Economic Outlook for the State of California

Tobias Reynolds, *Economic Analyst*

May Lin, *Economic Analyst*

Ying Zhang, *Economic Analyst*

Regional Economic Models, Inc.

Welcome and Introductions

- REMI models
- Big Picture: REMI Regional Growth Matrix
- Economic outlook
  - Short-term forecast
  - Long-term forecast
- Policy simulation

what does REMI say? sm

Model

Regional Economic Models, Inc. (REMI) was founded in 1980 on a transformative idea: *government decision-makers should test the economic effects of their policies before they're implemented.* We are the nation's leader in dynamic local, state and national policy modeling. Our clients use REMI models to perform rigorous economic analysis that critically influences local, state and national policies.

OUR CLIENTS:

Business Roundtable • Sandia National Laboratories • Ernst & Young • Texas Comptroller
University of Michigan • Tennessee Valley Authority • National Education Association
South Coast Air Quality Management District • Florida Legislature
North Carolina Department of Commerce • Wyoming Department of Administration & Information
California Environmental Protection Agency • U.S. Army Corps of Engineers

what does REMI say? sm

California State Economy

- The most populous state and the third-largest state by area

- Worldwide trendsetter in popular culture

- The economy of California is the largest sub-national economy in the world

- Diverse economy
  - 54% of California's economy is based on finance, government, real estate services, technology, and professional, scientific, and technical business services[1]

Short-Term Outlook: California

- Years 2019-2023

- Growth 2020-2021
  - Personal income: 1.4%
  - GDP: 3.3%
  - Output: 3.1%
  - Employment: +627 thousands

- Uncertainty

what does REMI say? sm
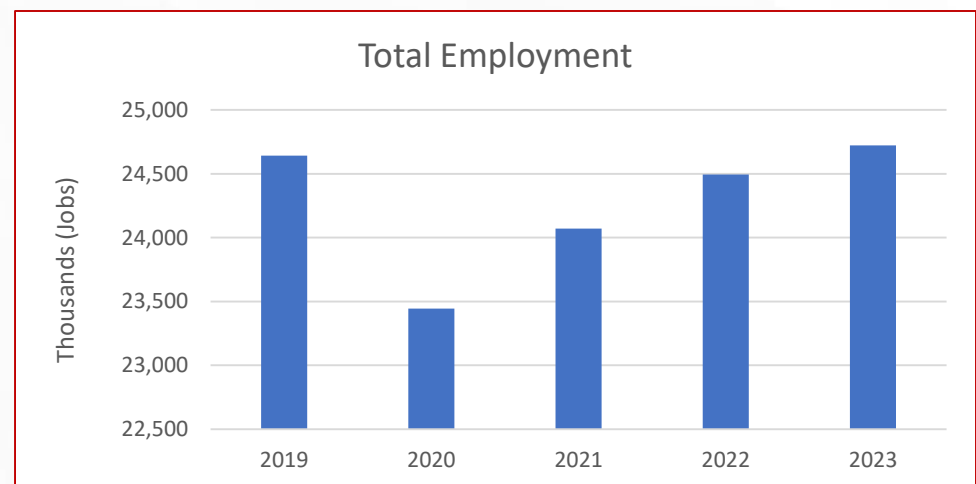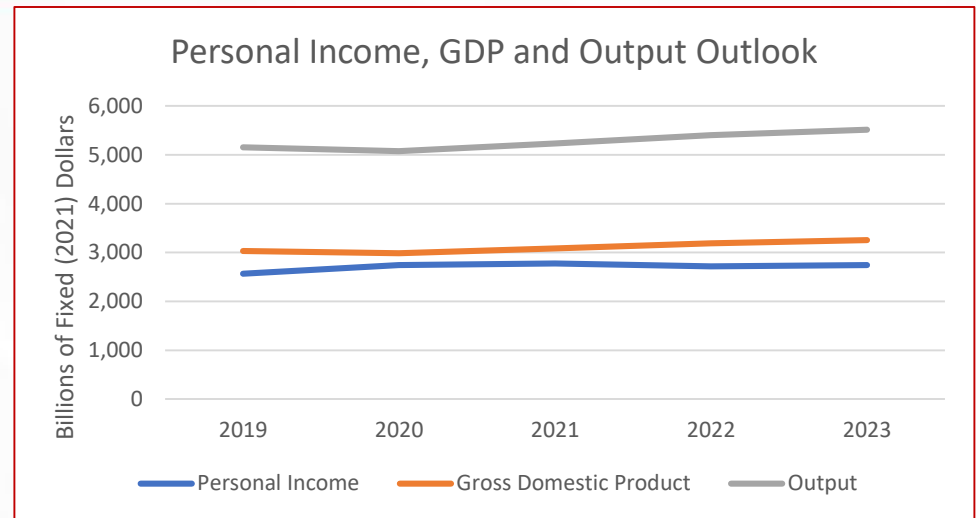
REMI Regional Growth Matrix: Economic & Demographic Factors

Economic Factors

	Industry Growth	Industry Clusters	Pay	Productivity	Business Cost
Favorable	Growing	Strong	High-paid industries	High	Low
Unfavorable	Declining	Weak	Low-paid industries	Low	High

Demographic Factors

	Population Age	Retirees	Immigration	Amenities	Housing Cost
Favorable	Younger	Gains retirees	Immigration gateway	High	Low
Unfavorable	Older	Loses retirees	Low internat'l immigration	Low	High

what does REMI say? [sm]

Regional Growth Matrix

Favorable

Renaissance Economies
(Massachusetts)

Growth Economies
(Colorado, Texas)

Employment

Unfavorable

Favorable

Transitional Economies (Maine,
West Virginia, *California*)

Lifestyle Economies
(Hawaii, Virginia)

Unfavorable

Population

what does REMI say? sm
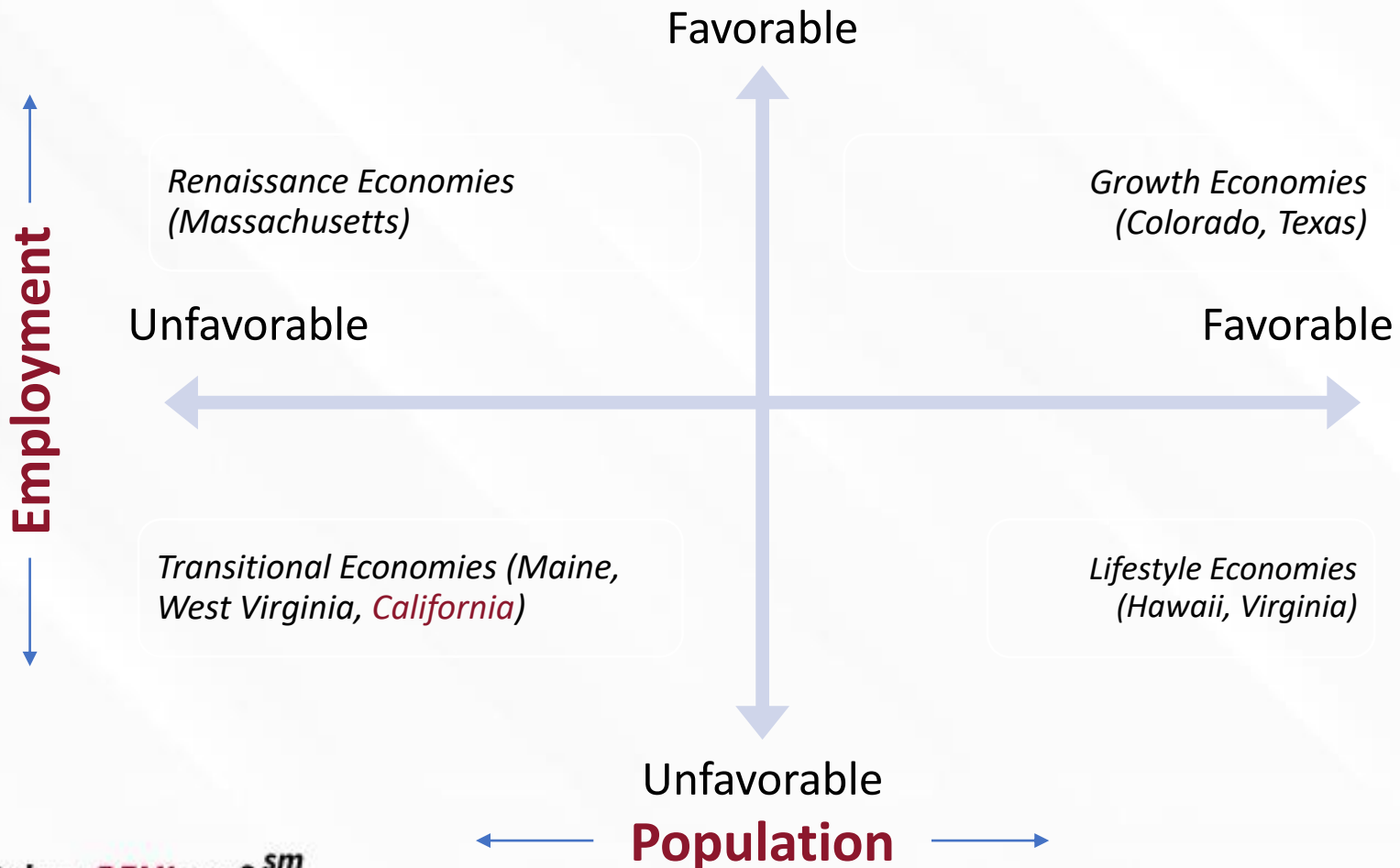
Growth Matrix

Difference in Growth from US Average (2021-2022)

	US Average	CA State	Difference
Employment growth	1.9%	1.8%	-0.2%
Population growth	0.7%	0.5%	-0.1%

*what does REMI say?* sm
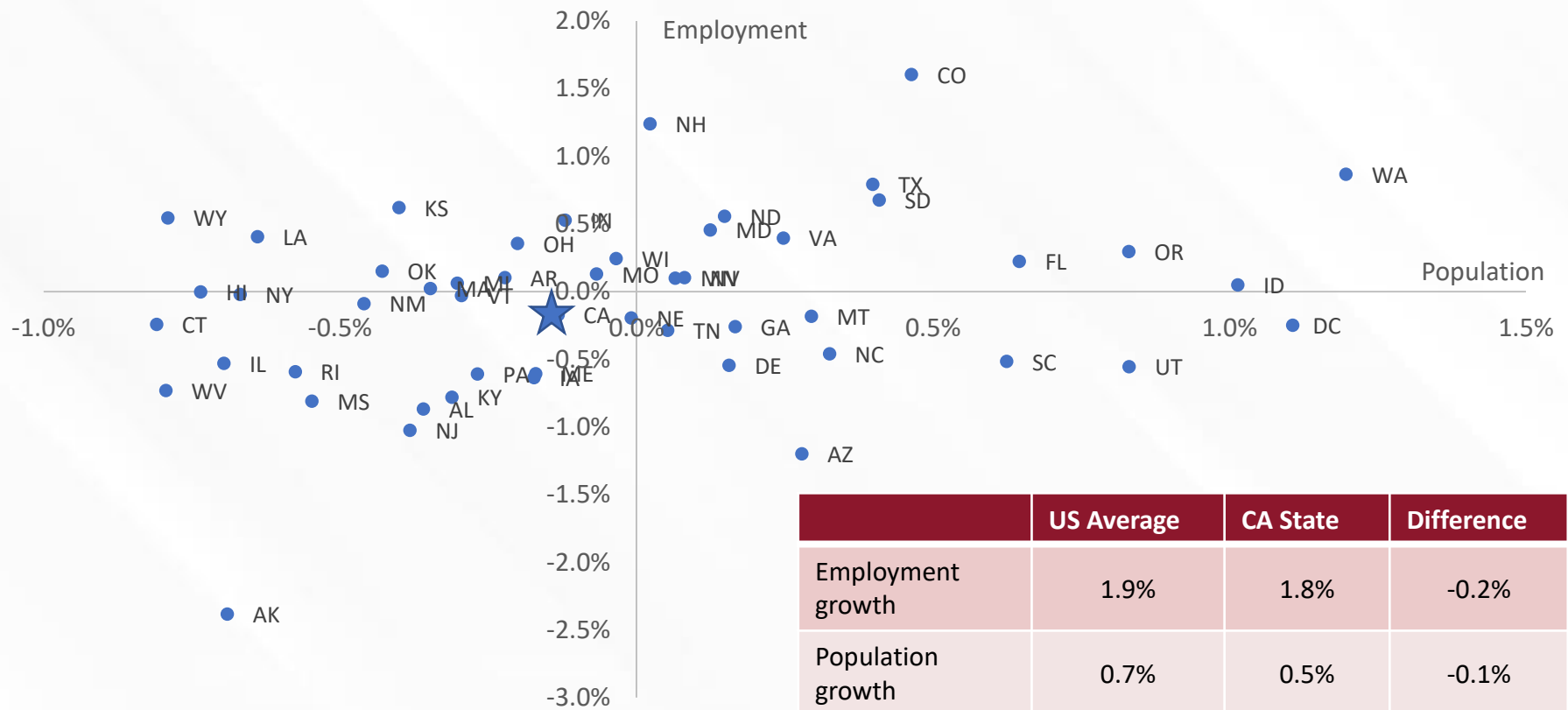
Data Sources

- Baseline (Standard National Control)
  - BLS Forecast Data
- Economic Forecast Update March 2021
  - 2019-2020 historical data from BEA
  - The U.S. Economic Outlook for 2020-2022 from the University of Michigan's Research Seminar in Quantitative Economics (RSQE)
  - An update to the Economics Outlook from CBO
  - Includes $1.6 trillion stimulus, additional vaccination, and additional consumer spending[1]

National Outlook
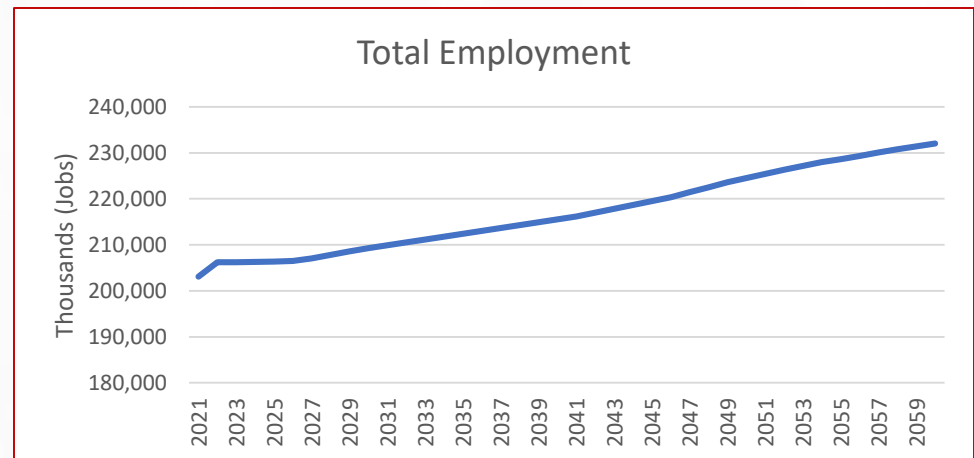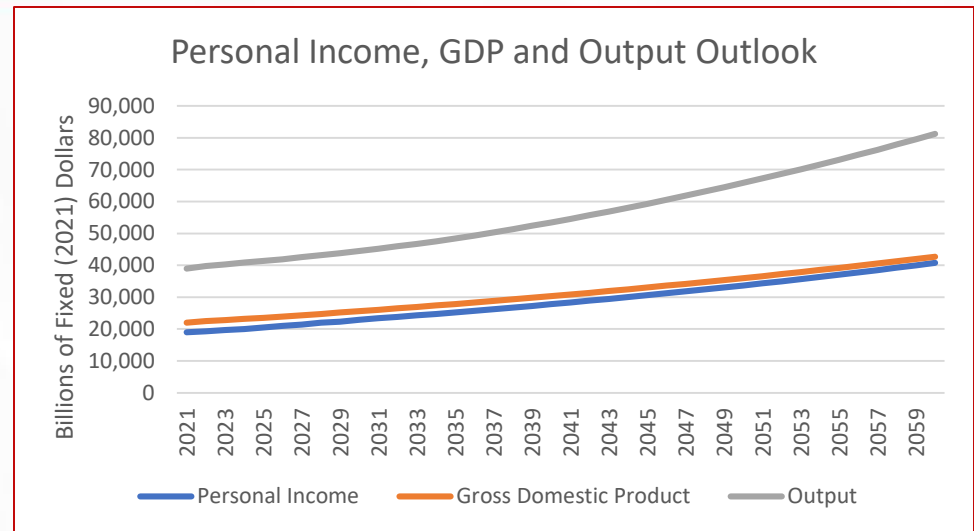
Short-Term Outlook: the U.S.

REMI

- Years 2019-2023

- Growth 2020-2021
  - Personal income: 2.9%
  - GDP: 4.4%
  - Output: 4.4%
  - Employment: +7,099 thousand jobs

Personal Income, GDP and Output Outlook

Total Employment

what does REMI say? sm
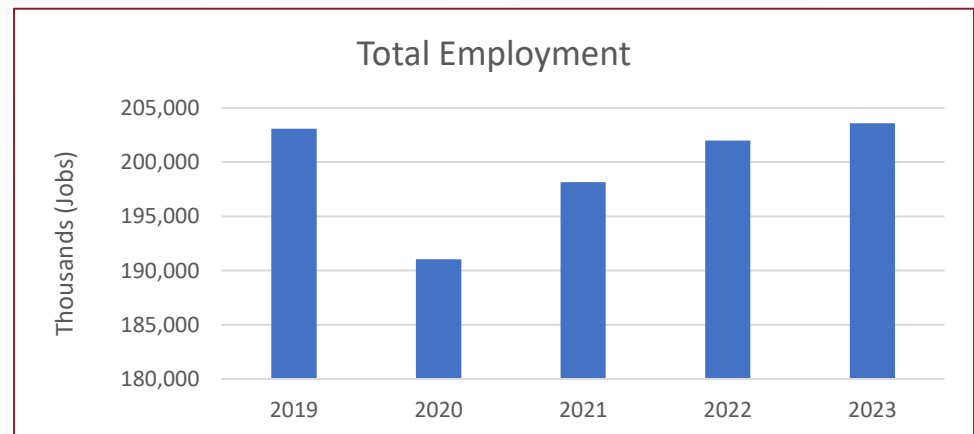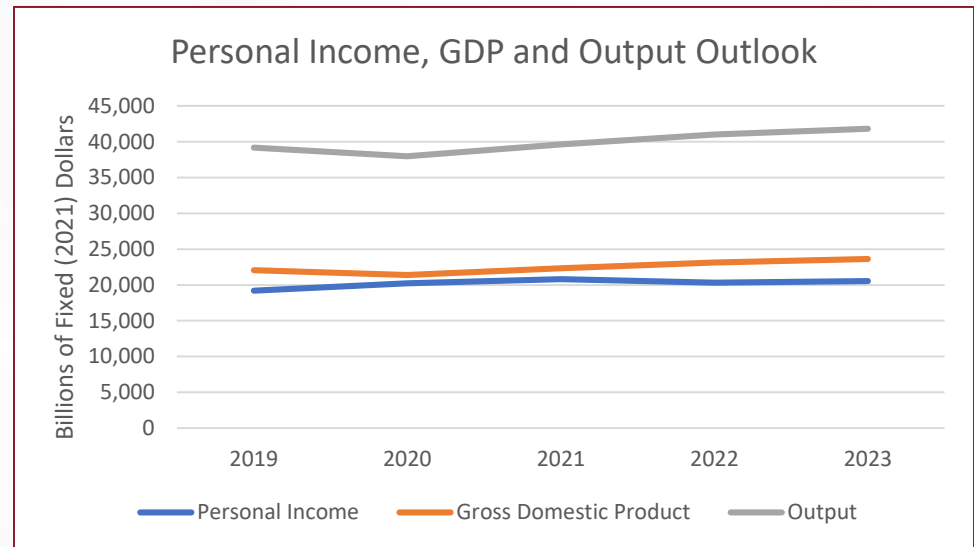
Long-Term Outlook: The U.S.

- Years 2021-2060
- Average growth / year
  - Personal income: 1.9%
  - GDP: 1.8%
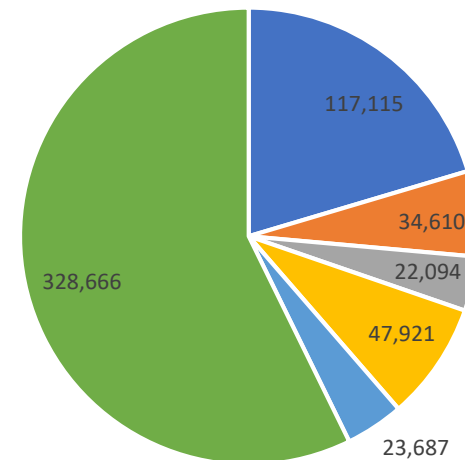 - Output: 1.9%
  - Total employment: +741 thousand jobs

Personal Income, GDP and Output Outlook

Total Employment

Short-Term Outlook: Employment by Industry

- Industries with largest employment growth rates in 2021

- 2020 - 2021: 245,427 jobs increasing in the top 5 fast growing industries

Job Increase in The Fastest Growing Industries in 2021

117,115

34,610

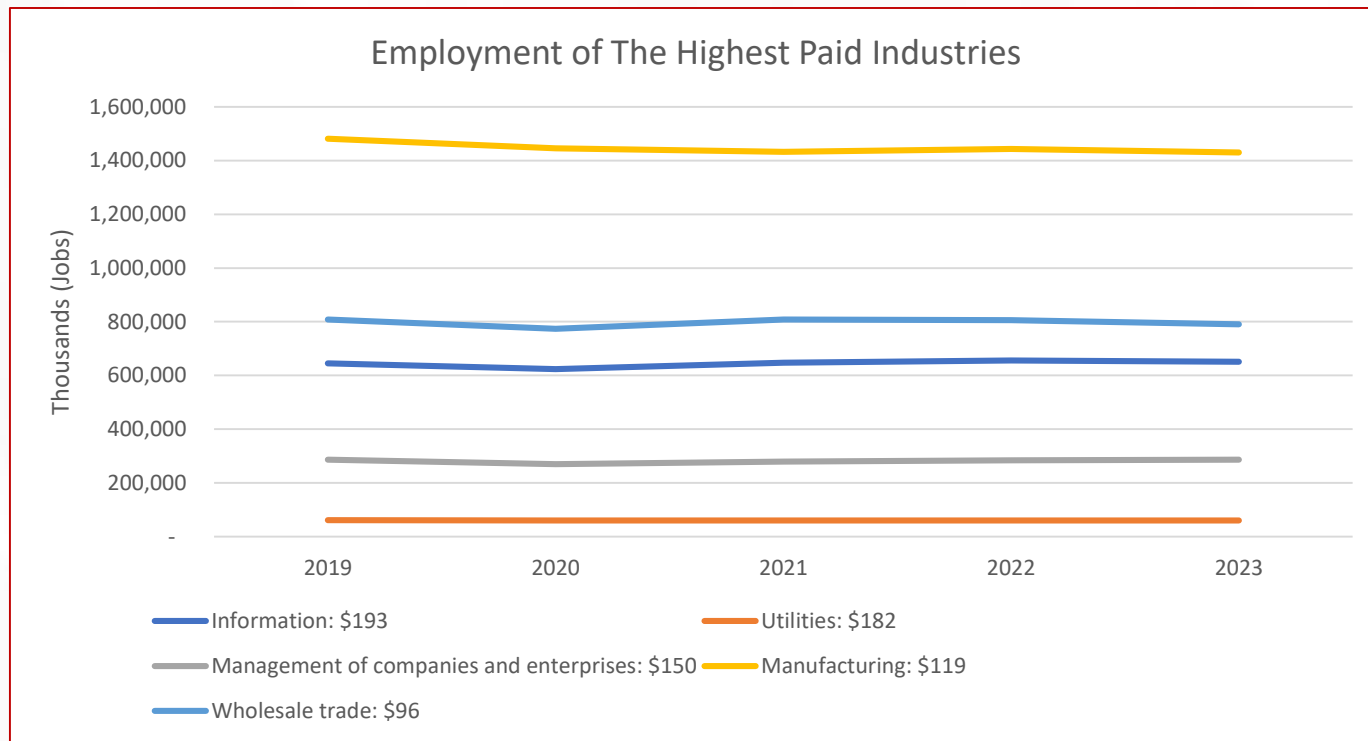22,094

47,921

23,687

328,666

- Health care and social assistance: 4.49%
- Wholesale trade: 4.47%
- Educational services; private: 4.41%
- Construction: 3.83%
- Information: 3.80%
- All other industries

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Short-Term Outlook: Employment by Industry

- Industries with highest average annual compensation rates in 2021

Employment of The Highest Paid Industries

Y-axis: Thousands (Jobs) — 1,600,000 / 1,400,000 / 1,200,000 / 1,000,000 / 800,000 / 600,000 / 400,000 / 200,000 / -

X-axis: 2019, 2020, 2021, 2022, 2023

Legend:
- Information: $193
- Utilities: $182
- Management of companies and enterprises: $150
- Manufacturing: $119
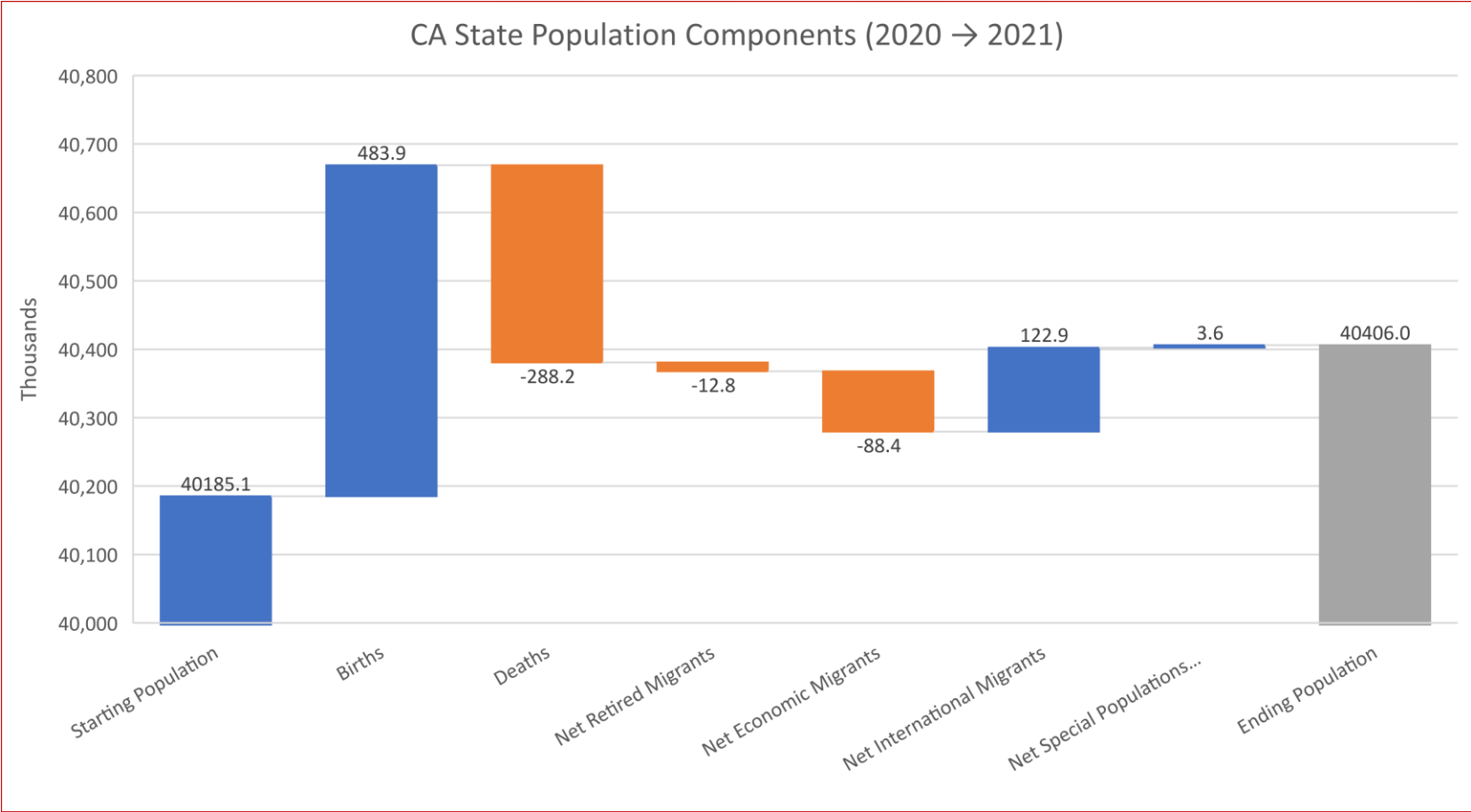- Wholesale trade: $96

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Short-Term Outlook: Population Pyramid (2021)

- Year 2021

- Near Constrictive
  - elderly and shrinking
  - quality education and health care

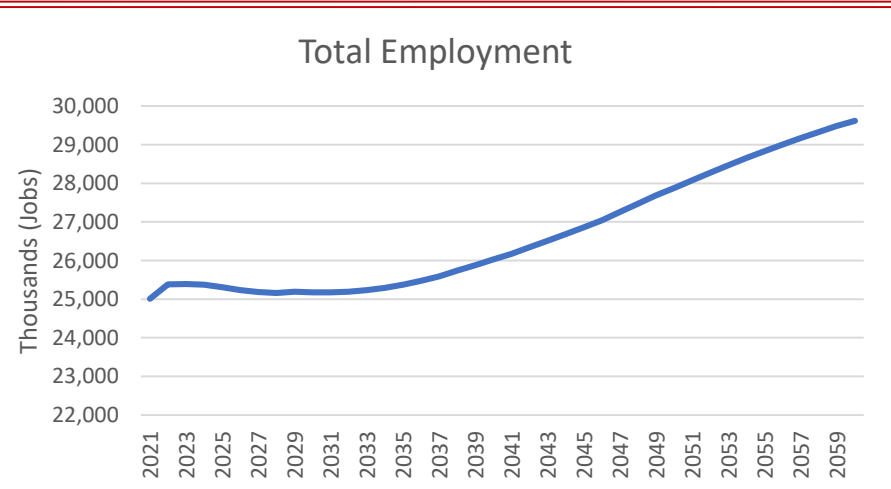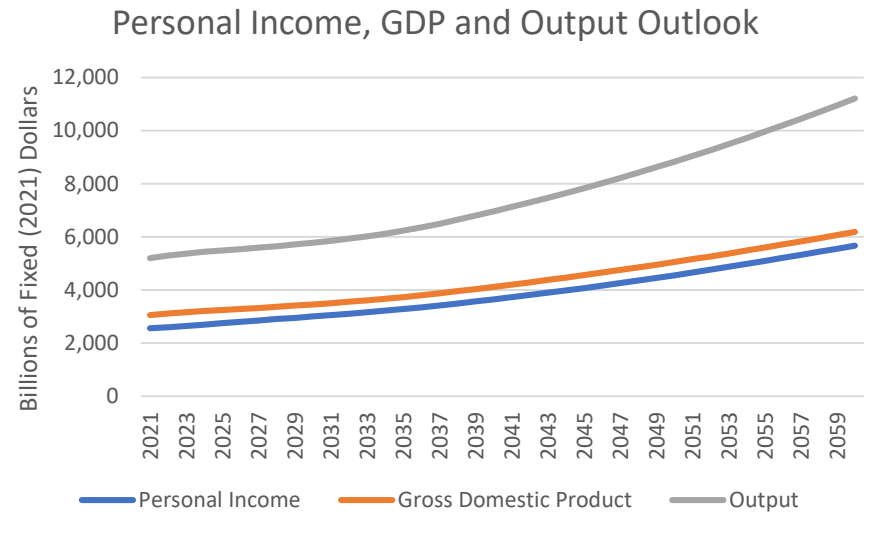# Short-Term Outlook: Population Components

CA State Population Components (2020 → 2021)
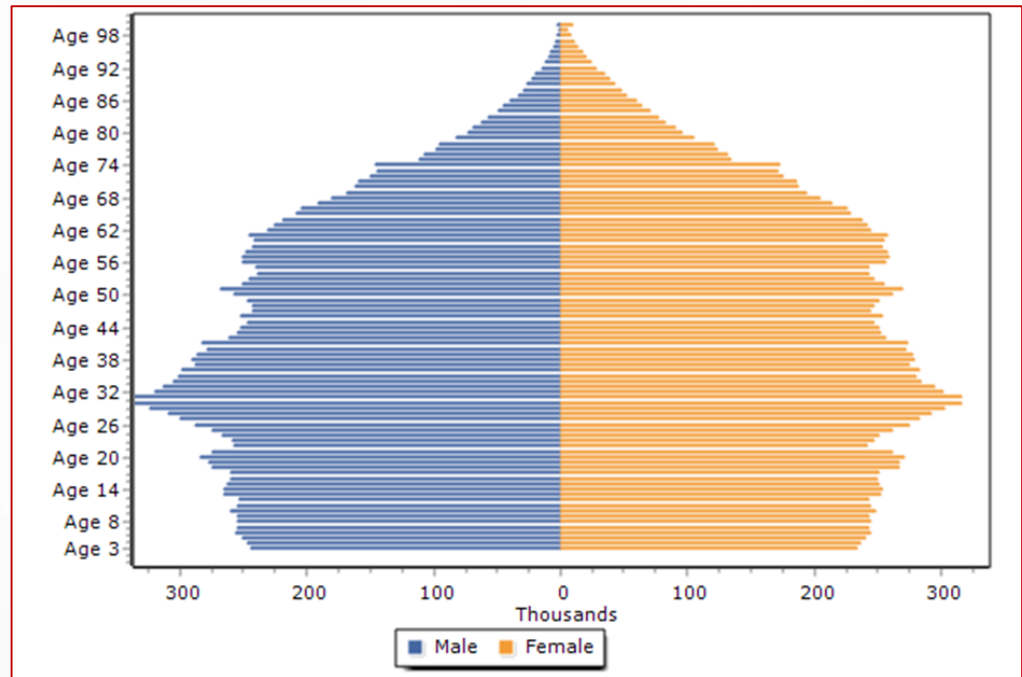
Long-Term Outlook: California

- Years 2021-2060
- Average growth / year
  - Personal income: 2.0%
  - GDP: 1.9%
  - Output: 2.0%
  - Total employment: +123 thousand jobs

Personal Income, GDP and Output Outlook

Total Employment

Long-Term Outlook: Employment by Industry

- Industries with fastest employment increasing

- 2020 - 2060: 3.6 million jobs increasing in the top 5 fast growing industries

Job Increase in The Fastest Growing Industries (2020 → 2060)

- 1,518,543
- 1,192,172
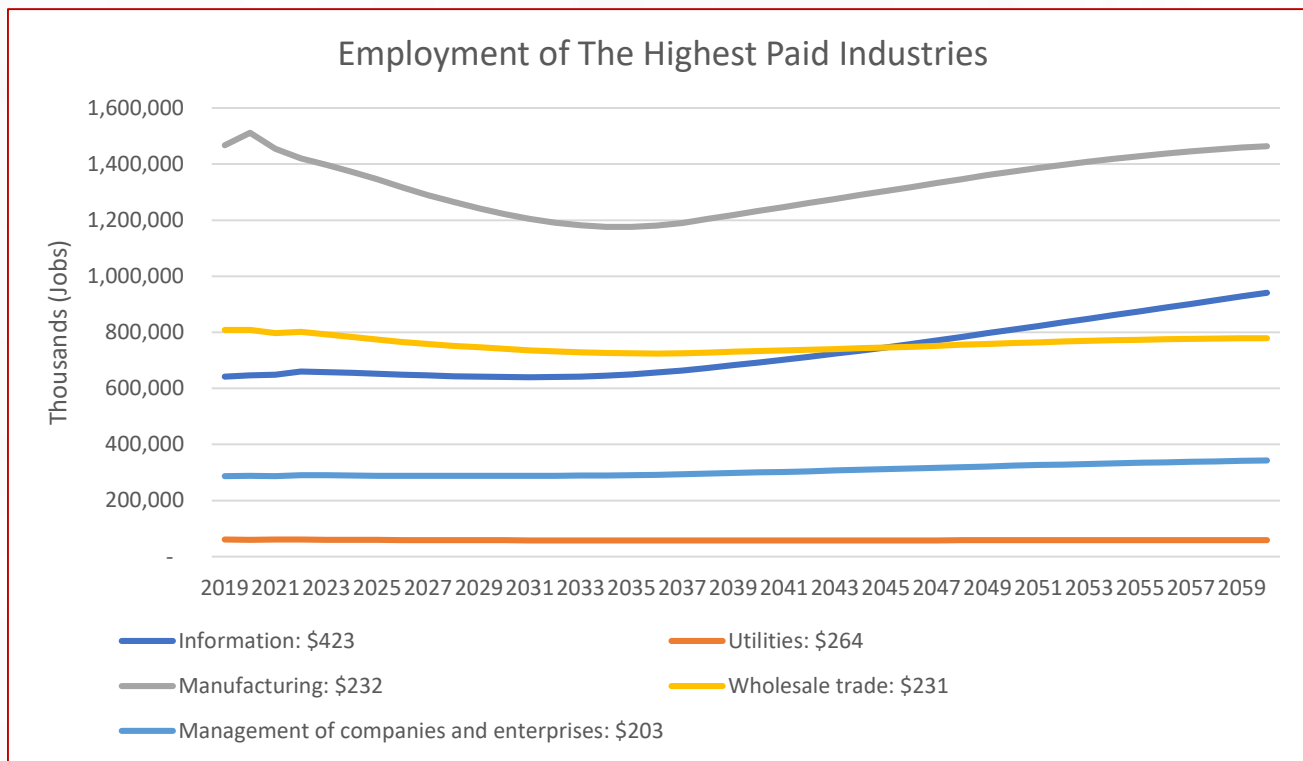- 294,707
- 106,881
- 465,862
- 1,309,902
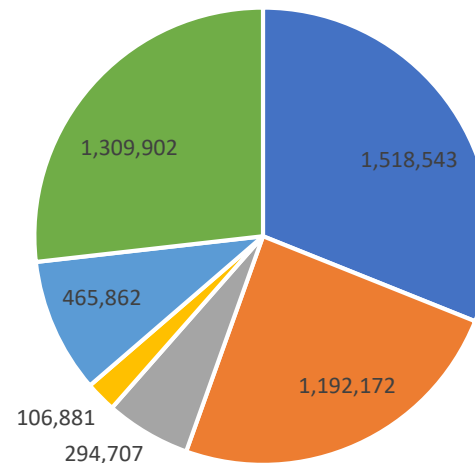
- Health care and social assistance: 1.12%
- Professional, scientific, and technical services: 1.11%
- Information: 0.94%
- Forestry, fishing, and hunting: 0.81%
- Administrative, support, waste management, and remediation services: 0.65%
- All other industries
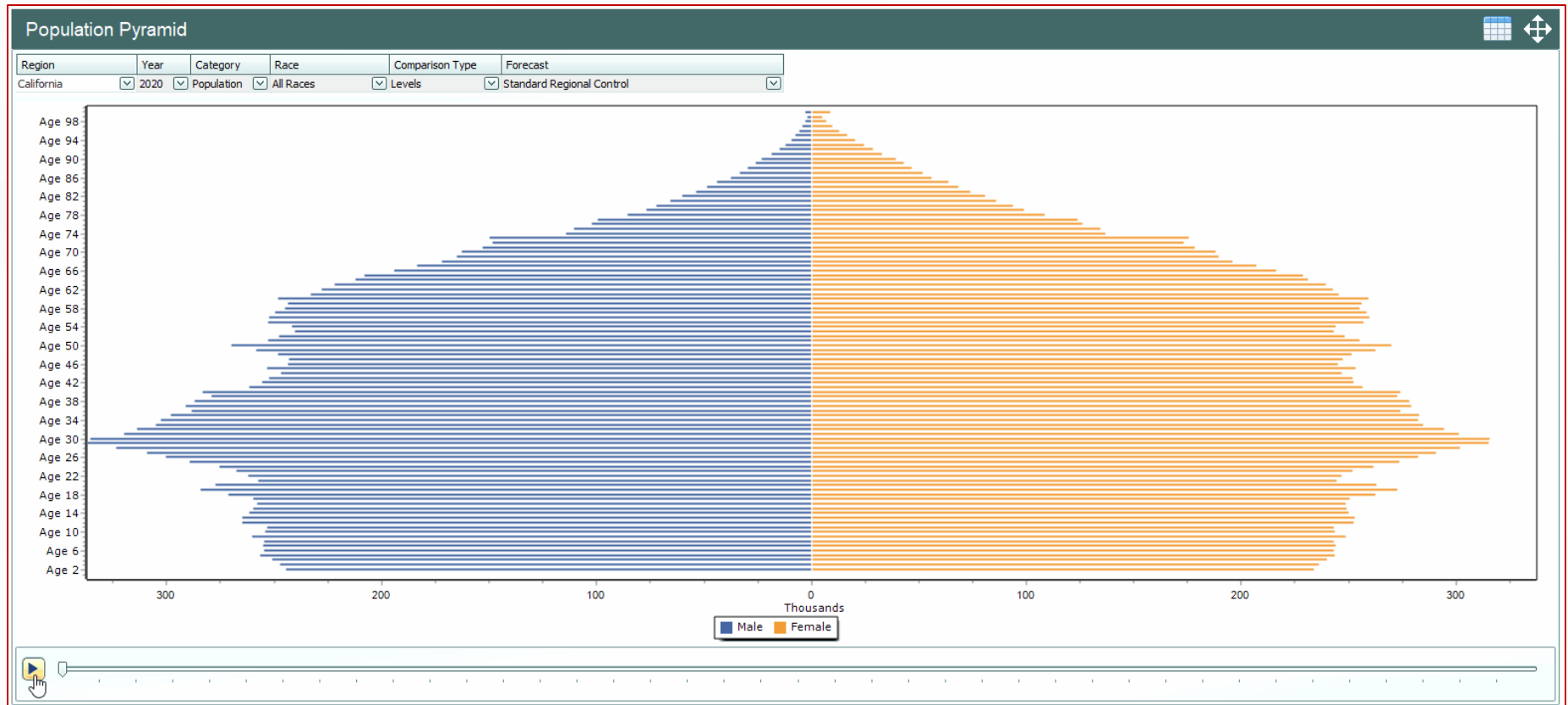
Long-Term Outlook: Employment by Industry

- Employment of industries with highest average annual compensation rates in 2060

Employment of The Highest Paid Industries

Legend:
- Information: $423
- Utilities: $264
- Manufacturing: $232
- Wholesale trade: $231
- Management of companies and enterprises: $203

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Long-Term Outlook: Population Pyramid
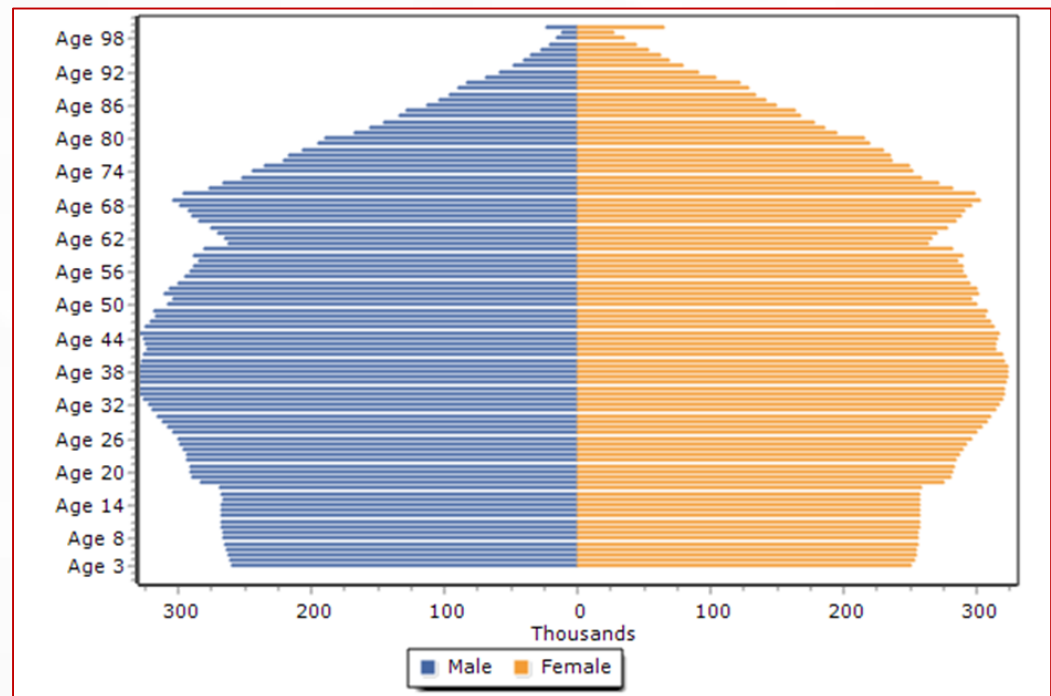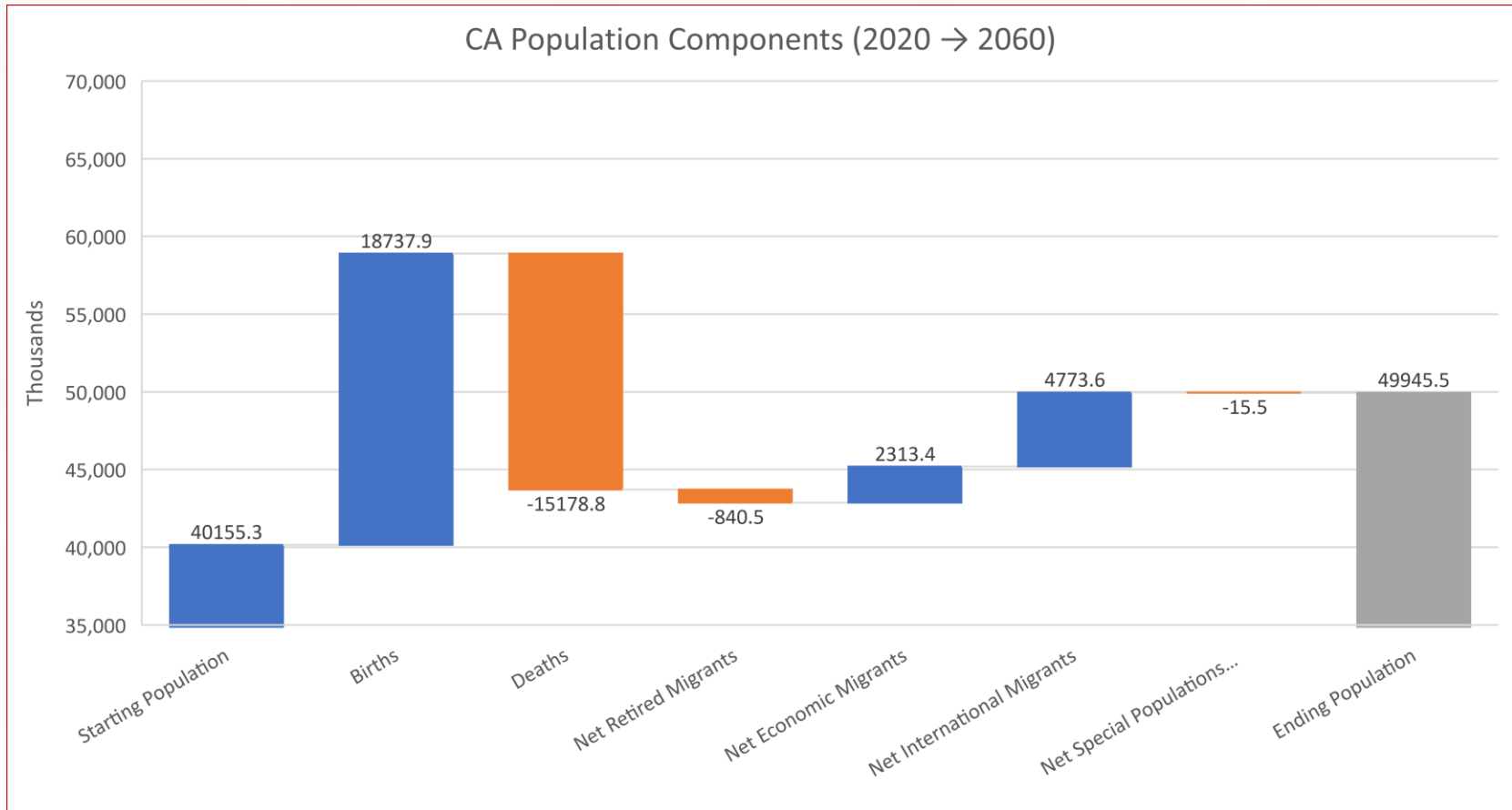

REMI

- Year 2060

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Long-Term Outlook: Population Pyramid

- Year 2021

- Constrictive population pyramid
  - elderly and shrinking
  - quality education and health care

Population Components

CA Population Components (2020 → 2060)

The Scenario, Assumptions, & Methodology

- High cost of living, rise of remote work encouraging companies to leave California
  - Hewlett-Packard, Palantir
- Our example: Oracle HQ relocation[3]
  - Shift 1000 publishing jobs from CA to TX
  - Adjust to keep compensation the same between states

Conclusion

- Points to consider
    - Too big to ignore
    - Working from home cuts both ways
- Economic forecasts can be difficult
    - The outbreak of COVID-19
    - The election of a new president
    - General uncertainty about the economy
- REMI can help
    - Forecasts: Macro modeling used to clarify, calculate, and communicate
    - Simulations: What-if scenarios
    - Dynamic results

what does REMI say? ^{sm}

Citations

1. "California Gross domestic product (GDP) (millions of current dollars)". U.S. Department of Commerce, Bureau of Economic Analysis. Retrieved December 23, 2020-- new statistics for 2020:Q3.

2. Ehrlich, Gabriel M. "The U.S. Economic Outlook for 2021-2022 -- Executive Summary: February 2021." *College of Literature, Science, and the Arts, University of Michigan*, Research Seminar of Quantitative Economics, University of Michigan, 19 Feb. 2021, lsa.umich.edu/content/dam/econ-assets/Econdocs/RSQE%20PDFs/Exec_Sum_Feb_2021.pdf.

3. DiFurio, Dom. "Oracle Moving Its HQ from California to Texas, like HP Enterprise, Tesla CEO." *Chicagotribune.com*, Chicago Tribune, 14 Dec. 2020, www.chicagotribune.com/business/ct-biz-oracle-california-texas-headquarters-20201214-rjxn73e7dffd3iuq6gfjjecery-story.html.

Q & A

Tobias Reynolds, Economic Analyst
Tobias.Reynolds@remi.com

May Lin, Economic Analyst
May.Lin@remi.com

Ying Zhang, Analyst
Ying.Zhang@remi.com

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