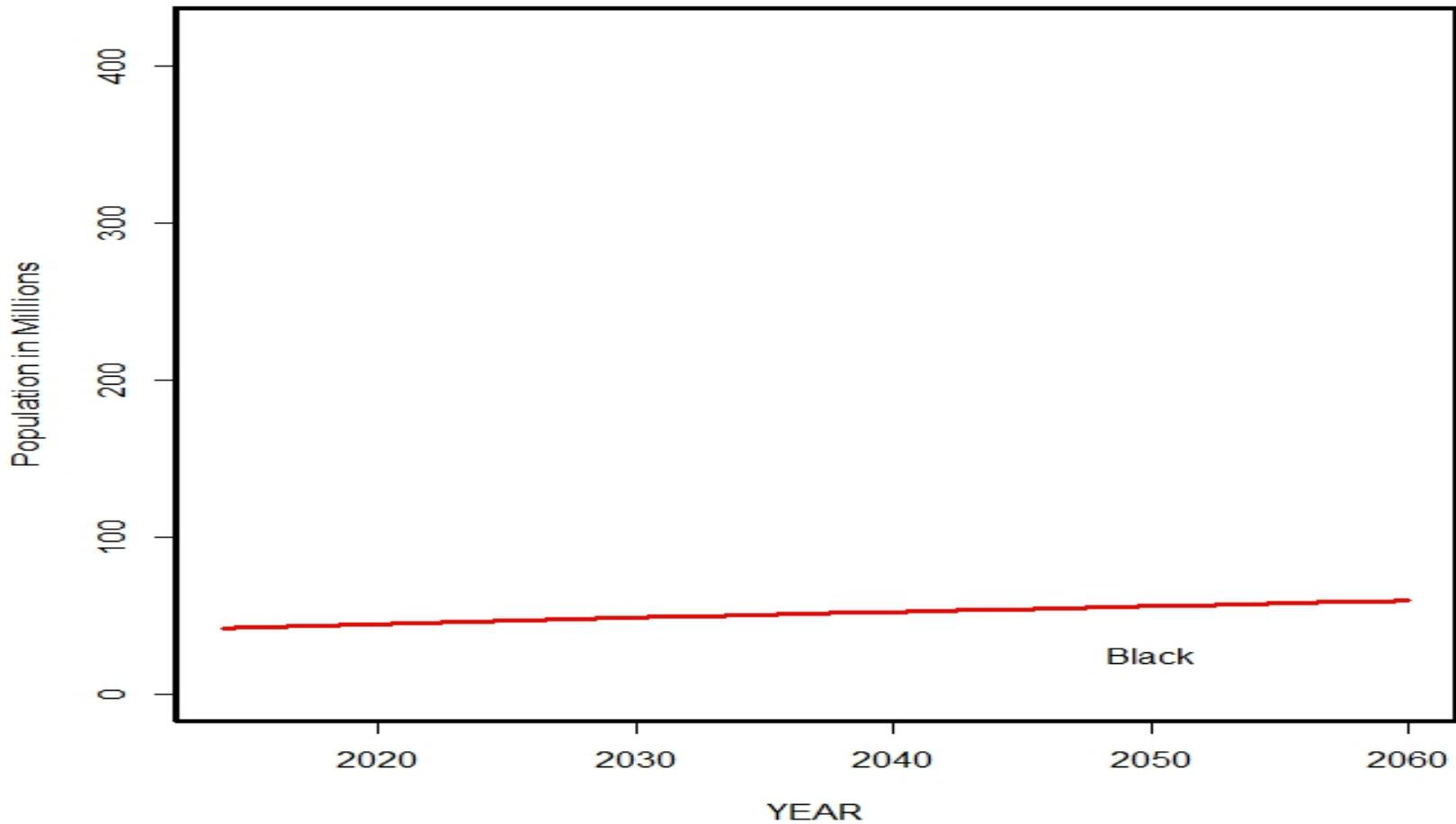
Five Mutually Exclusive Categories

- Black
- Asian, NHOPI & AIAN
- Two or more races
- White Hispanic
- White non-Hispanic

Used here only for purposes of discussion.

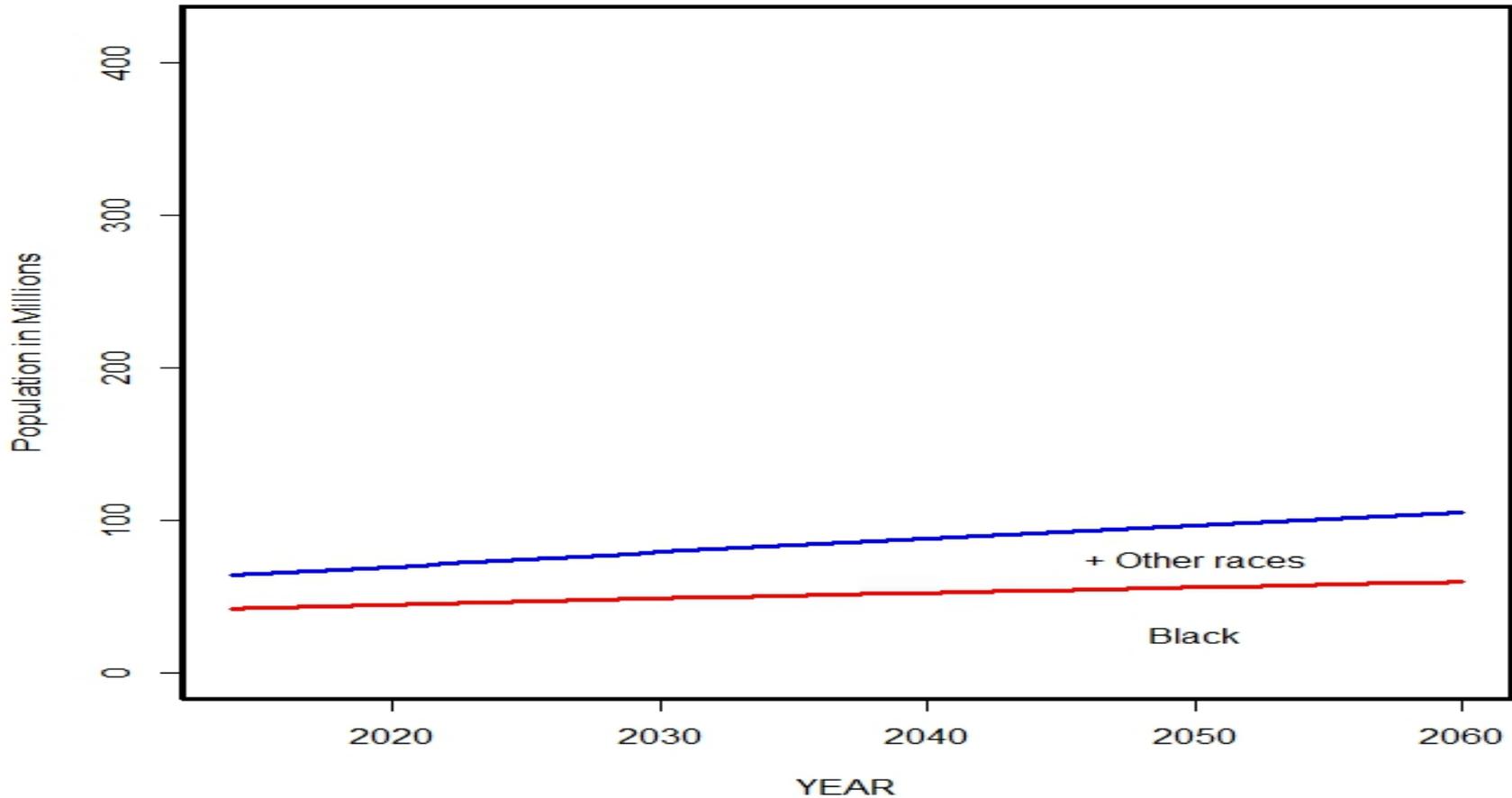
Total Population

Millions: Black



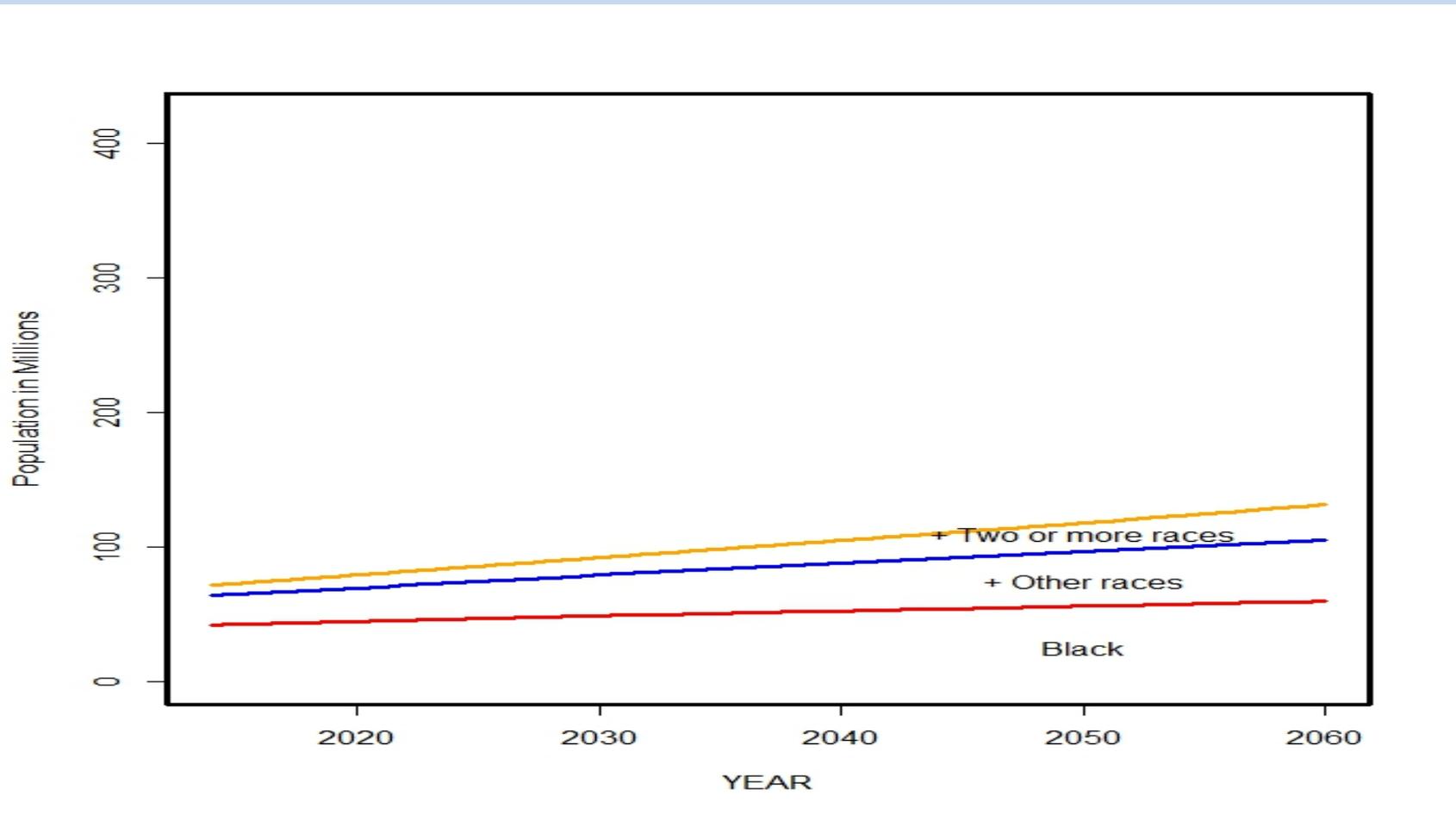
Total Population

Millions plus Asian, NHOPI & AIAN



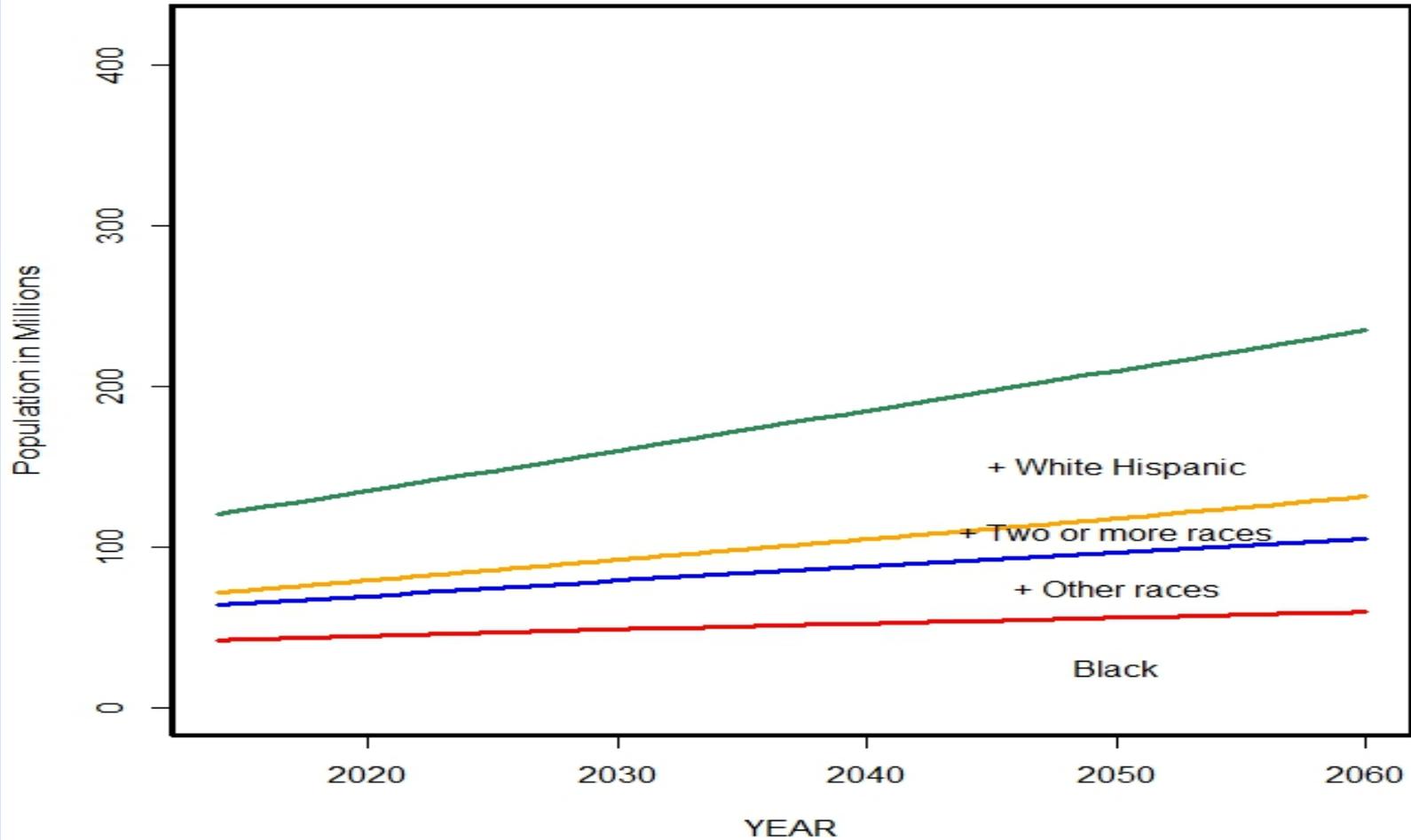
Total Population

Millions plus Two or More Races



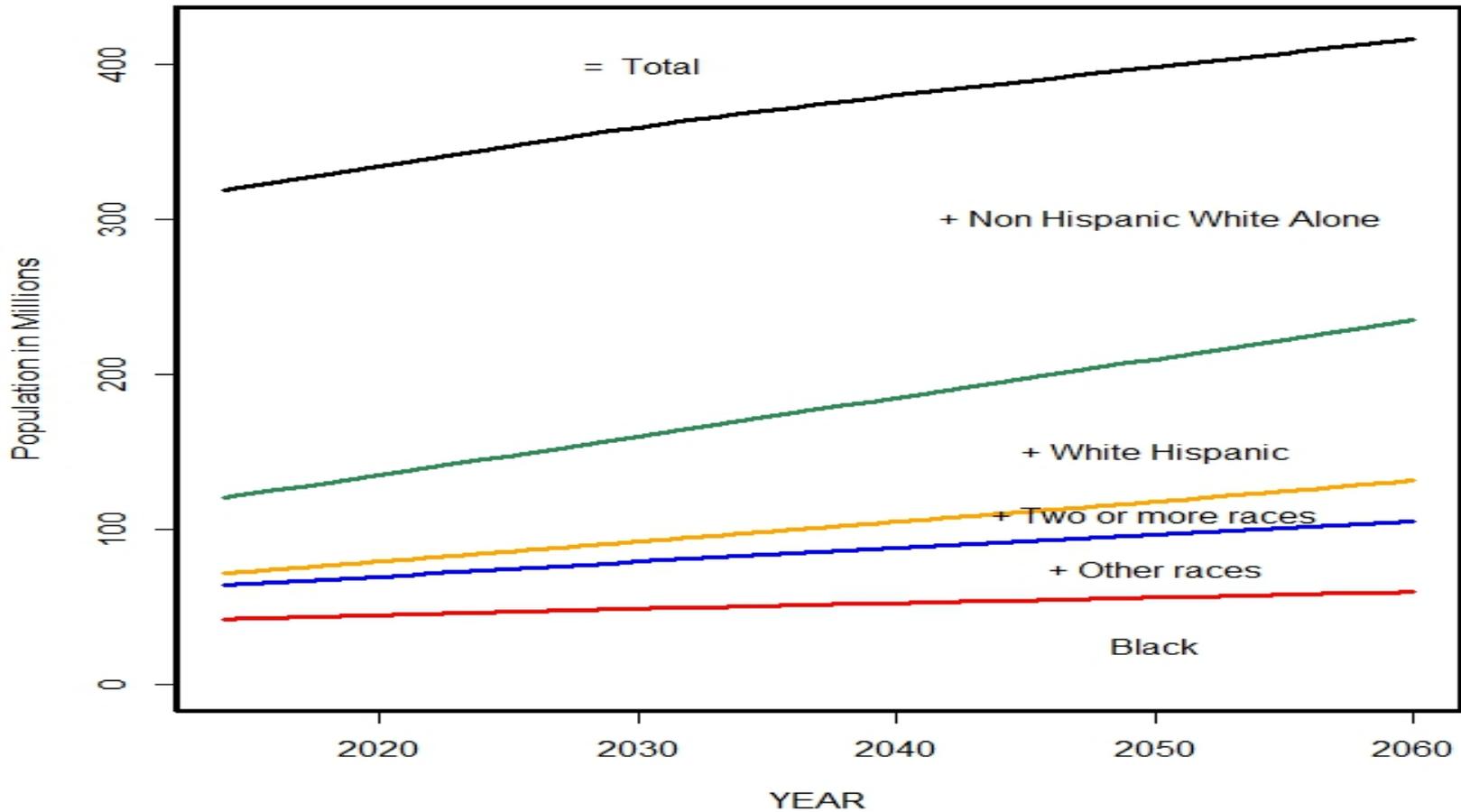
Total Population

Millions plus White Hispanic

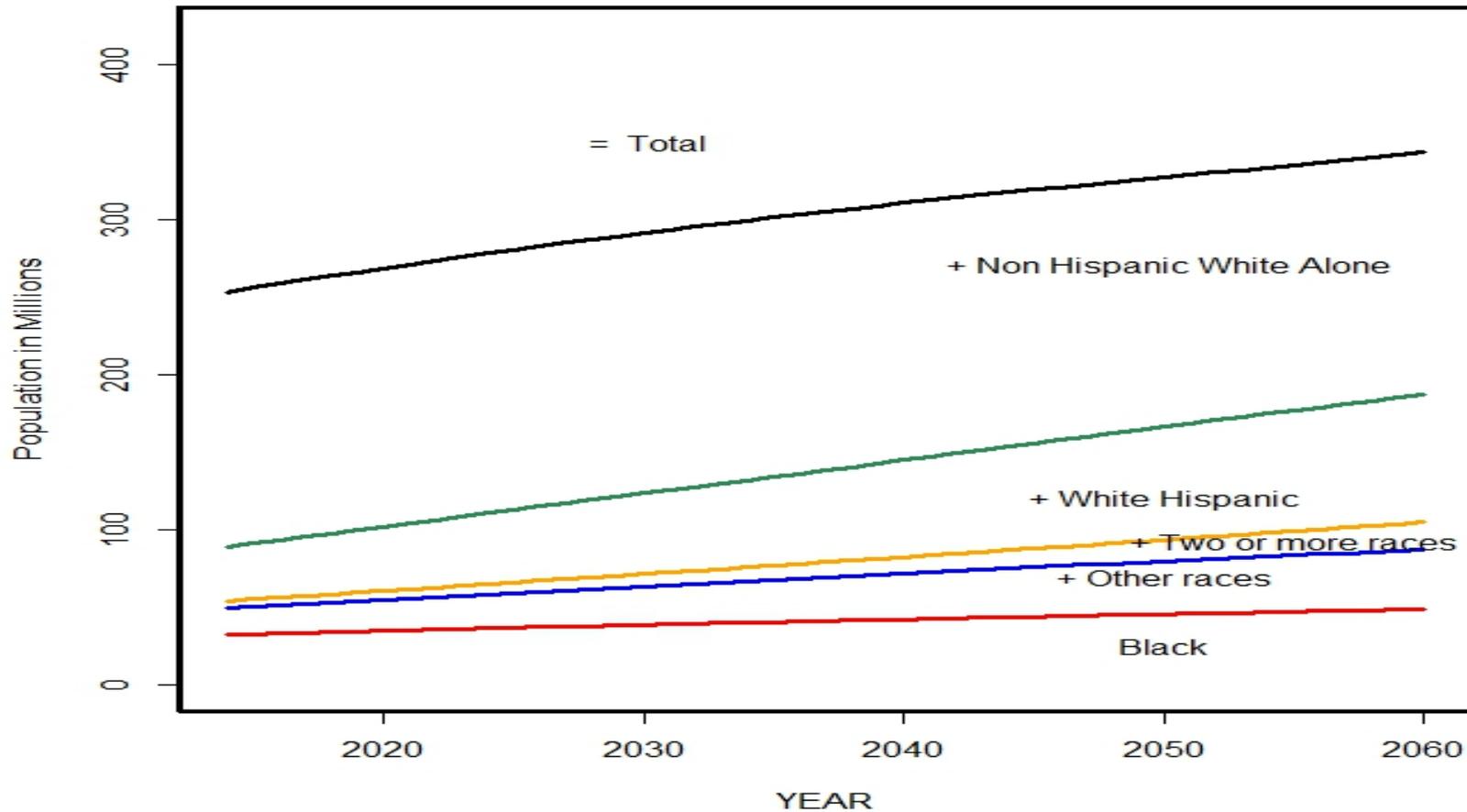


Total Population

Millions Total

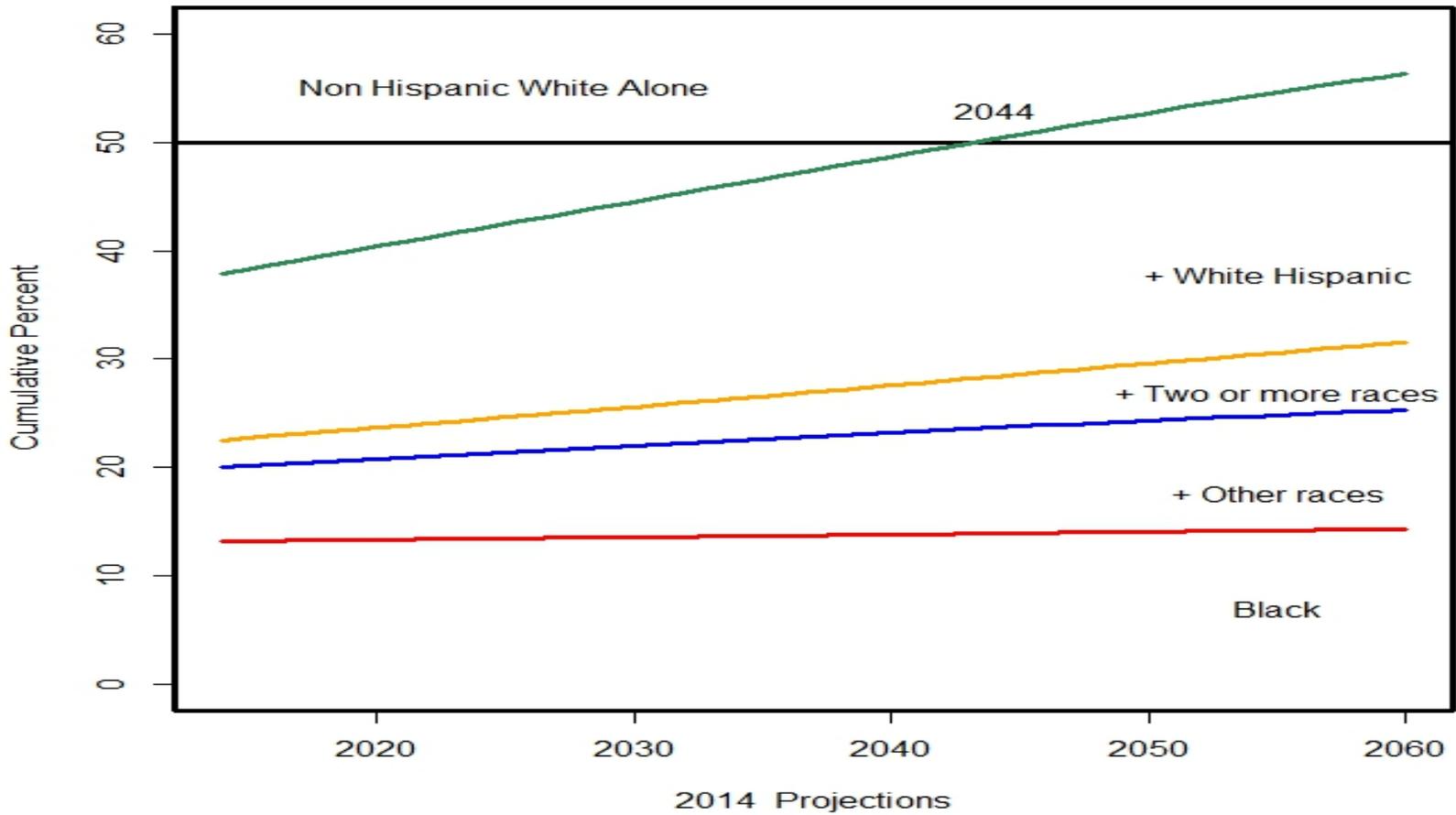


Population 16 and Over by Group

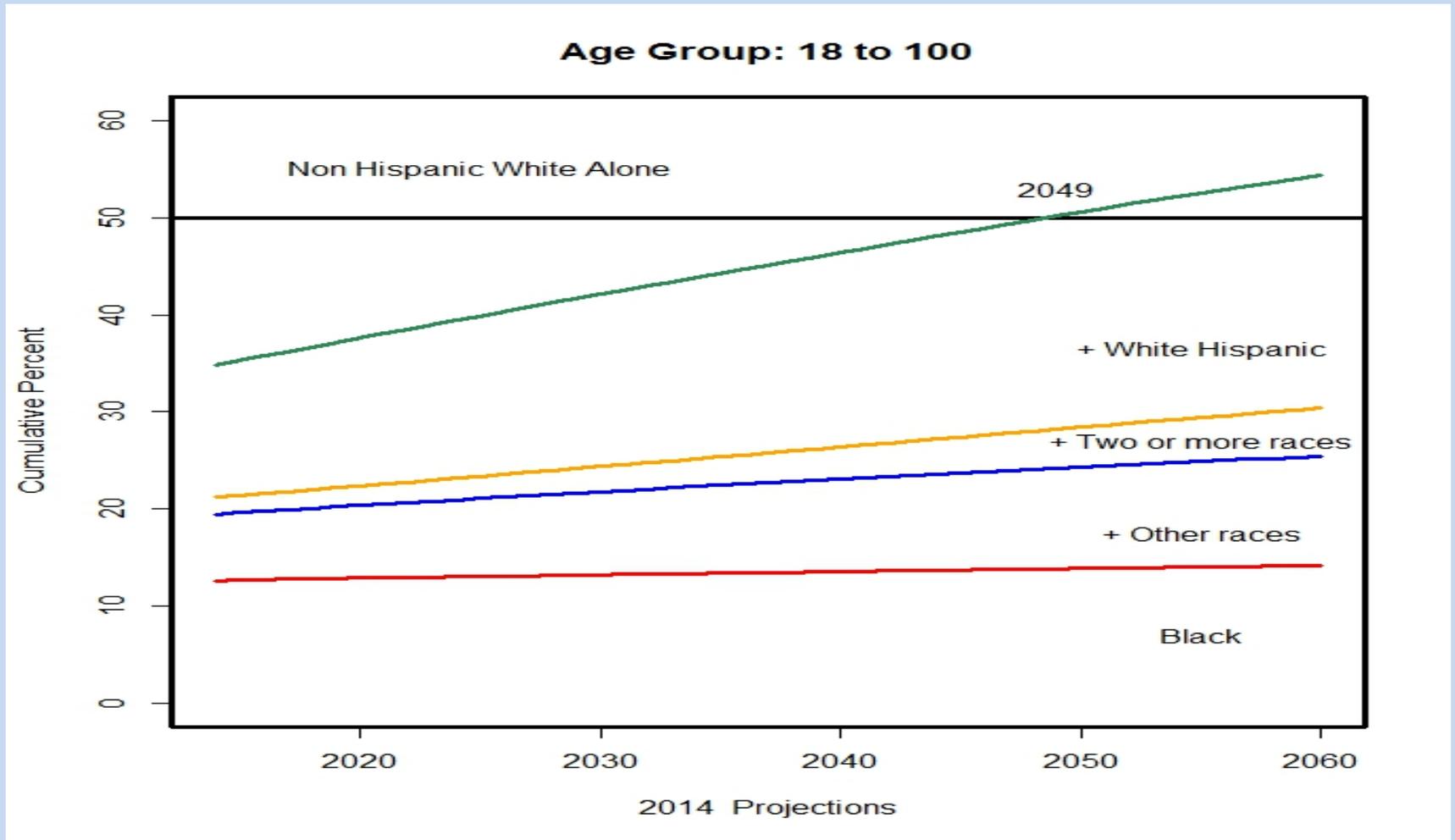


Total Population Percent

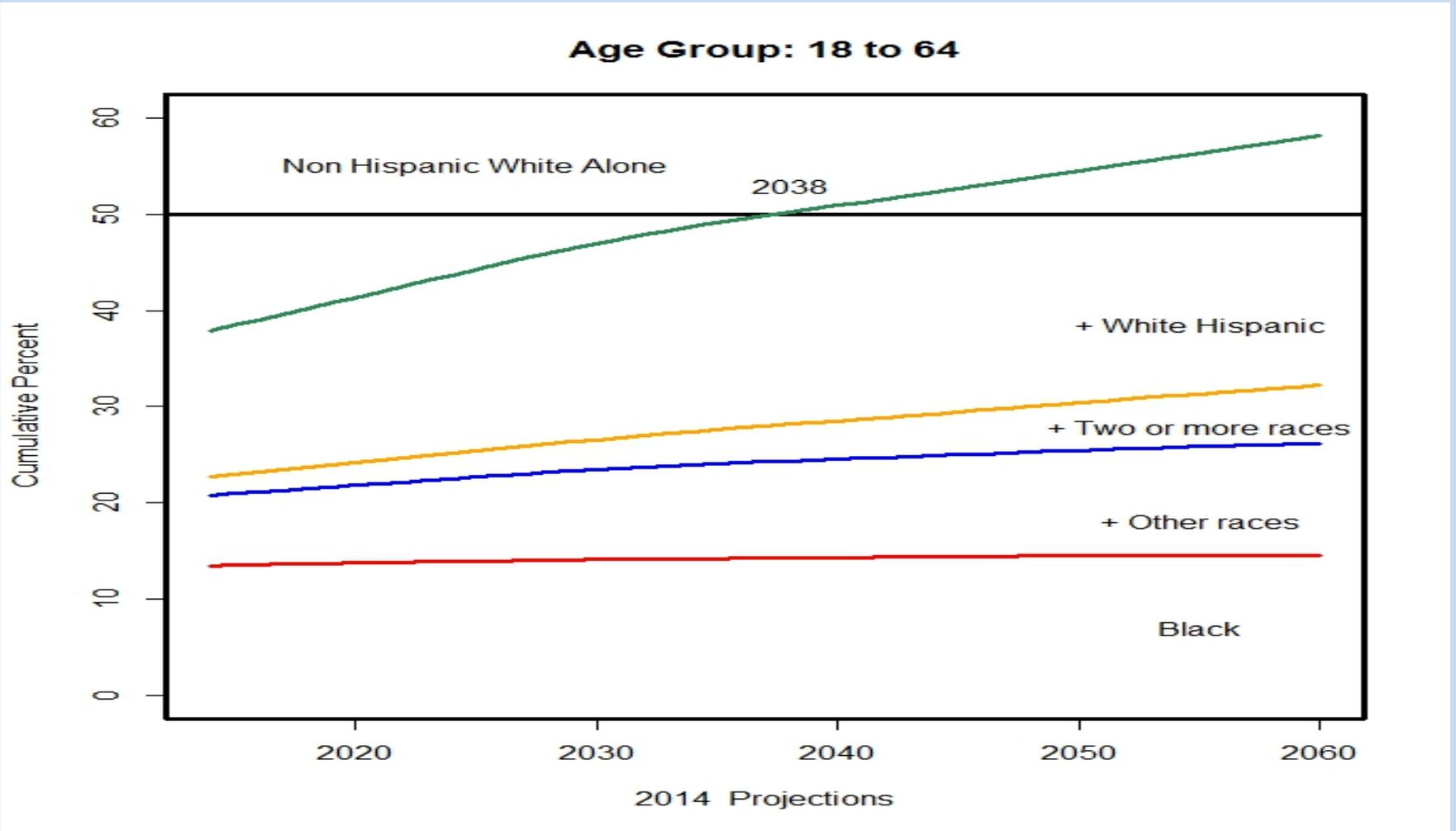
Age Group: 0 to 100



Voting Age Population Percent

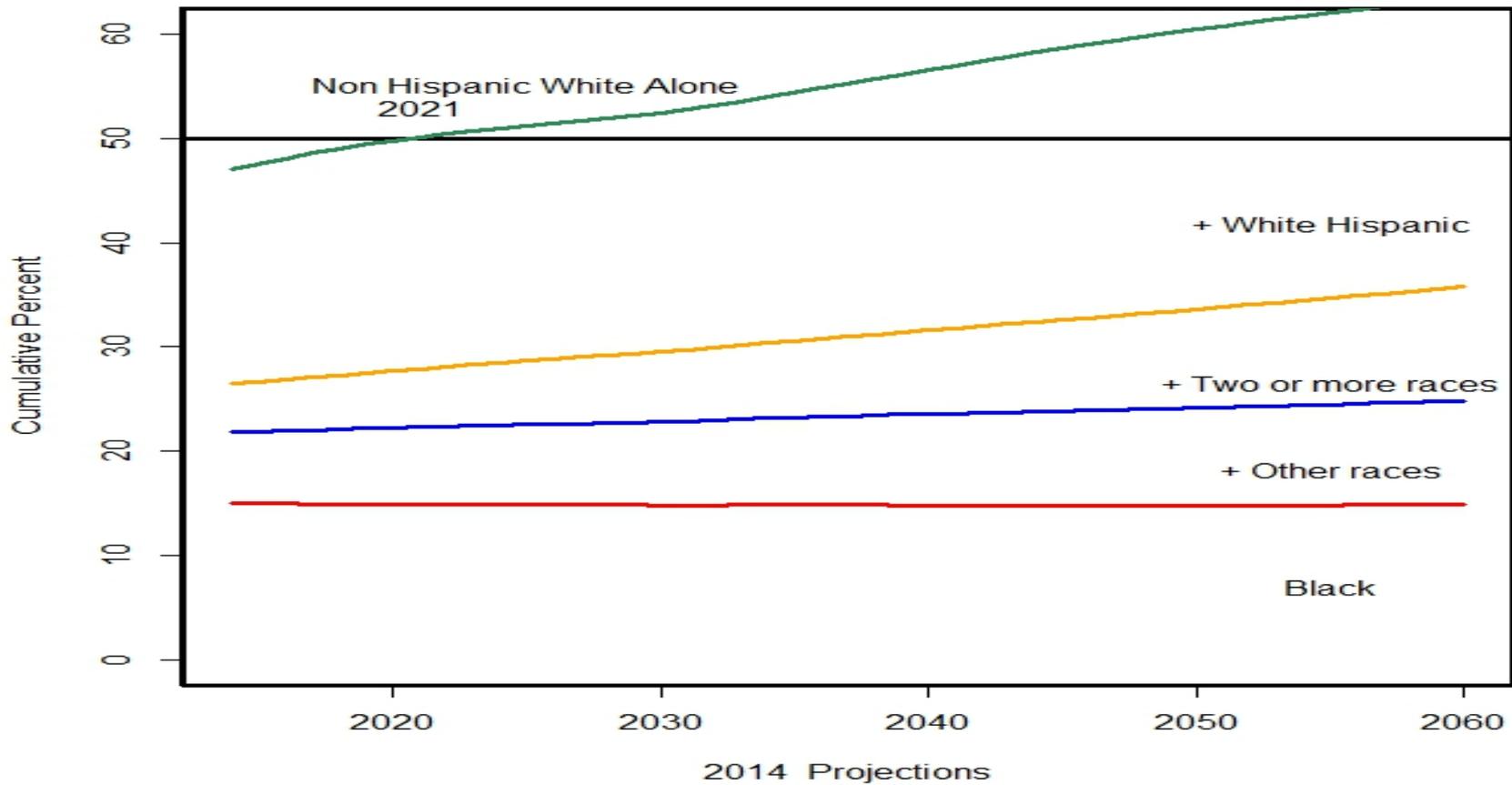


Prime Working Age Population Percent



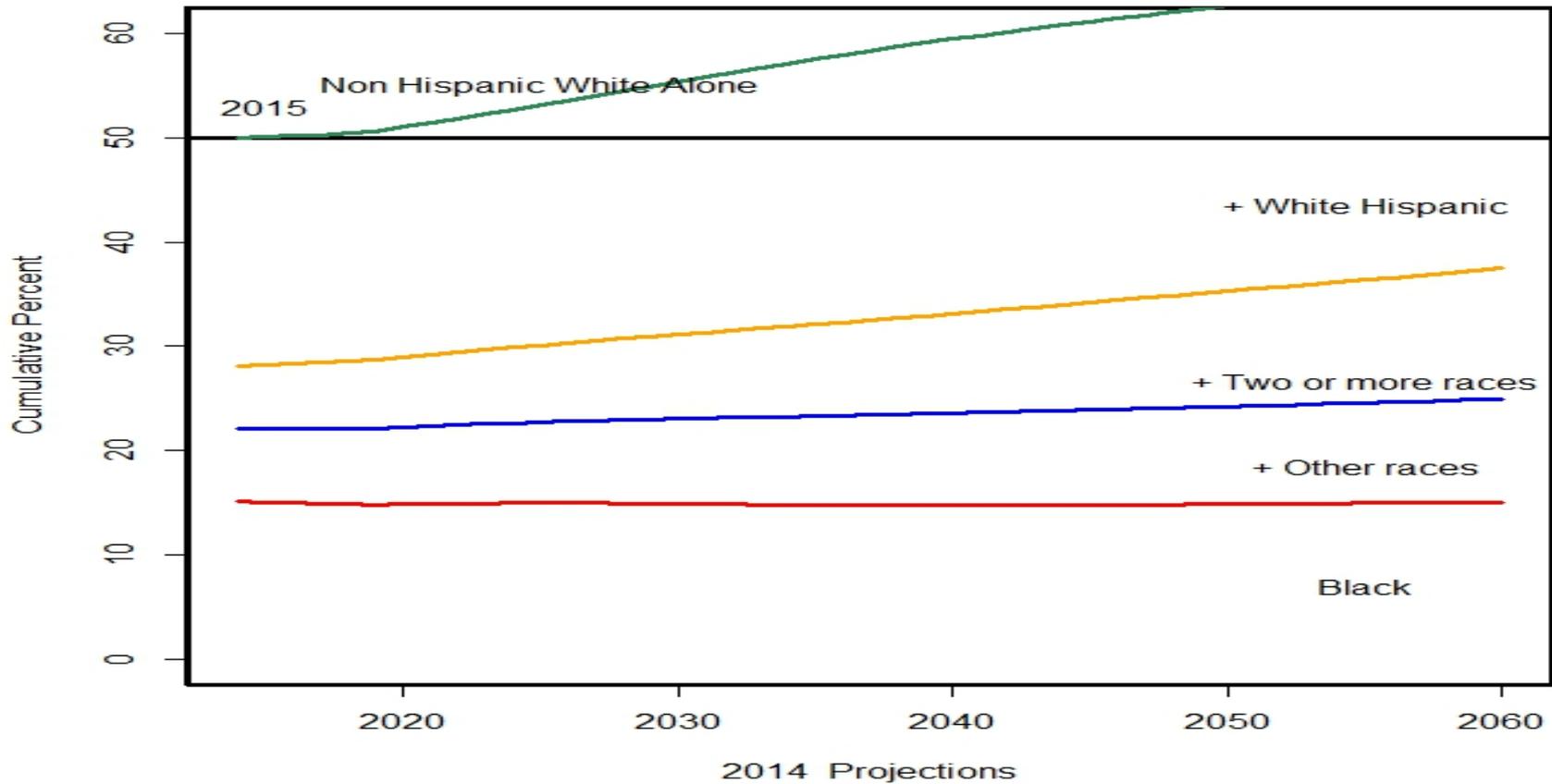
School Age Population Percent

Age Group: 6 to 17

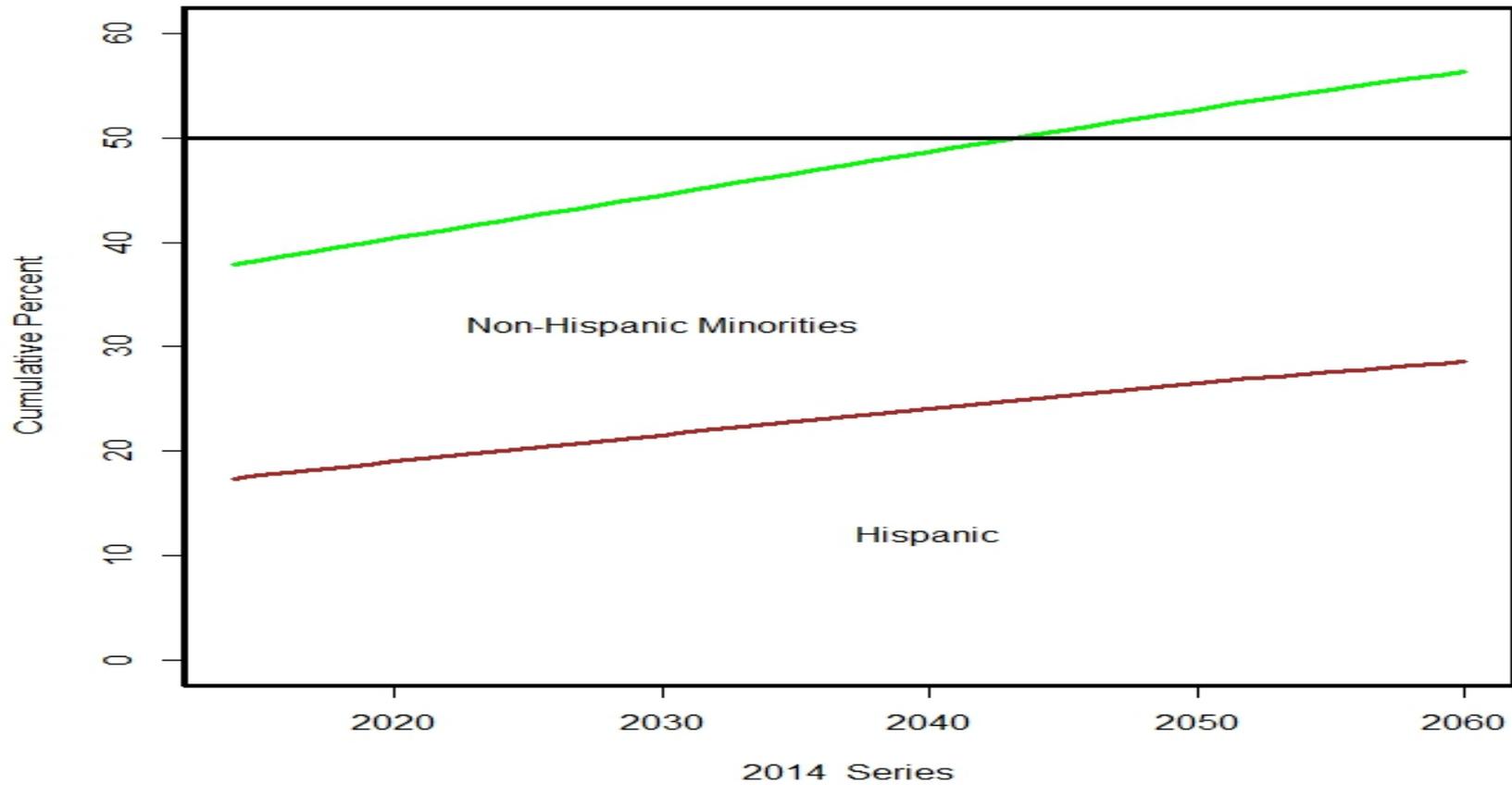


Pre-school Population Percent

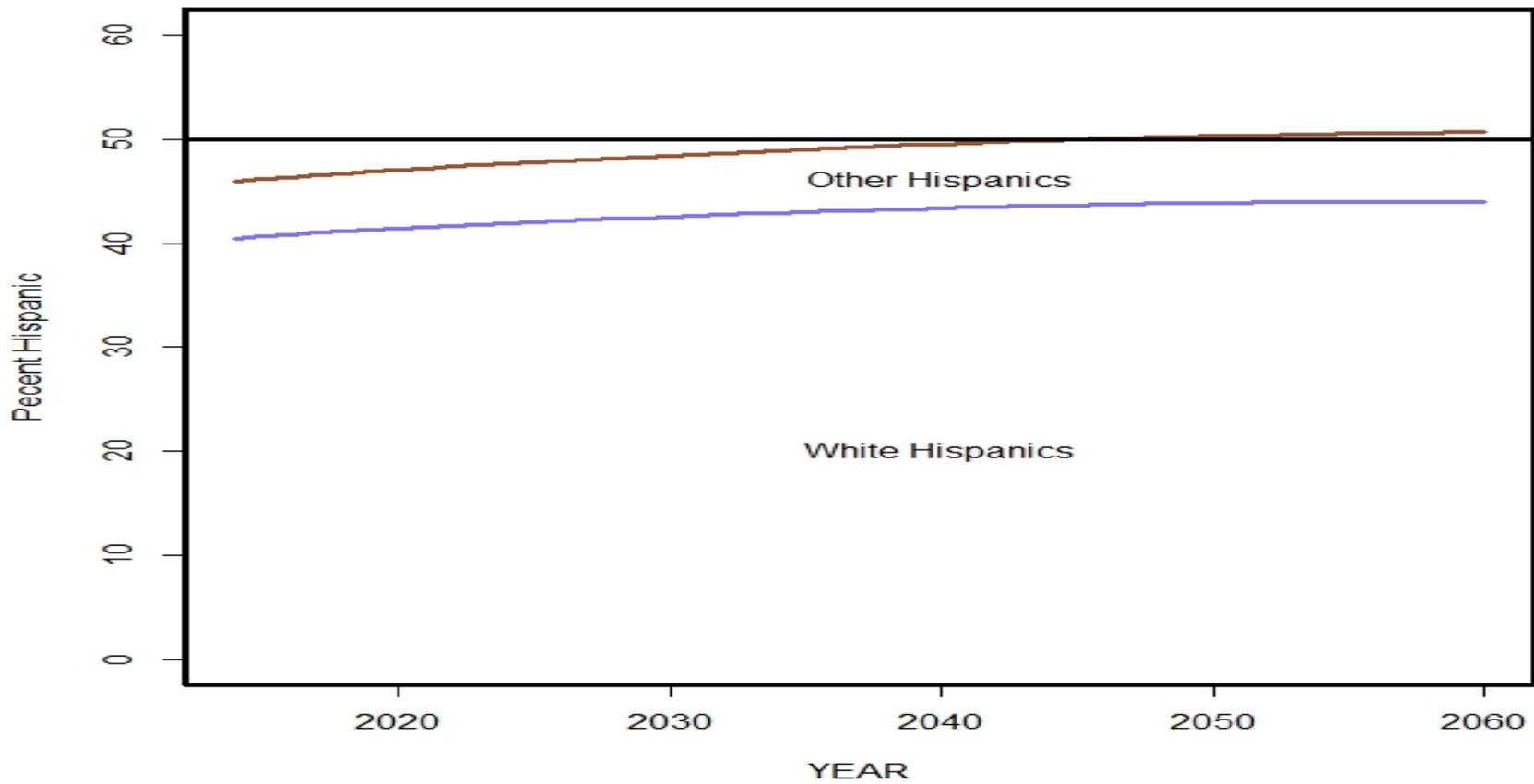
Age Group: 0 to 5



Hispanic Population Percent of Total



Hispanic Population Percent of “Minority”



Outline

- Introduction
- 2014 Projections: Results
- **Demographic Assumptions**
- Issues in projecting diversity
- Learning more

Demographic Assumptions

Pop(t) =

Pop(0) – Deaths + Births

– Out-movers + In-movers

Population = Survivors

+ Births

+ Net-native immigration

+ Net-foreign immigration

Mortality Assumptions

Age-specific death rates decreases slowly

For most ages, high confidence of accuracy, barring major war or epidemic.

Issues mainly concern older ages

Fertility Assumptions

Age specific rates decreases slowly

Reasonable confidence based on trends throughout the developed world.

Can be influenced by changes in economic and social conditions.

Net Native-born Migration Assumptions

Small component

Close to zero in long run

Some net movement expected from
Puerto Rico and other territories.

Net Foreign Born Immigration

Assumptions

Based on the population
of sending regions.

Expected to grow as sending
populations grow.

Very hard to predict levels and origins

Historically subject to large
& unexpected surges.

“Cross over Date” from Recent Projections

- 2008 Series
 - Low 2045
 - High 2040
 - “Constant” 2050
- 2012 Series
 - Low 2045
 - High 2041
 - “Constant” 2046

Outline

- Introduction
- 2014 Projections: Results
- Demographic Assumptions
- **Issues in projecting diversity**
- Learning more

Cohort Growth of “Both White & Black”

Age in 2000	% Growth
Total	31
Under 5	28
5 to 9	28
10 to 14	22
15 to 19	30
20 to 24	48
25 to 29	50
30 to 34	49
35 to 39	53
40 to 44	52
45 to 49	48
50 to 54	34
55 +	10

Issues in projecting the Hispanic population

- Immigration
- Sensitivity to question wording
- Assigning Race
- Effects of inter-marriage

Question Wording

- Census 2000 Question:
Is this person Spanish/Hispanic/Latino?

- Census 2010 Question:
Is this person of Hispanic, Latino or Spanish origin?

Assigning Race

	CENSUS	ESTIMATES BASE
White alone	72.4	78.4
Black alone	12.6	13.0
AIAN alone	0.9	1.2
Asian alone	4.8	4.9
NHOPI alone	0.2	0.2
Two or more races	2.9	2.3
Non-specified race only	6.2	(X)

Issues in projecting the Hispanic population: Husband/Partner of Hispanic Women Percent

All	21
US Mainland born	37
All Other	11

Currently married Hispanic women (w spouse present), who are the householder or spouse of householder
ACS 2013 1-year data.

Born in Puerto Rico included in All Other

Forecasts of the Population of the United States 1945-1975

Whelpton, Eldridge & Siegel 1947

TABLE 29.—POPULATION BY COLOR AND NATIVITY, FOR THE UNITED STATES, 1900 TO 1945, AND FORECASTS, 1950 TO 1975

[Estimates for 1945 and forecasts are comparable with census figures for 1940 and earlier years, no adjustment having been made for census under-enumeration of young children]

YEAR AND ASSUMPTION	POPULATION (IN THOUSANDS)					PERCENT DISTRIBUTION				
	All classes ¹	White			Non-white	All classes	White			Non-white
		Total ¹	Native	Foreign-born			Total	Native	Foreign-born	
CENSUS OR CURRENT ESTIMATE										
1900.....	75,995	66,809	56,595	10,214	9,185	100.0	87.9	74.5	13.4	12.1
1910.....	91,972	81,732	68,386	13,346	10,240	100.0	88.9	74.4	14.5	11.1
1920.....	105,711	94,821	81,108	13,713	10,890	100.0	89.7	76.7	13.0	10.3
1930.....	122,775	110,287	96,303	13,983	12,488	100.0	89.8	78.4	11.4	10.2
1940.....	131,669	118,215	106,796	11,419	13,454	100.0	89.8	81.1	8.7	10.2
1945 ²	139,621	125,053	114,805	10,248	14,568	100.0	89.6	82.2	7.3	10.4
FORECAST										
MEDIUM FERTILITY, MEDIUM MORTALITY										
No Immigration										
1950.....	145,460	130,017	121,148	8,869	15,443	100.0	89.4	83.3	6.1	10.6
1955.....	149,840	133,623	126,127	7,497	16,216	100.0	89.2	84.2	5.0	10.8
1960.....	153,375	136,375	130,220	6,155	17,000	100.0	88.9	84.9	4.0	11.1
1965.....	156,692	138,846	133,969	4,877	17,845	100.0	88.6	85.5	3.1	11.4
1970.....	159,847	141,145	137,441	3,705	18,702	100.0	88.3	86.0	2.3	11.7
1975.....	162,337	142,841	140,160	2,682	19,496	100.0	88.0	86.3	1.7	12.0

¹500,000 Net Immigration per 5 Years

1966 Population Projections

Group	Number	Percent
	308,912	
White	270,770	87.7
Non-White	38,142	12.3

1988 Population Projections

	2000	2050
Total		
Spanish Origin	9.4	16.4
White Non-Hispanic	74.2	61.6
Black	13.3	16.9
Other Races	3.6	6.1

Other Possibilities

Will “Middle-Eastern & North African” still be classified with European as “white” or have its own category?

Outline

- Introduction
- 2014 Projections: Results
- Demographic Assumptions
- Issues in projecting diversity
- **Learning more**

Where Can You Learn More?

www.census.gov

The screenshot shows the homepage of the U.S. Census Bureau website. At the top left is the logo for the United States Census Bureau. To its right is a navigation bar with four categories: Topics (Population, Economy), Geography (Maps, Geographic Data), Library (Infographics, Publications), and Data (Tools, Developers). Below this is a large banner for 'NOW HIRING' with a hand holding a black marker. To the right of the banner is a 'Regional Opportunities' section with the text 'We are hiring available in'. Below the banner are two main content areas: 'Population Clock' and 'QuickFacts'. The 'Population Clock' shows the U.S. Population as 320,169,188 and the World Population as 7,218,066,762, with a timestamp of Jan 15, 2015 16:39 UTC (Eastern+5) and a 'Learn More >>' link. The 'QuickFacts' section features a map of the United States with a dropdown menu set to 'Missouri' and the text 'Quick, easy access to facts about people, business, and geography.'

Census.gov Drop Down

Population

About this Topic

Data

News

Publications

Surveys/Programs

Visualizations

Working Papers

The U.S. Census Bureau is the leading source of statistical information about the nation's people. Our population statistics come from decennial censuses, which count the entire U.S. population every ten years, along with several other surveys.

[Read More](#)

- [Age and Sex](#)
- [Ancestry](#)
- [Children](#)
- [Foreign Born](#)
- [Hispanic Origin](#)
- [International](#)
- [Language Use](#)
- [Migration/Geographic Mobility](#)
- [Population Estimates](#)
- [Population Projections](#)
- [Race](#)
- [Veterans](#)

Latest

[News](#)

[Data](#)

[Publications](#)



<http://quickfacts.census.gov/qfd/states/29/2923986.html>



To
Pop

State & County QuickFacts

Select a State

USA QuickFacts

What's New

FAQ

Missouri counties- [selection map](#)

Missouri cities- [place search](#)

[▶ More Missouri data](#)

Select a county

Go

Ferguson (city)

Go

Missouri

People QuickFacts

Population, 2013 estimate

Population, 2010 (April 1) estimates base

Population, percent change, April 1, 2010 to July 1, 2013

People QuickFacts

- i Population, 2013 estimate
 - i Population, 2010 (April 1) estimates base
 - i Population, percent change, April 1, 2010 to July 1, 2013
 - i Population, 2010
 - i Persons under 5 years, percent, 2013
 - i Persons under 18 years, percent, 2013
 - i Persons 65 years and over, percent, 2013
 - i Female persons, percent, 2013
-
- i White alone, percent, 2013 (a)
 - i Black or African American alone, percent, 2013 (a)
 - i American Indian and Alaska Native alone, percent, 2013 (a)
 - i Asian alone, percent, 2013 (a)
 - i Native Hawaiian and Other Pacific Islander alone, percent, 2013 (a)
 - i Two or More Races, percent, 2013
 - i Hispanic or Latino, percent, 2013 (b)
 - i White alone, not Hispanic or Latino, percent, 2013
-
- i Living in same house 1 year & over, percent, 2009-2013
 - i Foreign born persons, percent, 2009-2013
 - i Language other than English spoken at home, pct age 5+, 2009-2013
 - i High school graduates, at least, percent of persons age 25+ 2009-2013

Active Labor Force by disability status

	Number	% of Total
Total Employed	150.2	
With a disability:	8.4	6
No disability	141.7	94

Source: AFF ACS_13_1YR_B18121