

The ABAG Regional Forecast Approach

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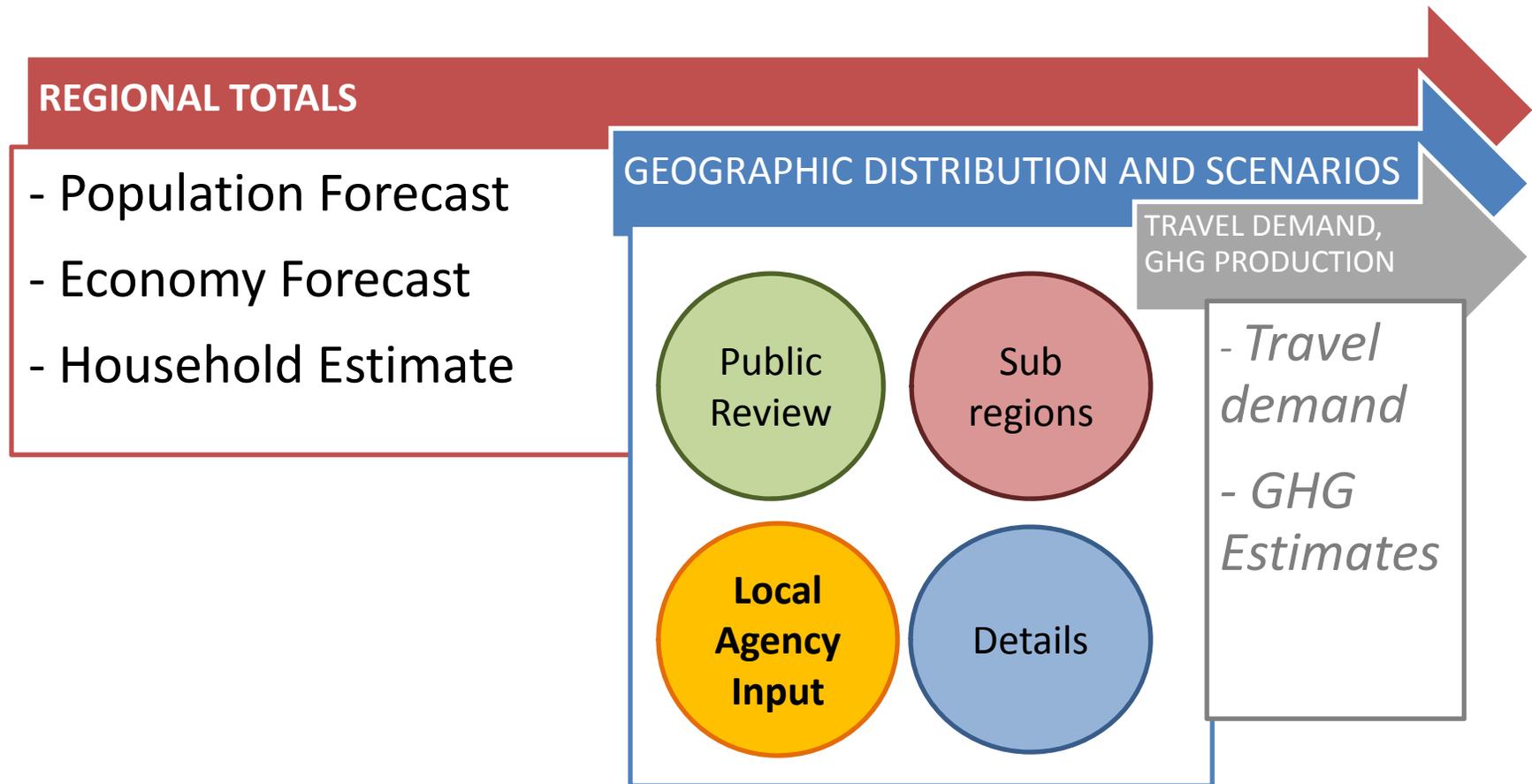
What is the Regional Forecast?

- A realistic 25-year regional outlook from 2010, based on expected national and international trends
- Estimates to 2040 of regional totals for population, jobs, households and income
- Geographic distribution of the forecast within the region based on local policy choices, market conditions, and baseline circumstances
- Frequently revised (current time frame—every four years)

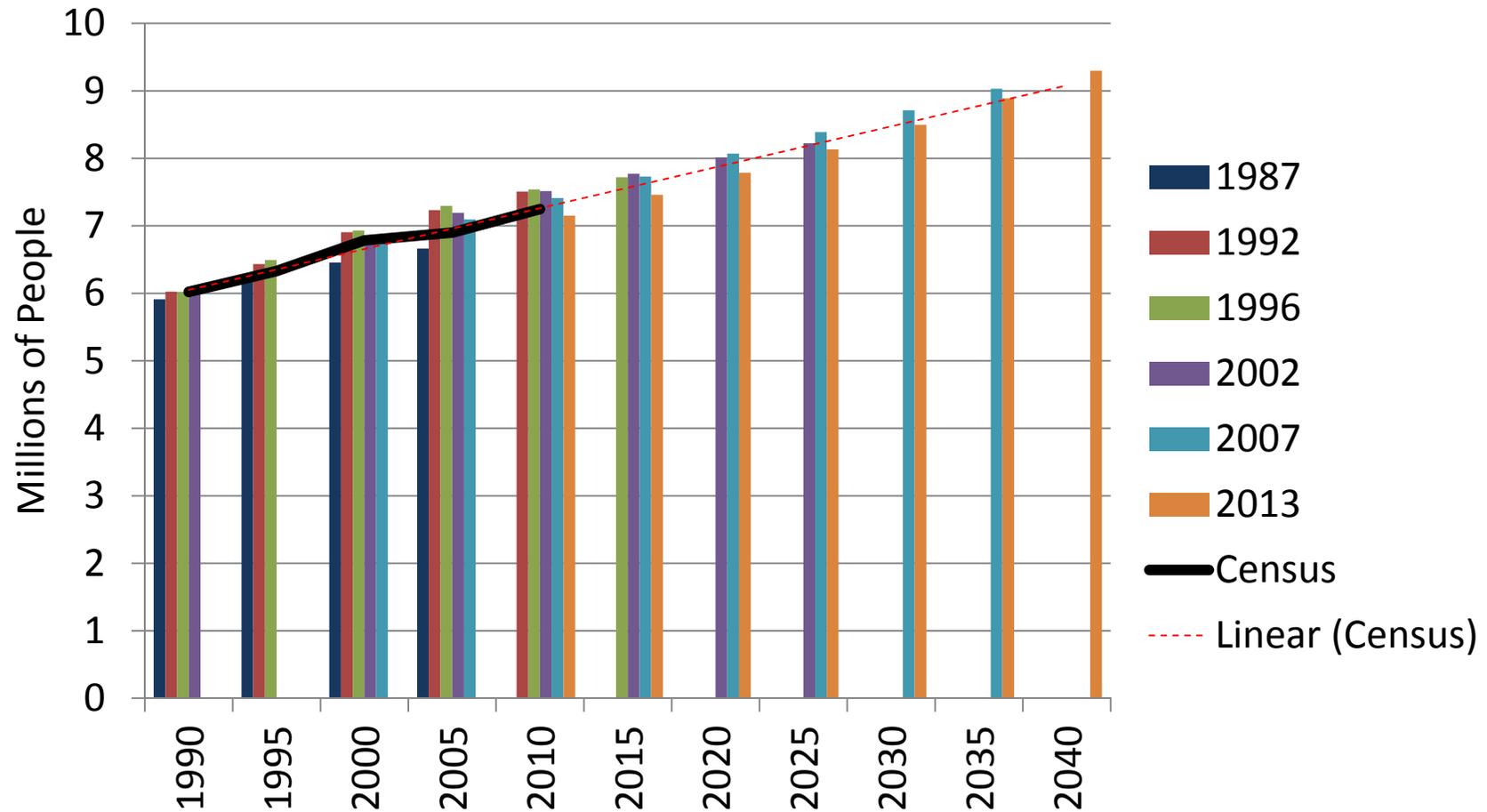
Why Have a Regional Forecast?

- Internally consistent estimates of jobs, population, households and income
- Context for local general planning efforts
- Needed for planning and financing long term transportation and housing investments
- California statutory framework
- Provides the regional control totals for Plan Bay Area

How do we do the Forecast?

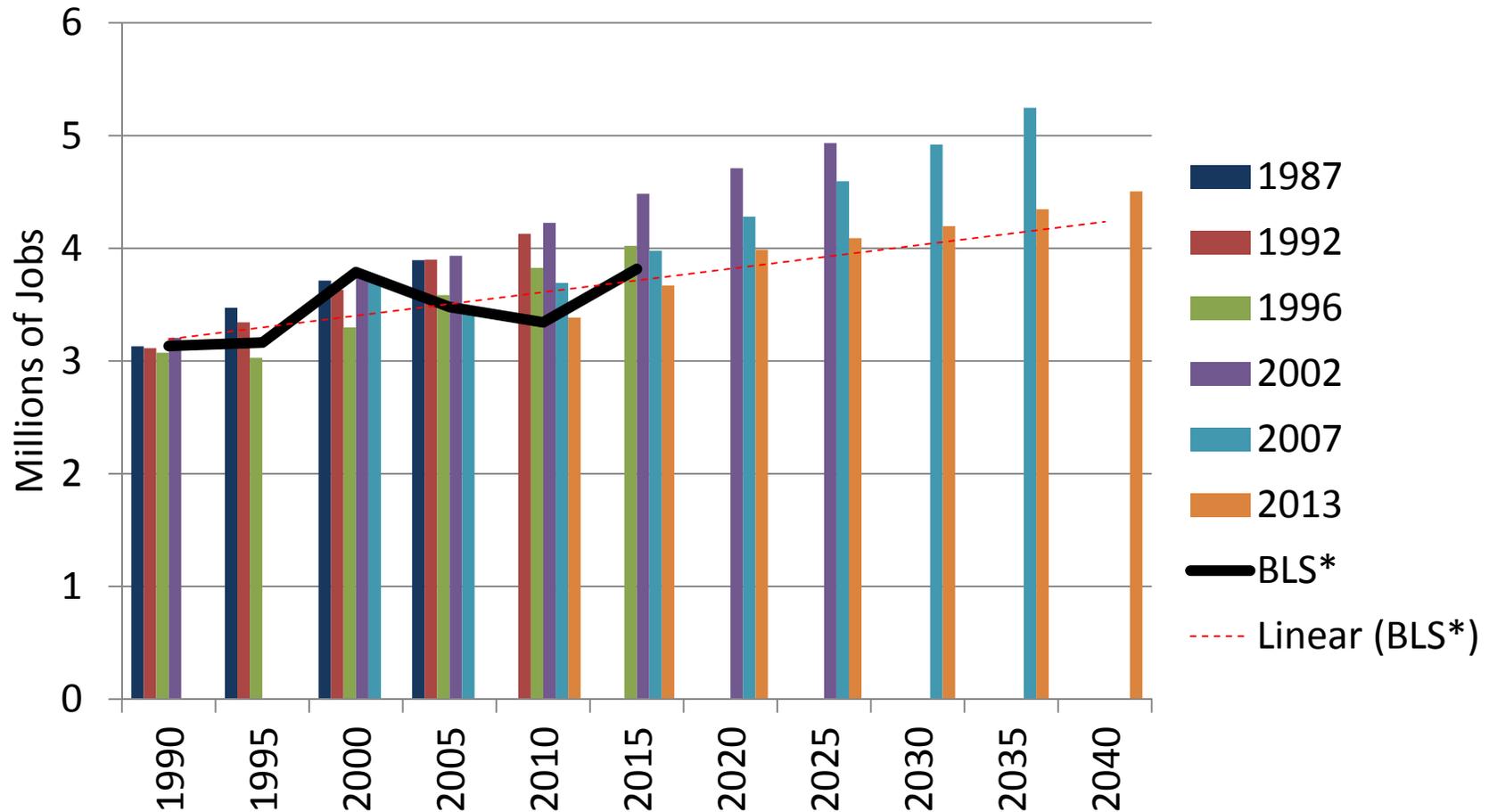


Past Population Projections



Source: ABAG from earlier Projections series and California Department of Finance.

Past Employment Projections



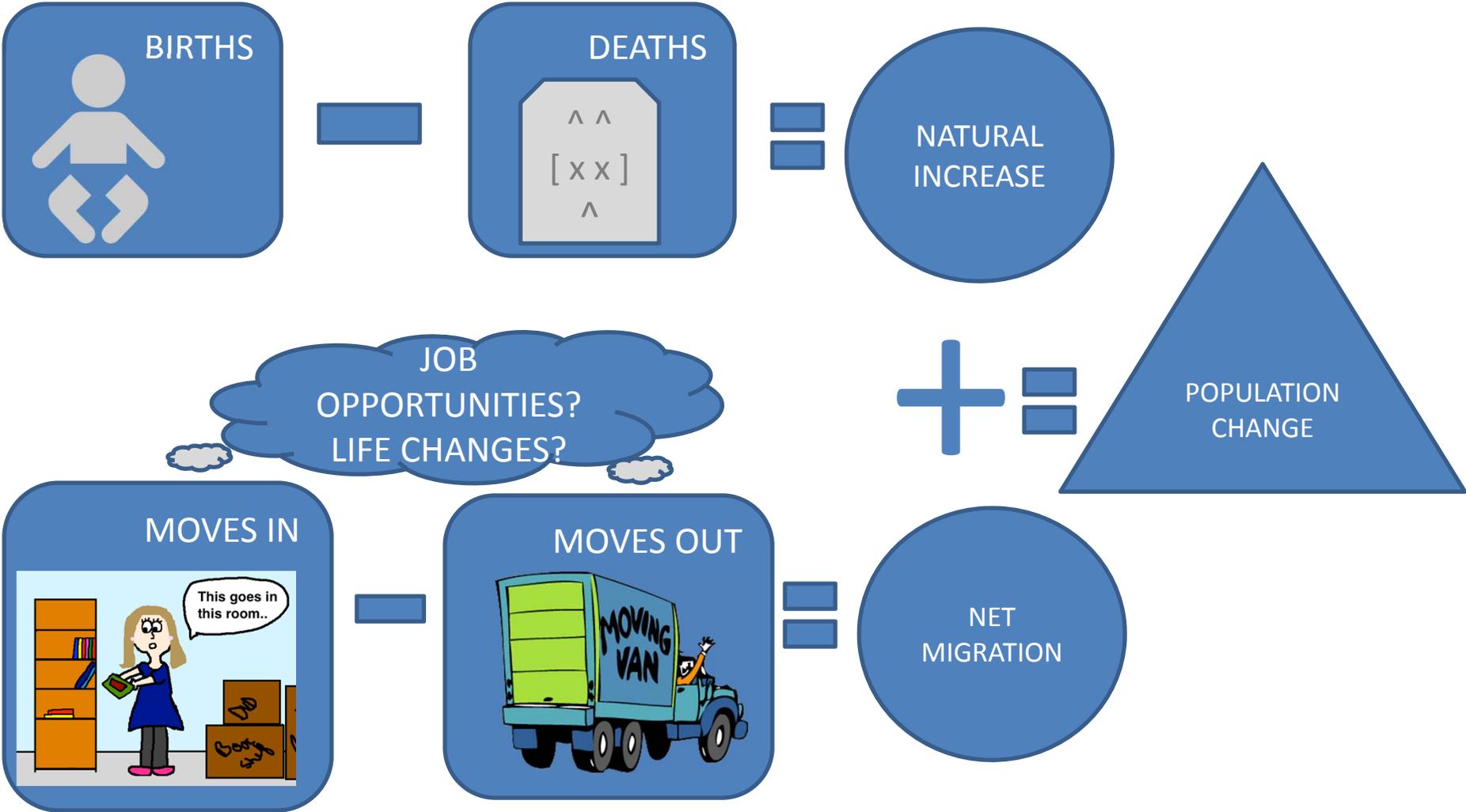
Source: ABAG from earlier Projections series and California Department of Finance.

* BLS data plus 6% to account for proprietors and self employed. 2015 date is actually October 2014.

Why Are Employment Forecasts Less Accurate?

- Forecasts predict long term trends but employment has short term cycles.
 - Past “trends” depend on the starting point
 - Accuracy depends on point in cycle
- Measurement issues
 - Many different definitions of employment
 - ABAG adjusts to jobs per person (tied to travel database)
 - Data accuracy is weaker for smaller geographies
- Geographic uncertainty—what will be the hot spots?

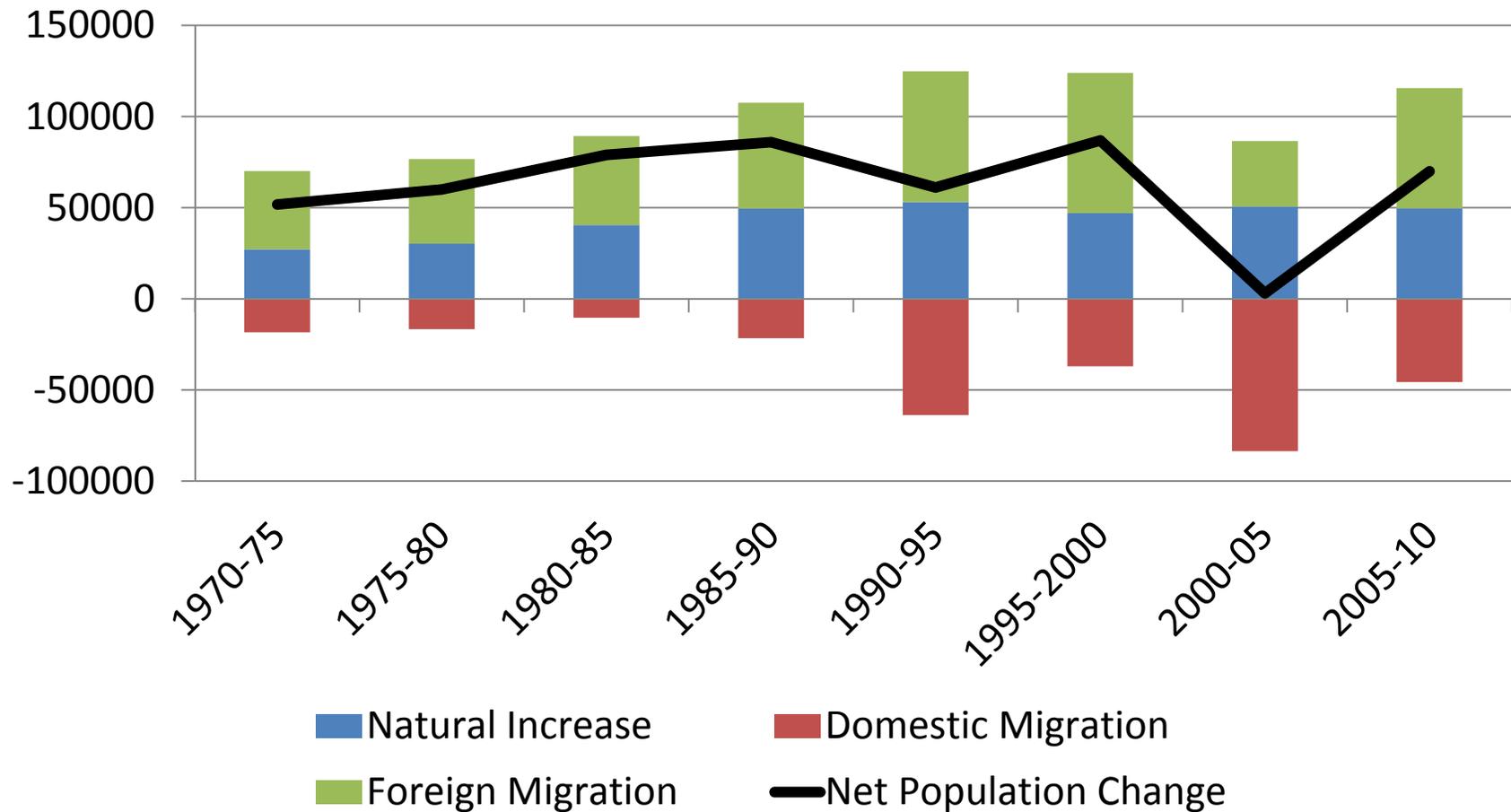
Factors in Population Change



ABAG Regional Population Forecast

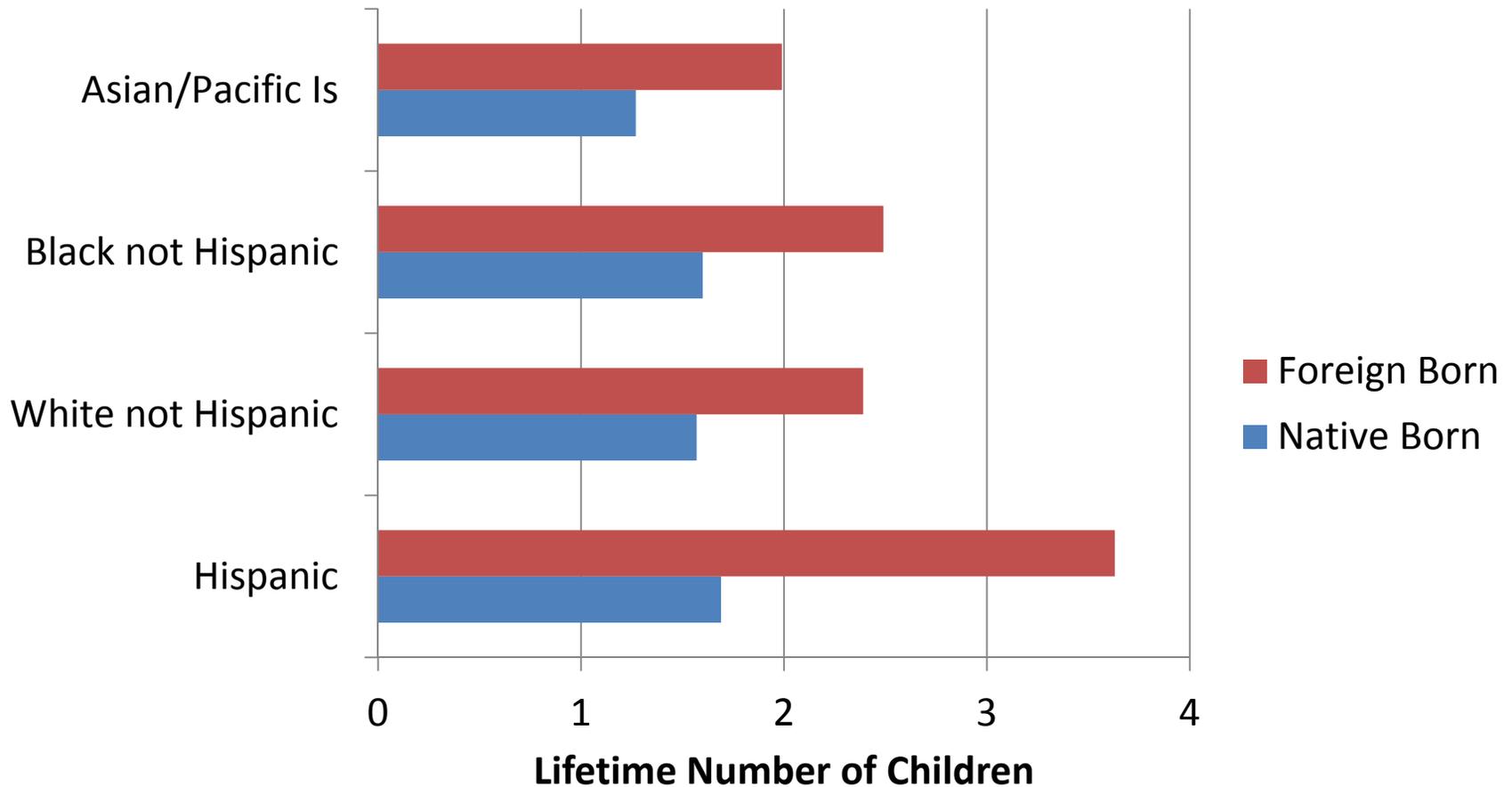
- Theoretical basis from John Pitkin and Professor Dowell Myers (USC)
- Cohort-Survival model with migration patterns drawn from past experience
- Natural increase sensitive to ethnicity, country of origin, and age structure of the population
- Migration sensitive to age, place of birth; does not include an economic component.

Historic Components of Population Growth



Source: ABAG from Pitkin-Myers analysis.

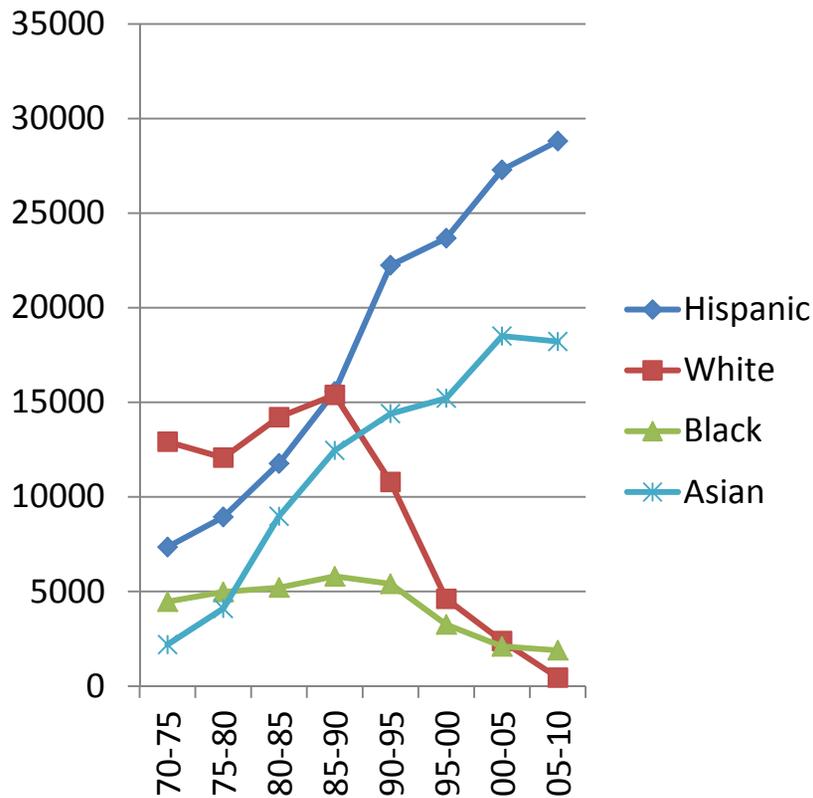
Fertility Rates Vary by Ethnic Group and Nativity



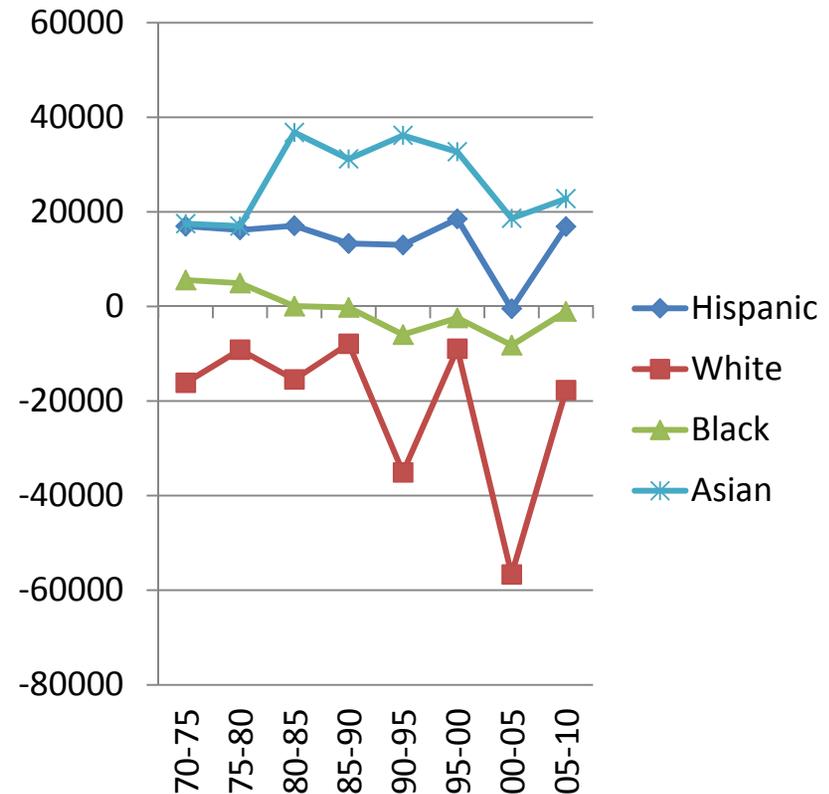
Source: ABAG from Pitkin-Myers analysis.

Population Changes by Ethnicity

Bay Area Natural Increase



Bay Area Net Migration

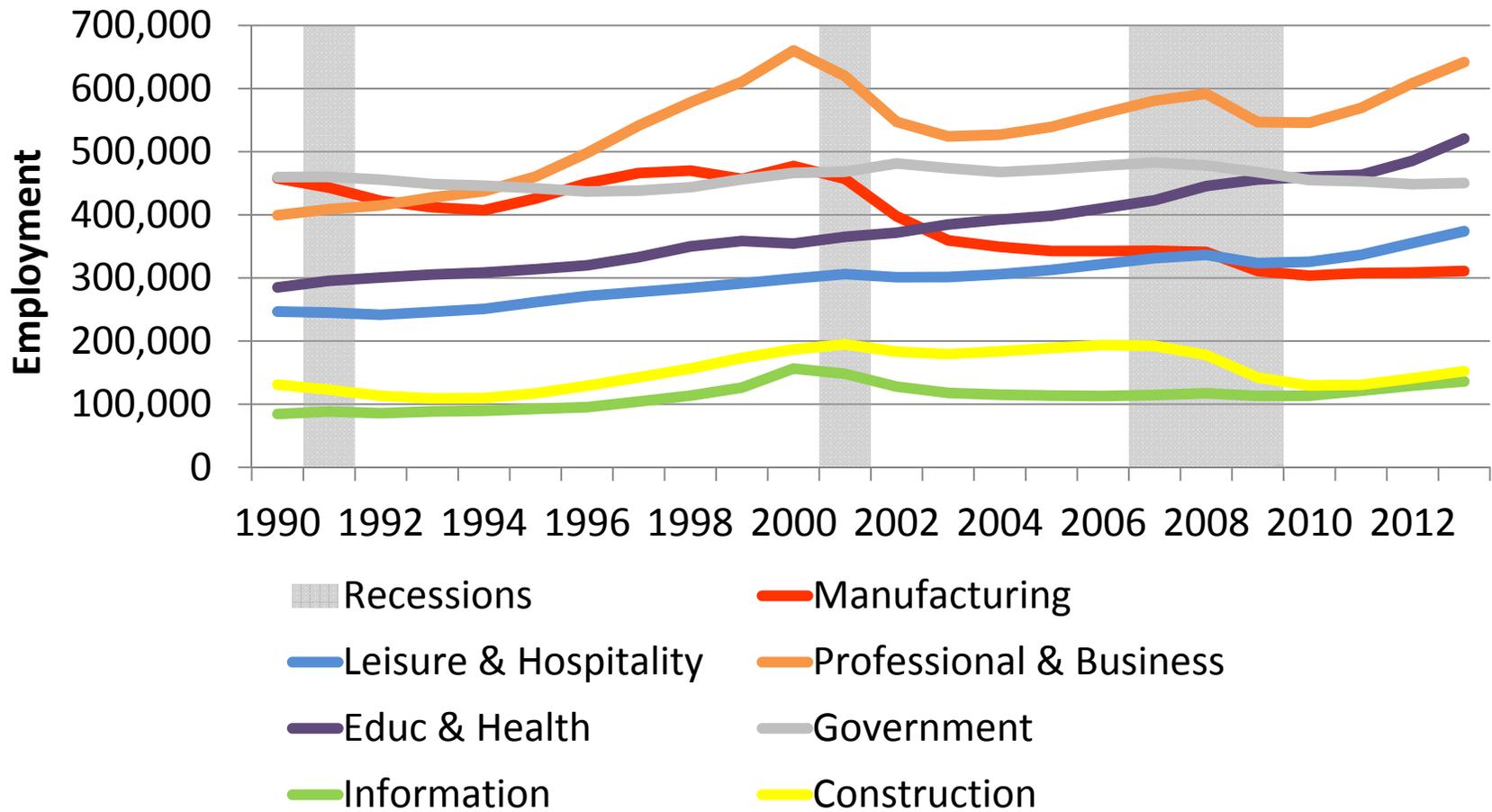


Source: Pitkin-Meyers analysis

ABAG Regional Economic Forecast

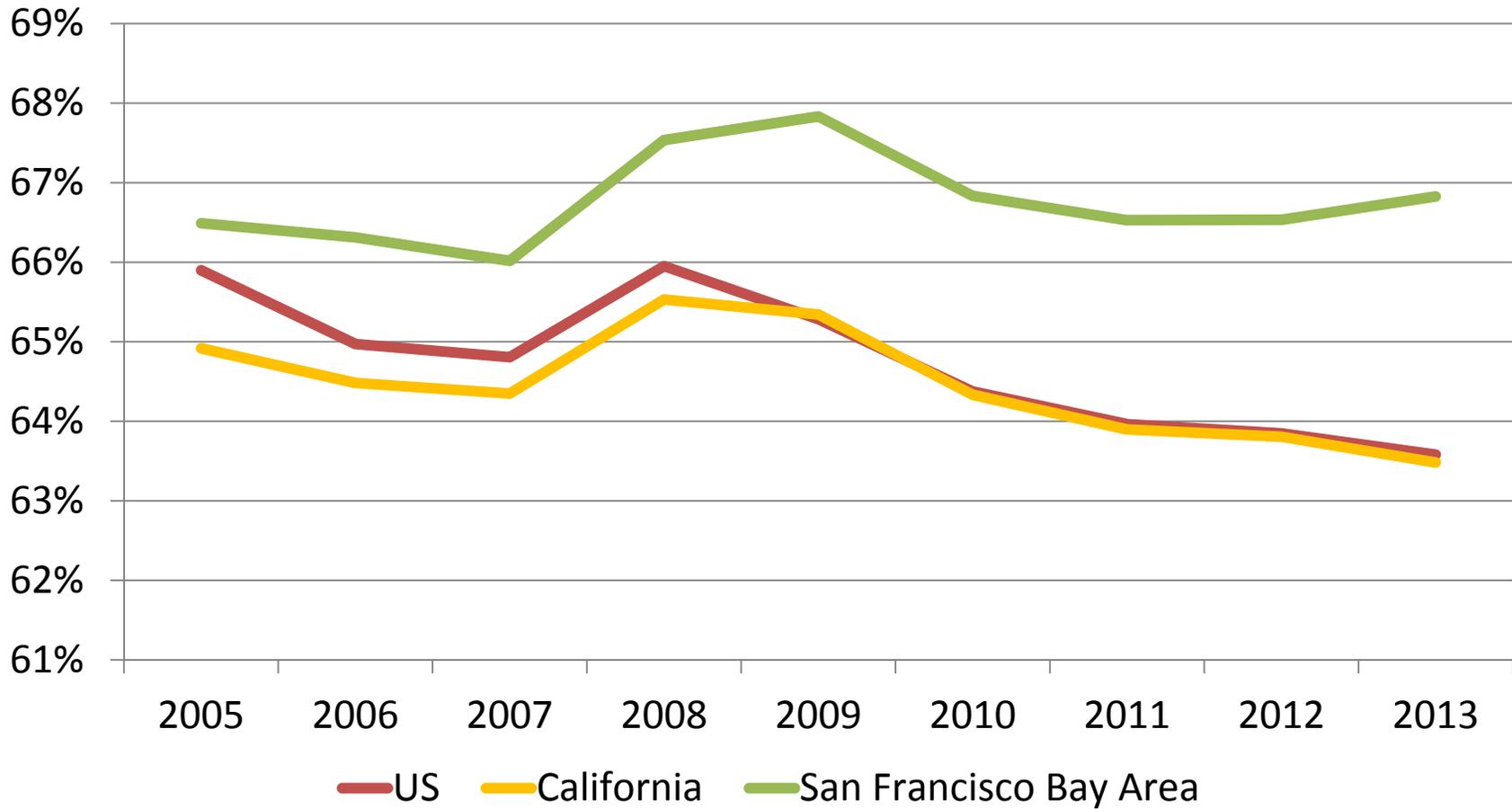
- Factors forecast
 - Gross regional product
 - Employment by place of work (total, by industry)
 - Population including economic migration
 - Labor force participation rates
 - Income
- Tools
 - REMI (CGE + econometric + input-output + other)
 - Alternative comparisons
 - In-house reconciliation with population model

Finding the Balance among Economic Drivers



Source: ABAG from California Employment Development Department data

Bay Area's High Labor Force Participation Rate

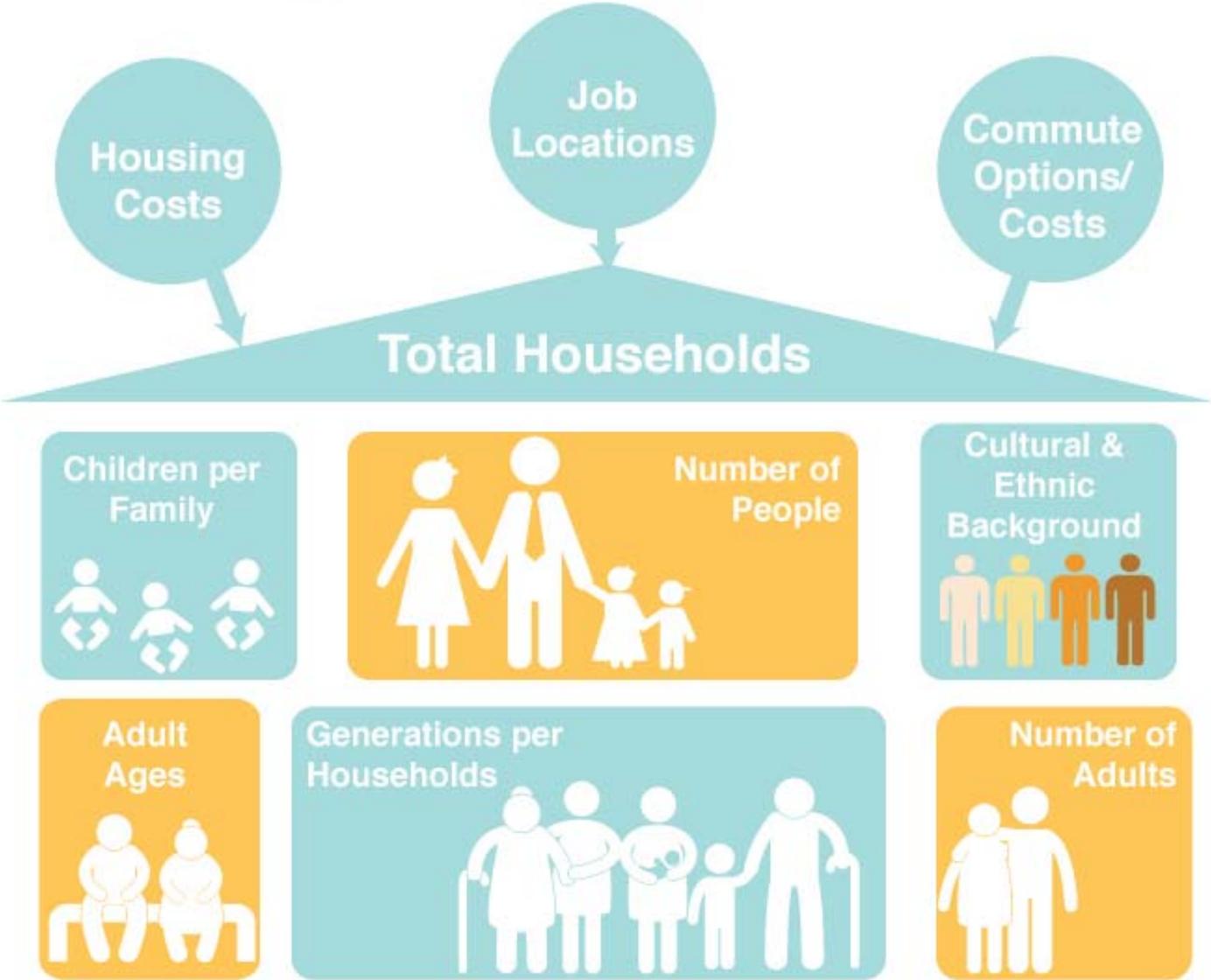


Source: ABAG from American Community Survey 1-year data.

ABAG Household-Income Forecasts

- Inputs
 - Population forecast reflecting demographic and economic factors
 - Historic household formation tendencies
 - by age
 - by ethnicity
 - by place of origin
 - by other preferences
 - by housing type and location
- Forecast
 - Number of households
 - By demographic type, income category, housing type

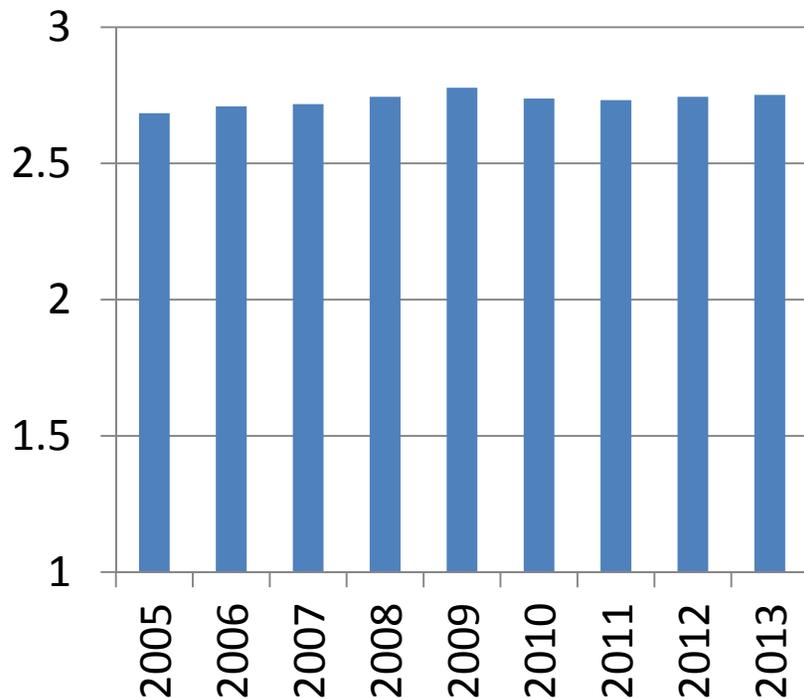
How Many Households?



Household Size Varies over Time, Place

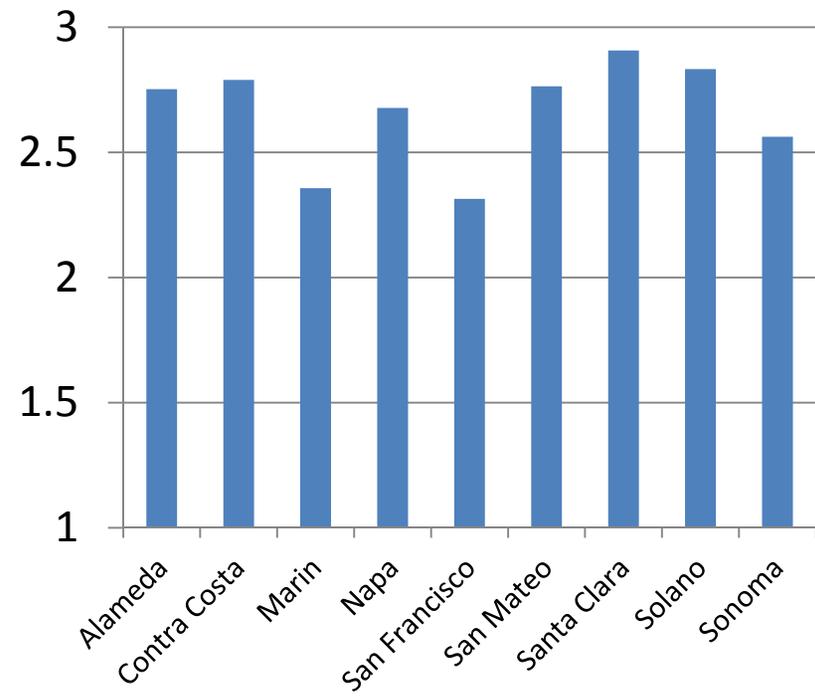
Bay Area Household Size

Persons per Household



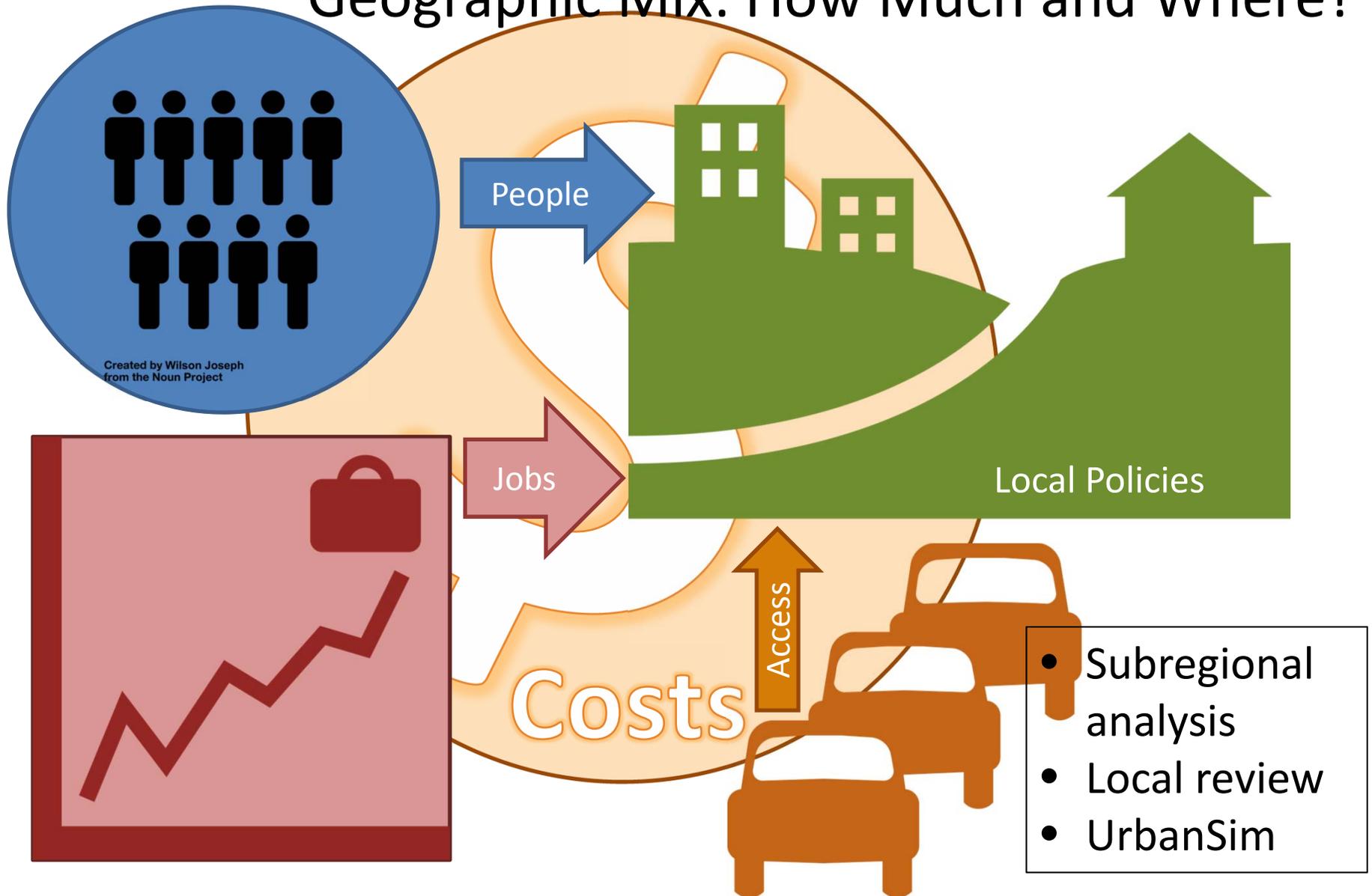
Household Size by County

5 Year Average—2012 ACS



Source: ABAG from American Community Survey. Chart on left is from the 1 year data, chart on the right is from the 2012 5-year data.

Population, Jobs, Households and Housing: Geographic Mix: How Much and Where?



The Process Going Forward— Role for Local Jurisdictions

Forecast Timing	Phase	Local Role
Spring and Summer 2015	Data and plan verification	Review zoning, pipeline, PDA and general plan info
Fall 2015	Scenario concepts and preliminary regional forecast	Review and response
Winter and Spring 2016	Final scenarios and regional forecast	Review and response

Thank You

4/10/2015

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