

# **Southeast Michigan's Long-Run Demographic and Economic Future: Baseline and Alternative Scenarios**



Presented to the Southeast  
Michigan Council of Governments  
October 13, 2022

**Research Seminar in Quantitative Economics**



# Forecast Background

# How the Forecast Was Produced

- The baseline forecast was produced by the University of Michigan's Research Seminar in Quantitative Economics (RSQE) in partnership with the Michigan Department of Transportation (MDOT)
- The forecast is the product of:
  - The Regional Economic Models, Inc. (REMI) TranSight economic and demographic forecasting and simulation model
  - RSQE's U.S. and Michigan forecasts and forecasting judgment
  - Comments and insights from SEMCOG and other local Metropolitan Planning Organizations and regional planning organizations
- The data for 2019 and earlier in our figures and tables are generally estimates from the REMI model and do not include subsequent data revisions
- We worked with SEMCOG staff to develop four alternative scenarios for the southeast Michigan region

# Summary of U.S. Forecast

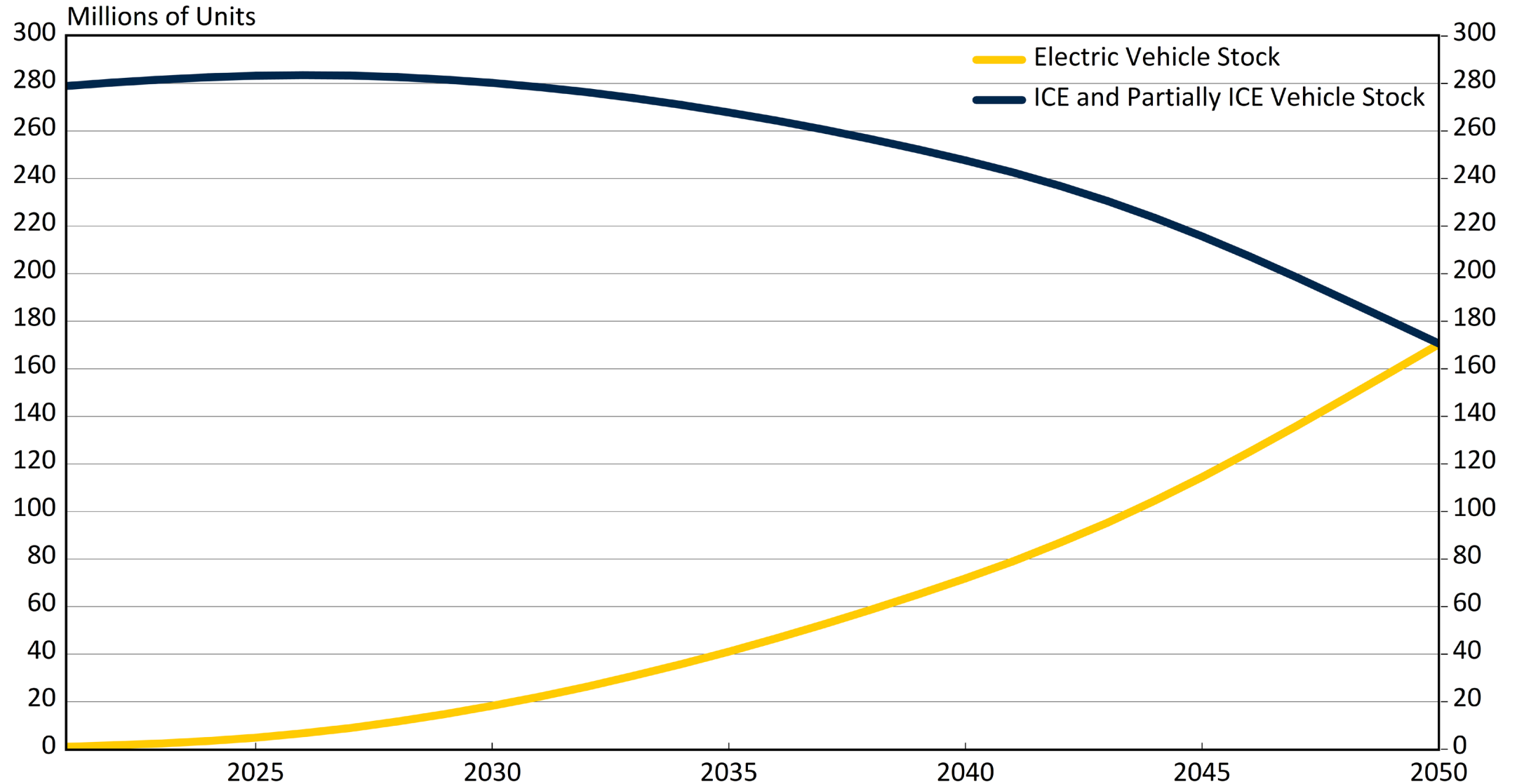
- We did not change REMI's national population forecast
- We modified the REMI model's national GDP forecast in several ways
  - We used key parts of RSQE's internal U.S. economic forecast through 2026
  - From 2026–2050, we targeted the CBO's long-run forecast for certain variables, aiming for smooth transitions from our internal forecast
  - We held the shares of major components of GDP approximately constant at 2030 values
  - We increased social insurance and personal taxes
  - We adjusted productivity by industry



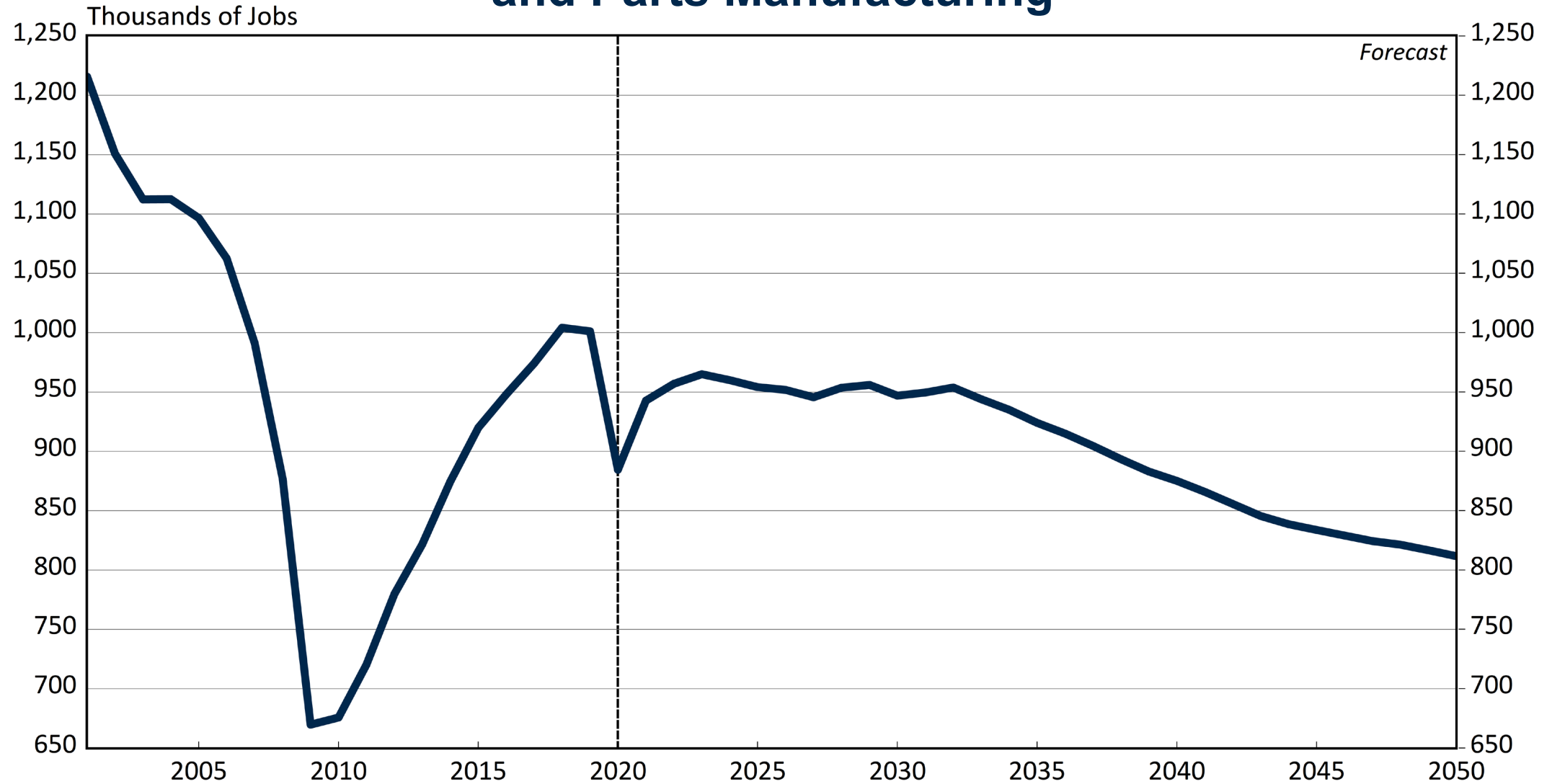
# Electric Vehicle Forecast

- Assumption of 9 percent U.S. new vehicle sales in 2025 will be totally EV
- Assume 24 percent in 2030
- Assume 54 percent in 2040
- Assume 100 percent in 2050
- Newly sold electric vehicles replace the existing fleet with a delay
  - Legacy (non-electric) vehicles will remain in the fleet long past 2050

# U.S. Light Vehicle Fleet by Power Type

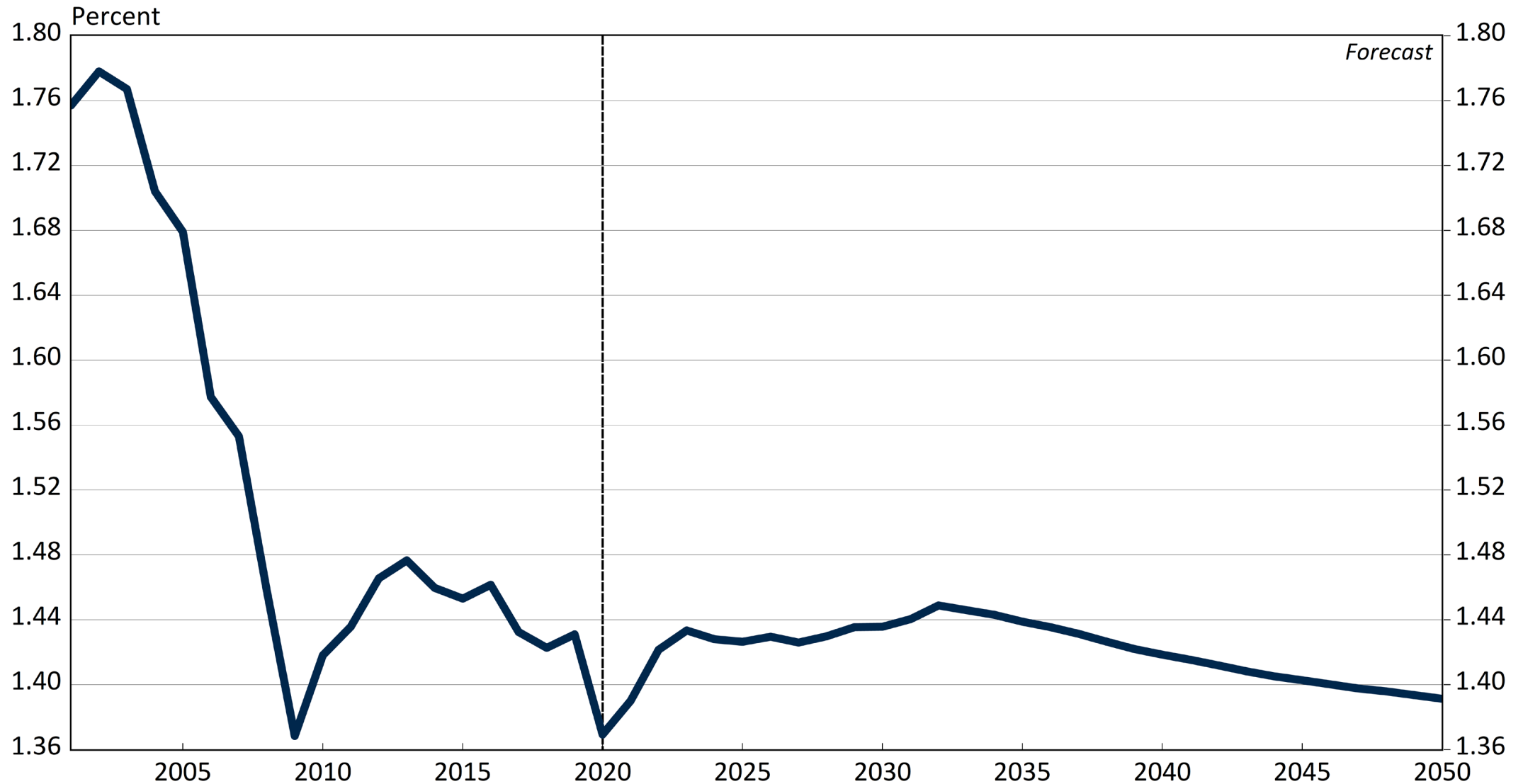


# U.S. Employment in Motor Vehicles, Bodies, and Parts Manufacturing

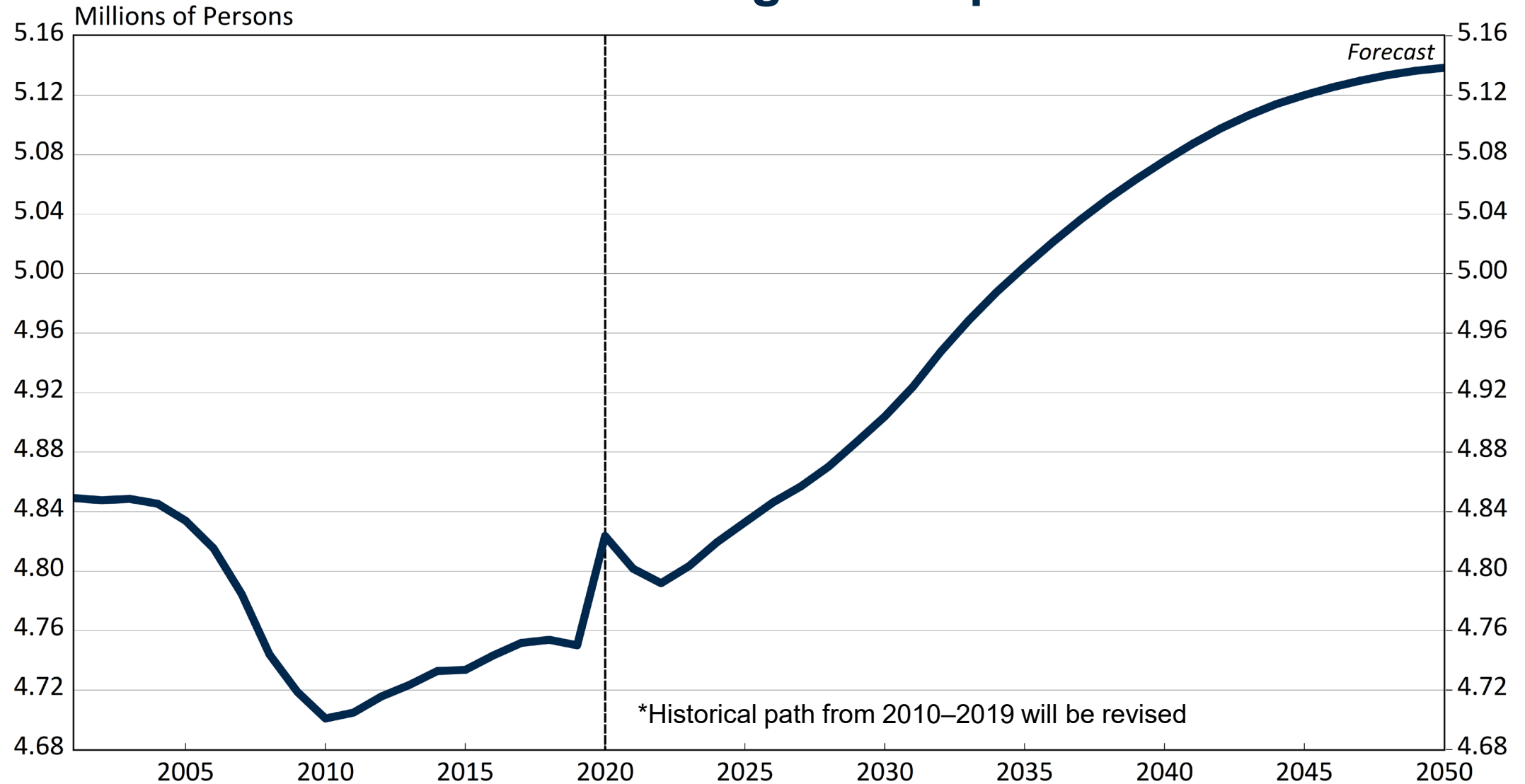


# **Southeast Michigan (SEMCOG) Baseline Forecast**

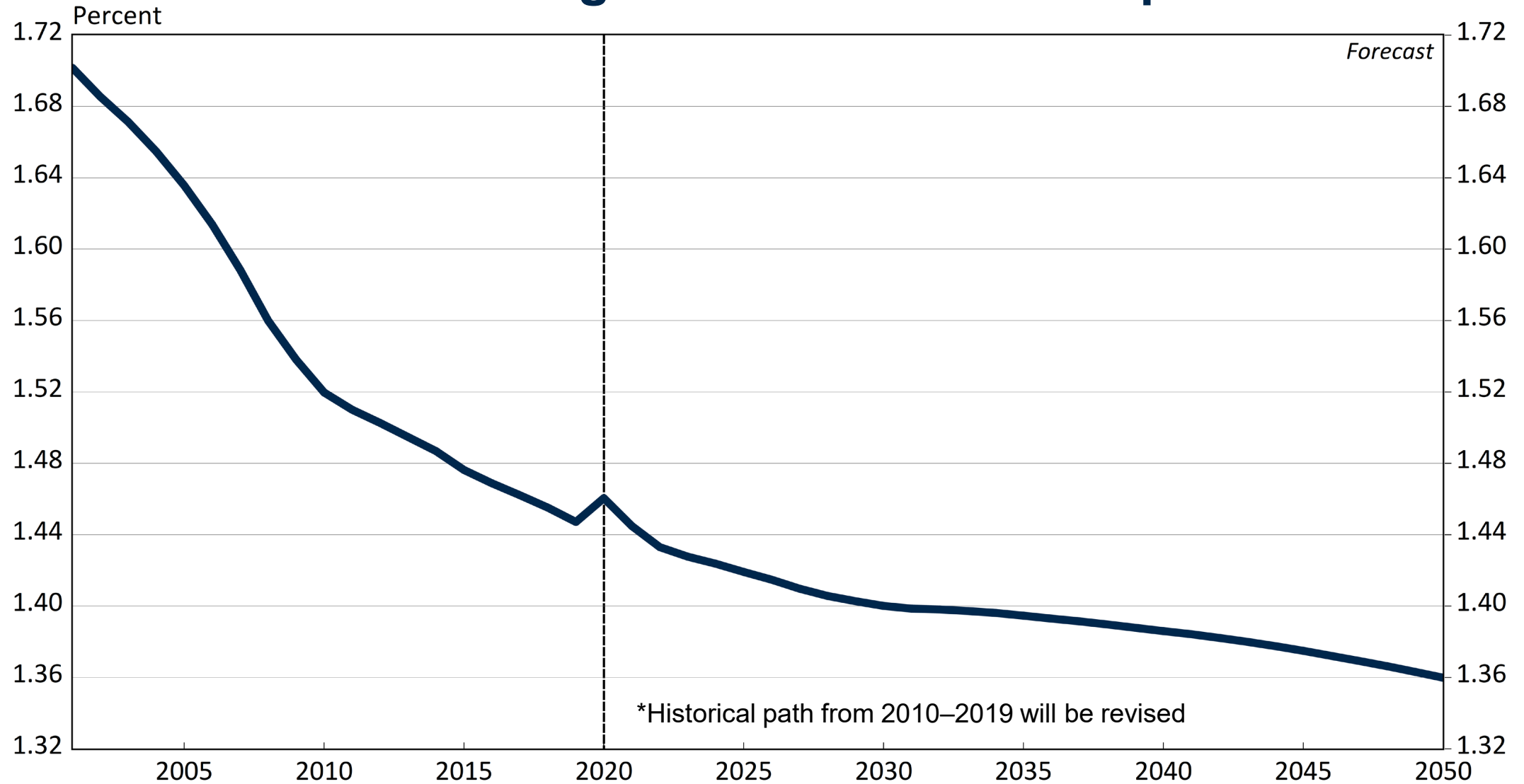
# Southeast Michigan's Share of U.S. Real GDP



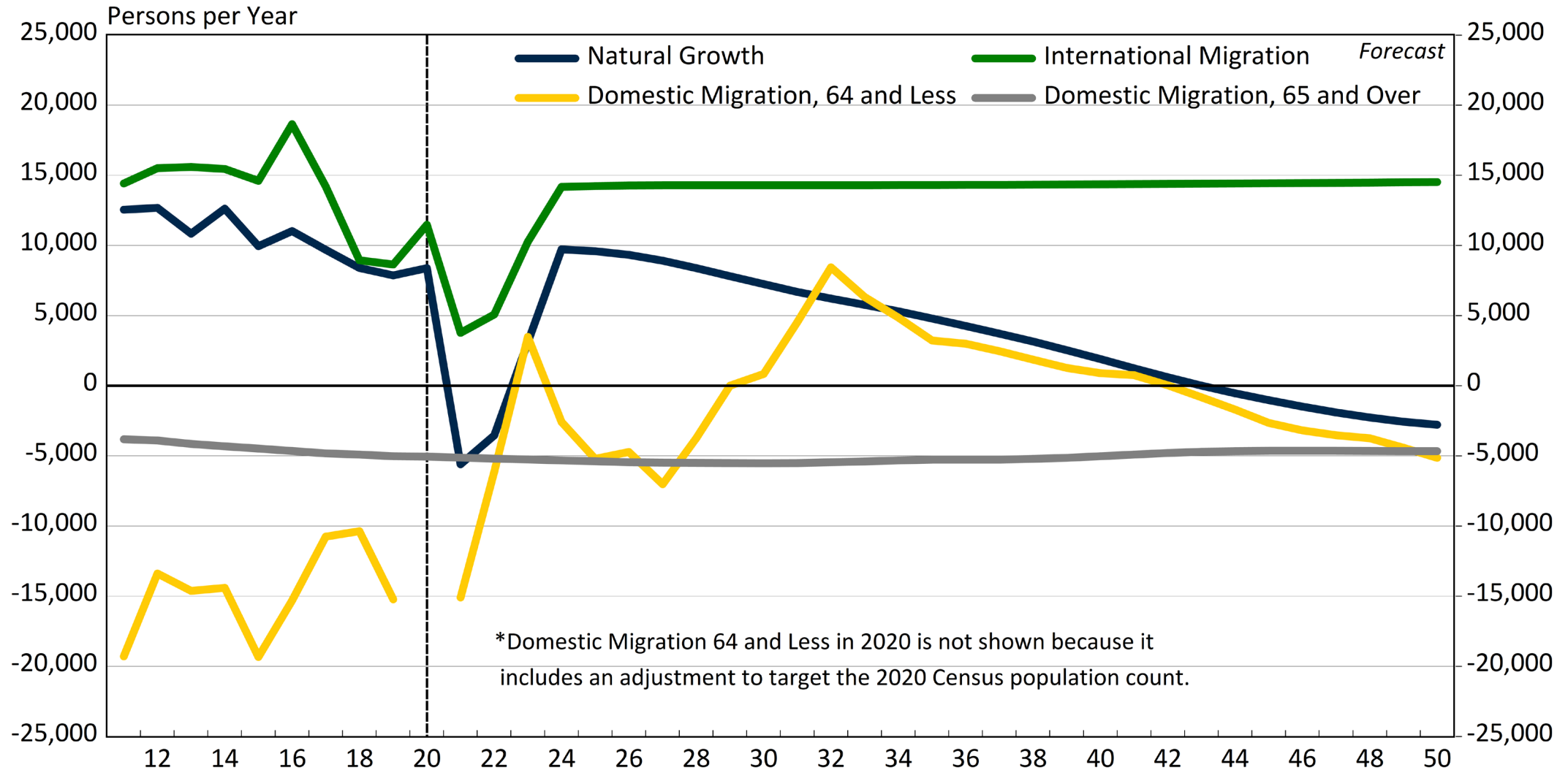
# Southeast Michigan's Population



# Southeast Michigan's Share of U.S. Population

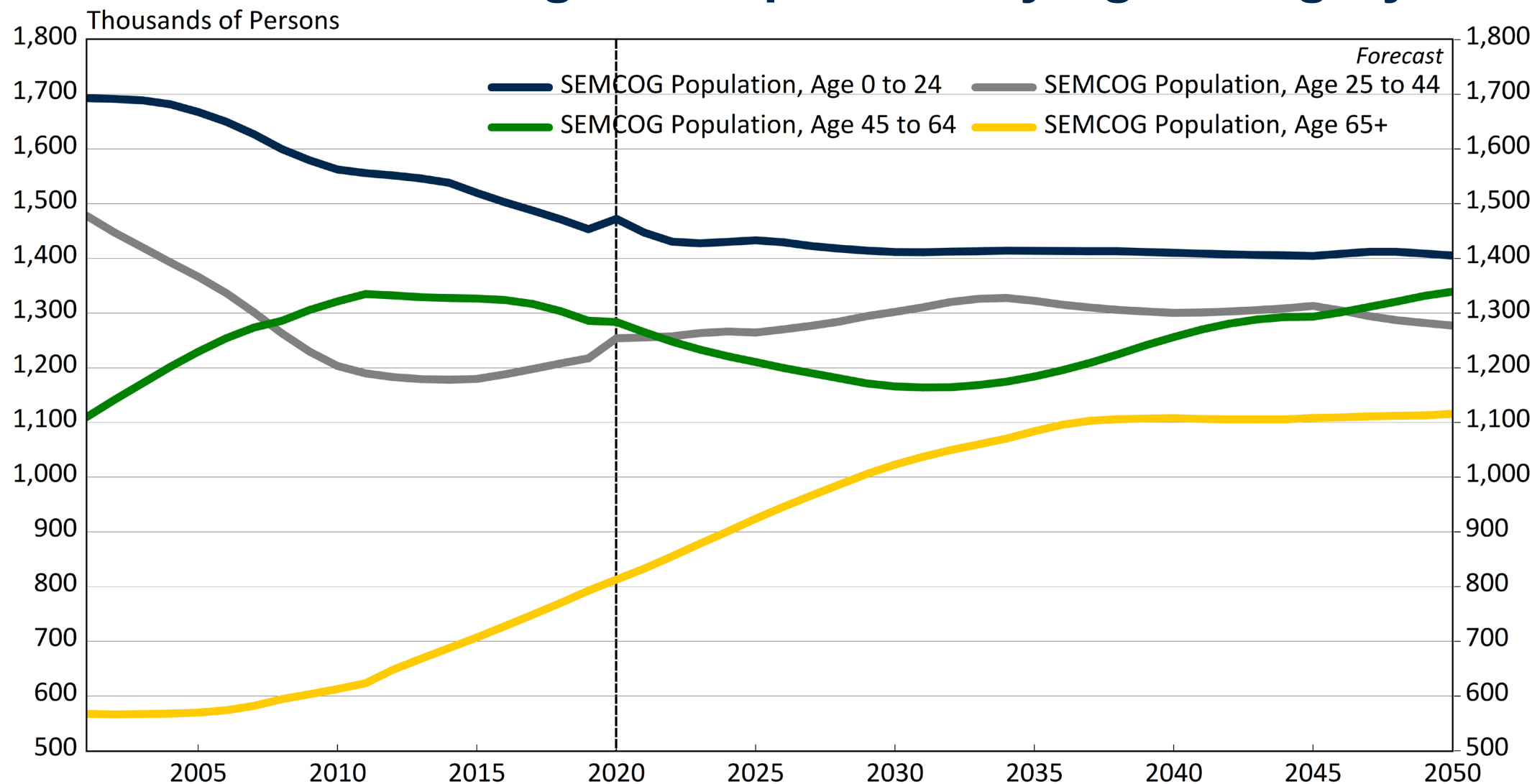


# Components of Southeast Michigan's Population Growth

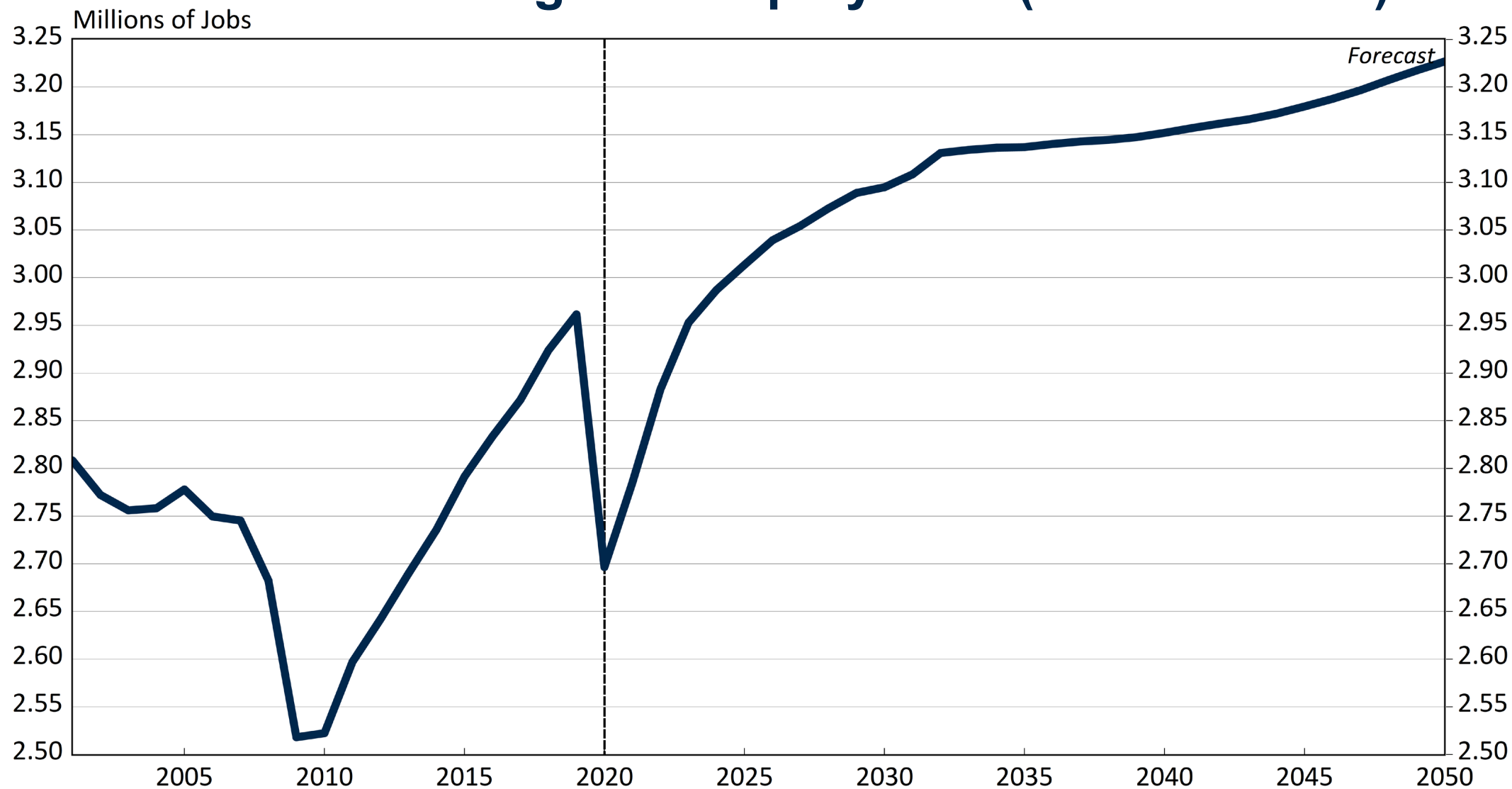




# Southeast Michigan's Population by Age Category



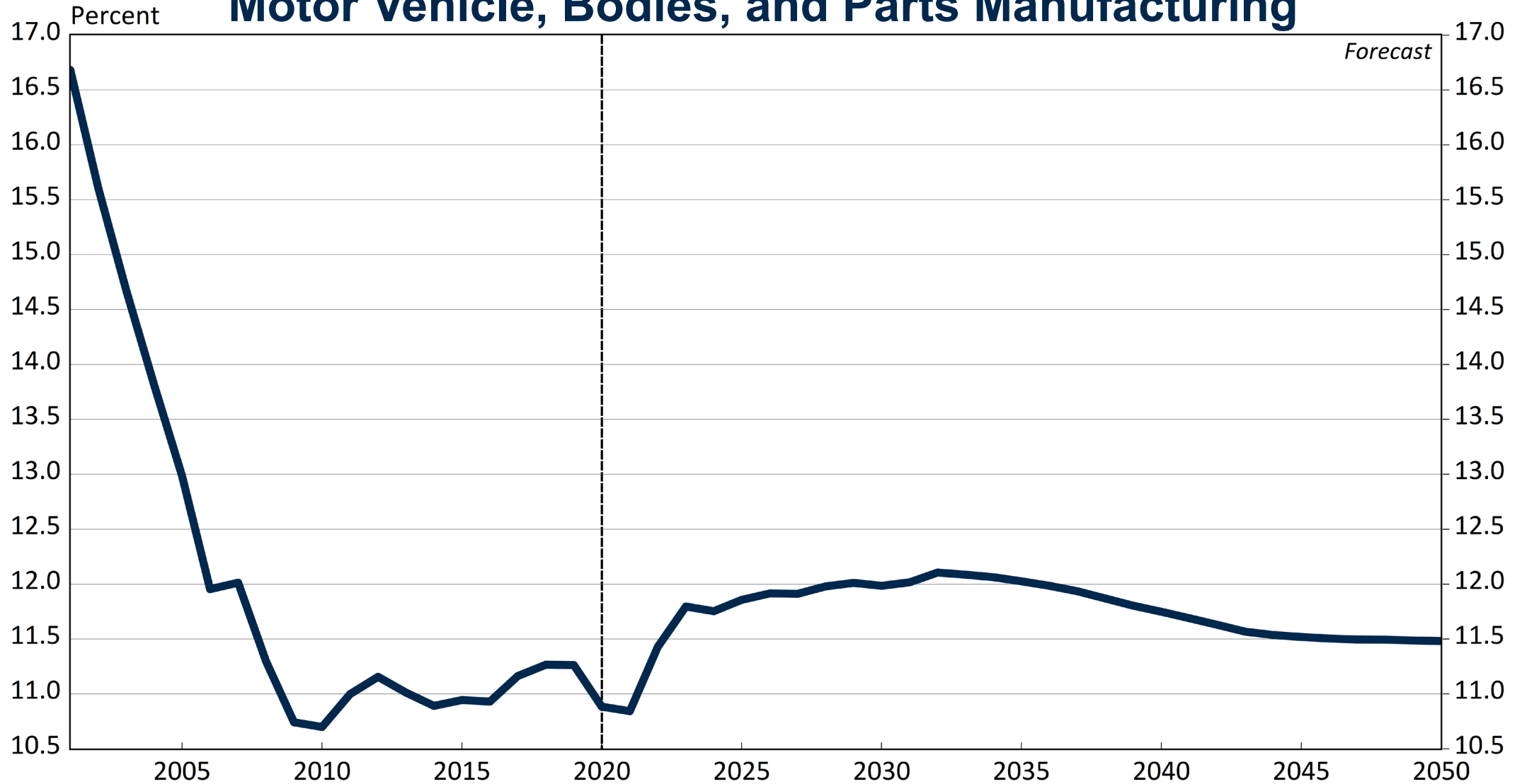
# Southeast Michigan's Employment (BEA Measure)



# Southeast Michigan's Share of U.S. Employment



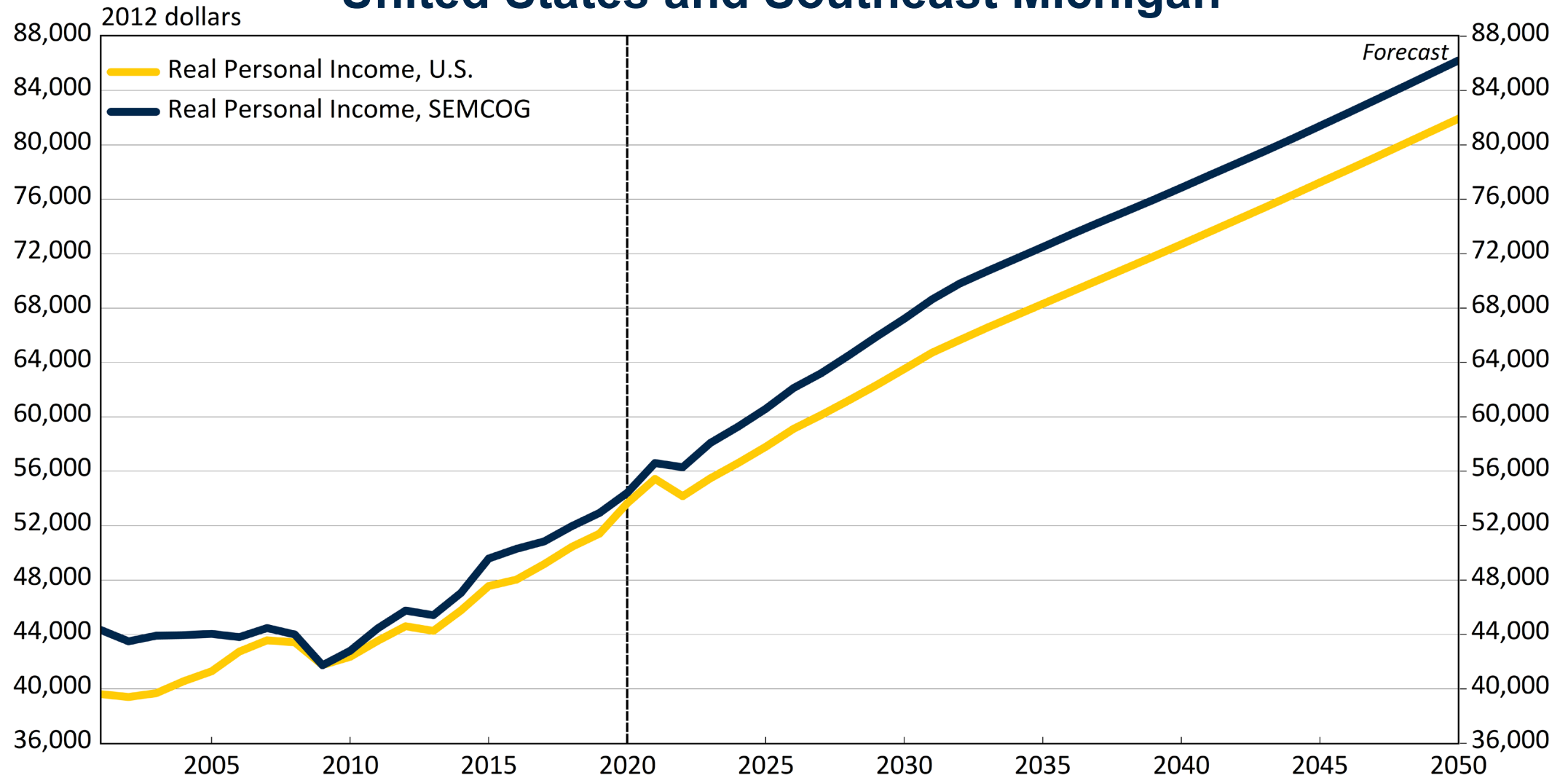
# Southeast Michigan's Share of U.S. Employment in Motor Vehicle, Bodies, and Parts Manufacturing



# Southeast Michigan's Employment Growth by Selected Industry Groups

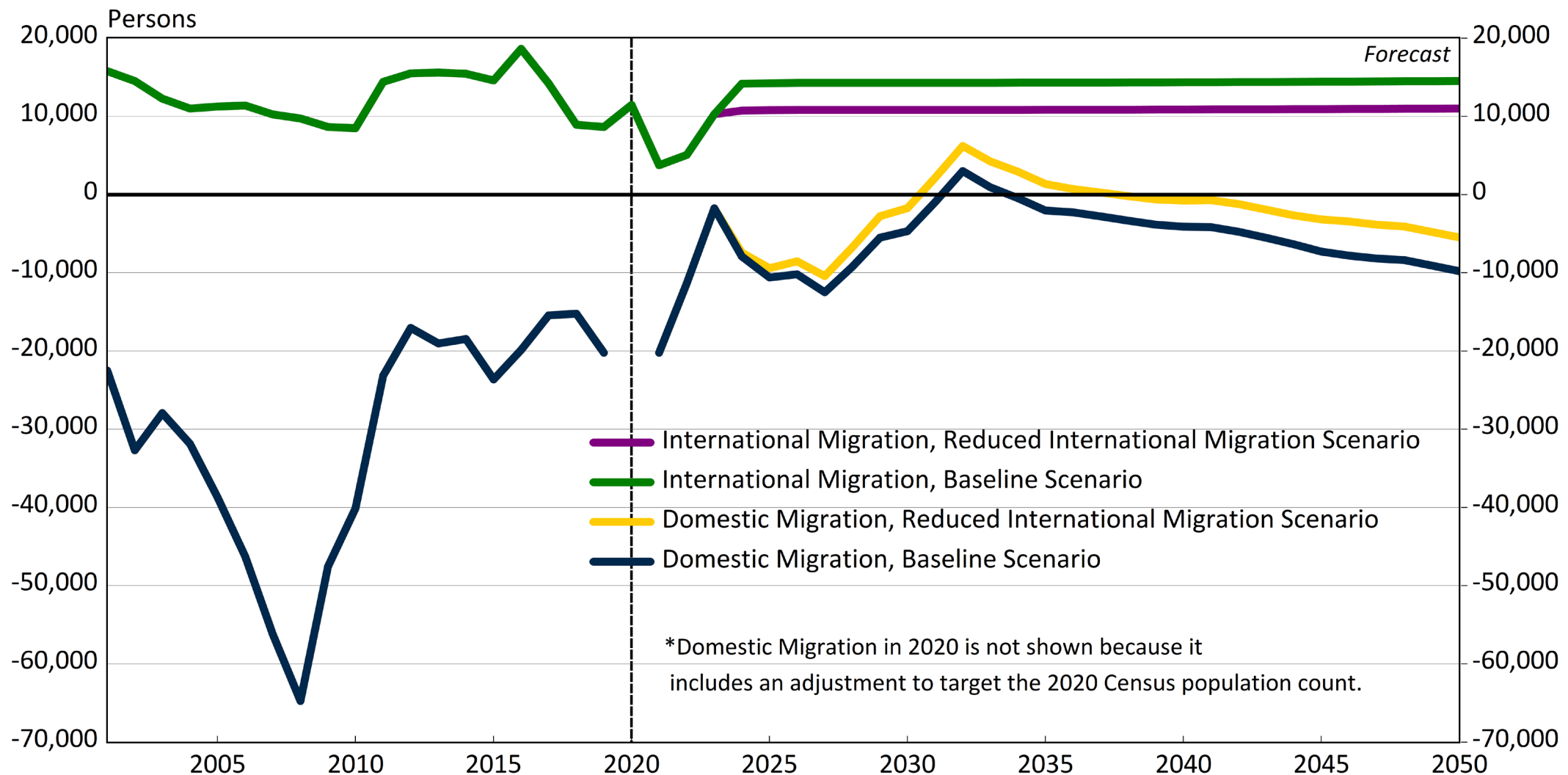
Employment by Selected Industry Groups	Average Annual Percent Change, 2019–2050
Construction	0.66%
Transportation, Warehousing, Wholesale Trade, and Utilities	0.63%
Private Education and Health	0.62%
Administrative Support and Waste Management	0.54%
Information, Financial Activities, Professional Services, and Management of Companies	0.52%
Leisure and Hospitality	0.17%
Government	0.15%
Other Private Services	0.14%
Other (non-Transportation Equipment) Manufacturing	-0.10%
Natural Resources, Mining, and Agriculture	-0.30%
Motor Vehicle Manufacturing	-0.61%
Retail Trade	-0.91%
<i>Addenda:</i>	
Total Jobs	0.28%

# Real Personal Income per Capita, United States and Southeast Michigan



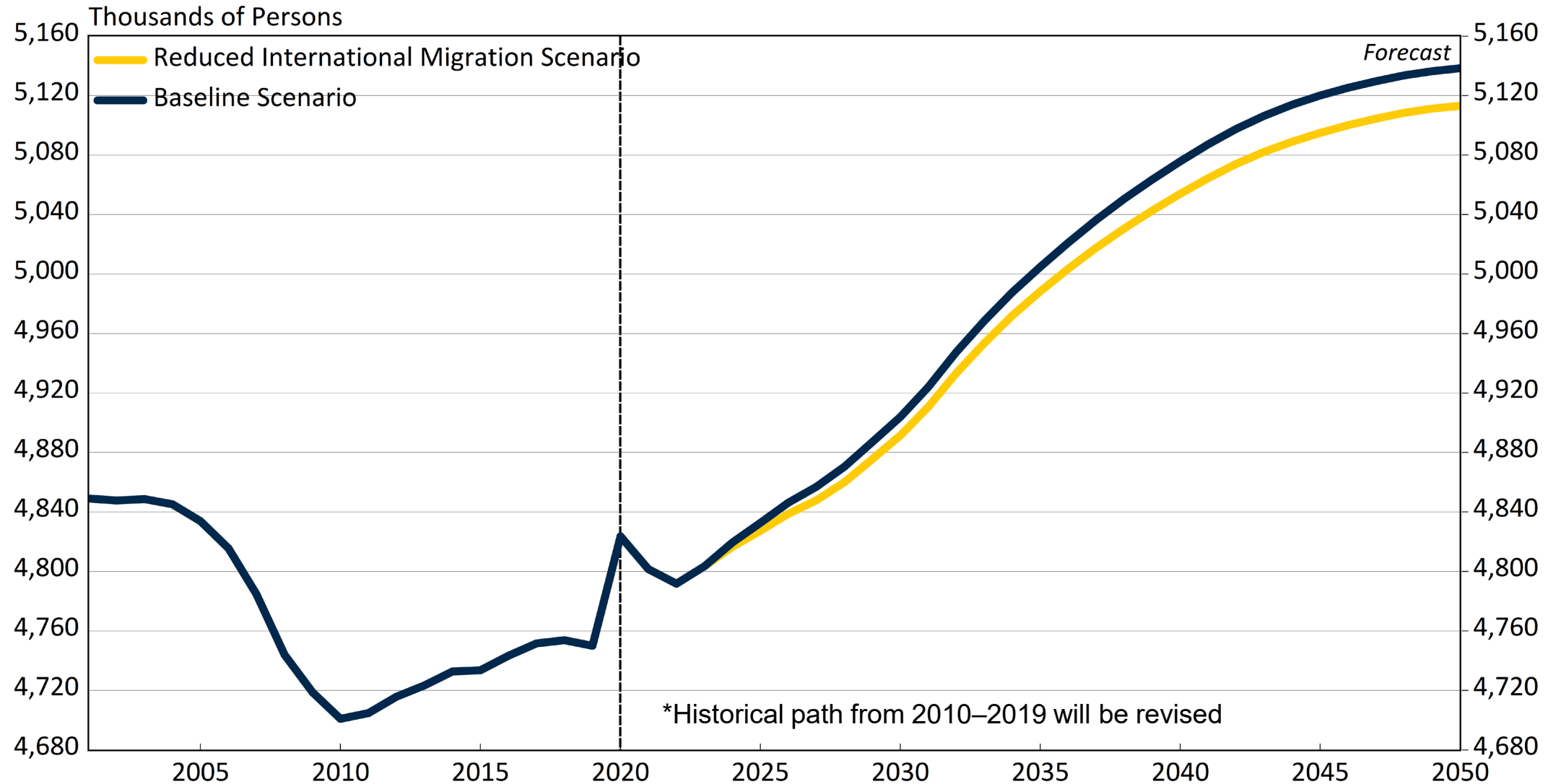
# **Reduced International Migration Scenario**

# Domestic and International Migration to Southeast Michigan

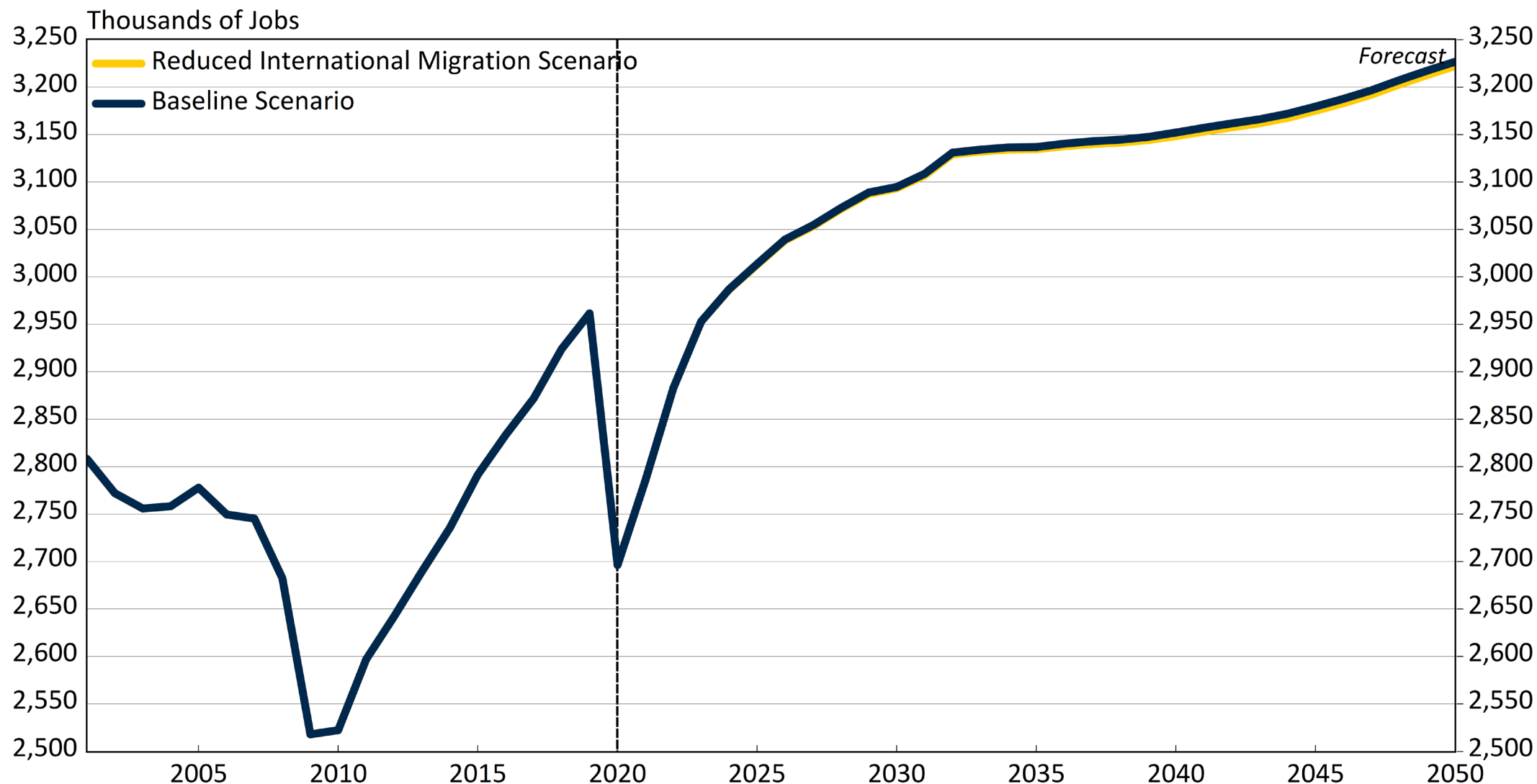




# Total Population in Southeast Michigan

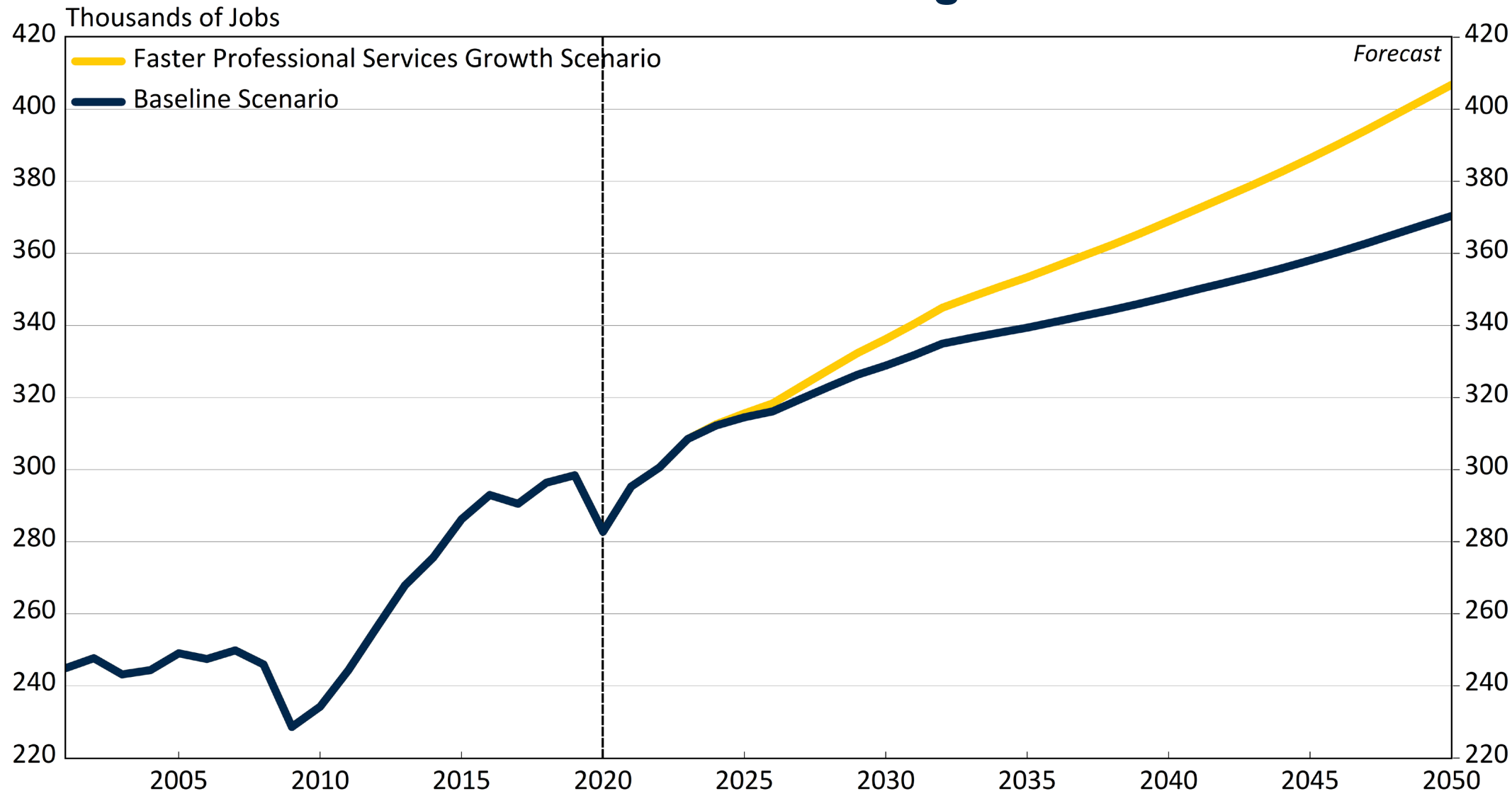


# Total Employment in Southeast Michigan

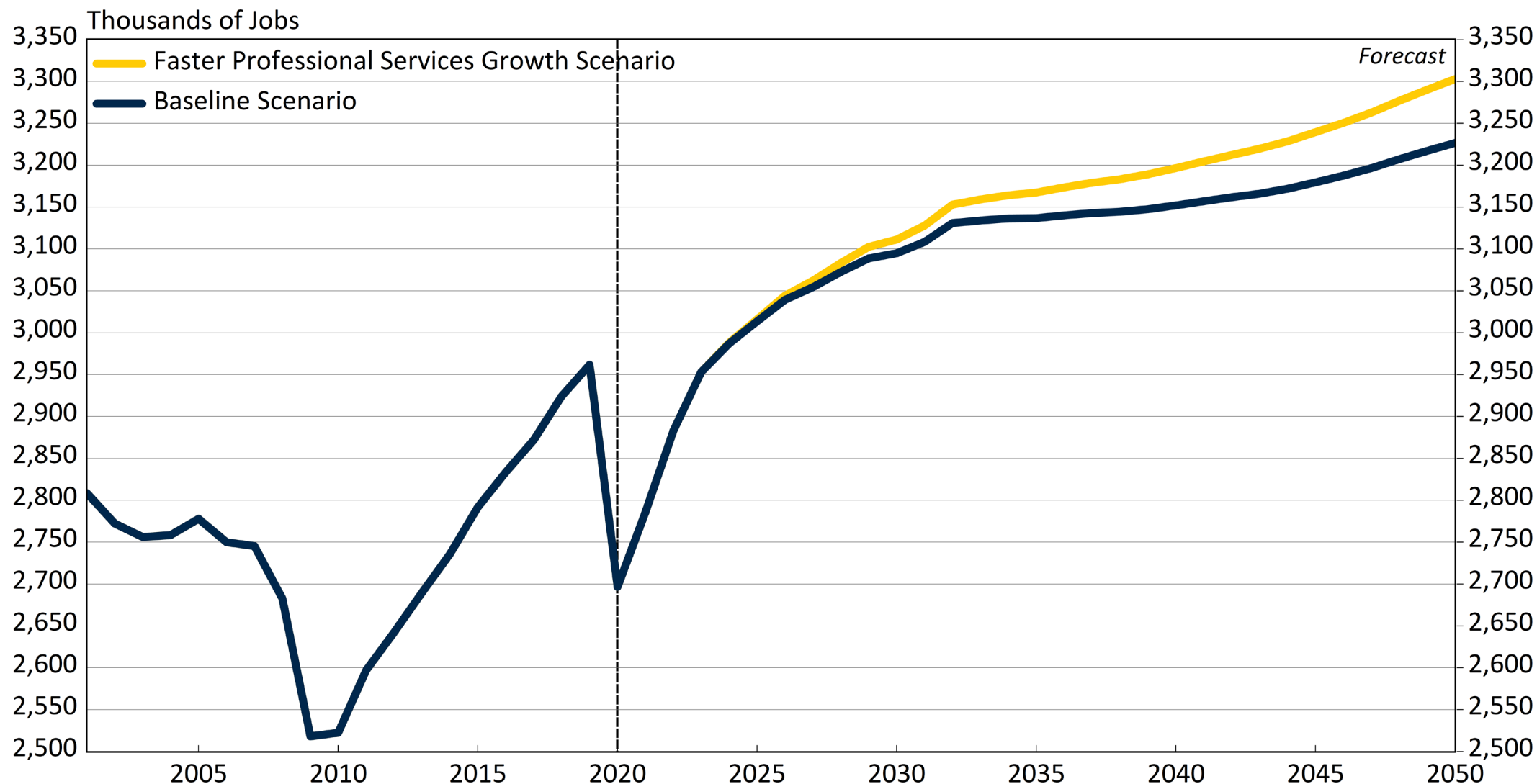


# **Faster Professional Services Growth Scenario**

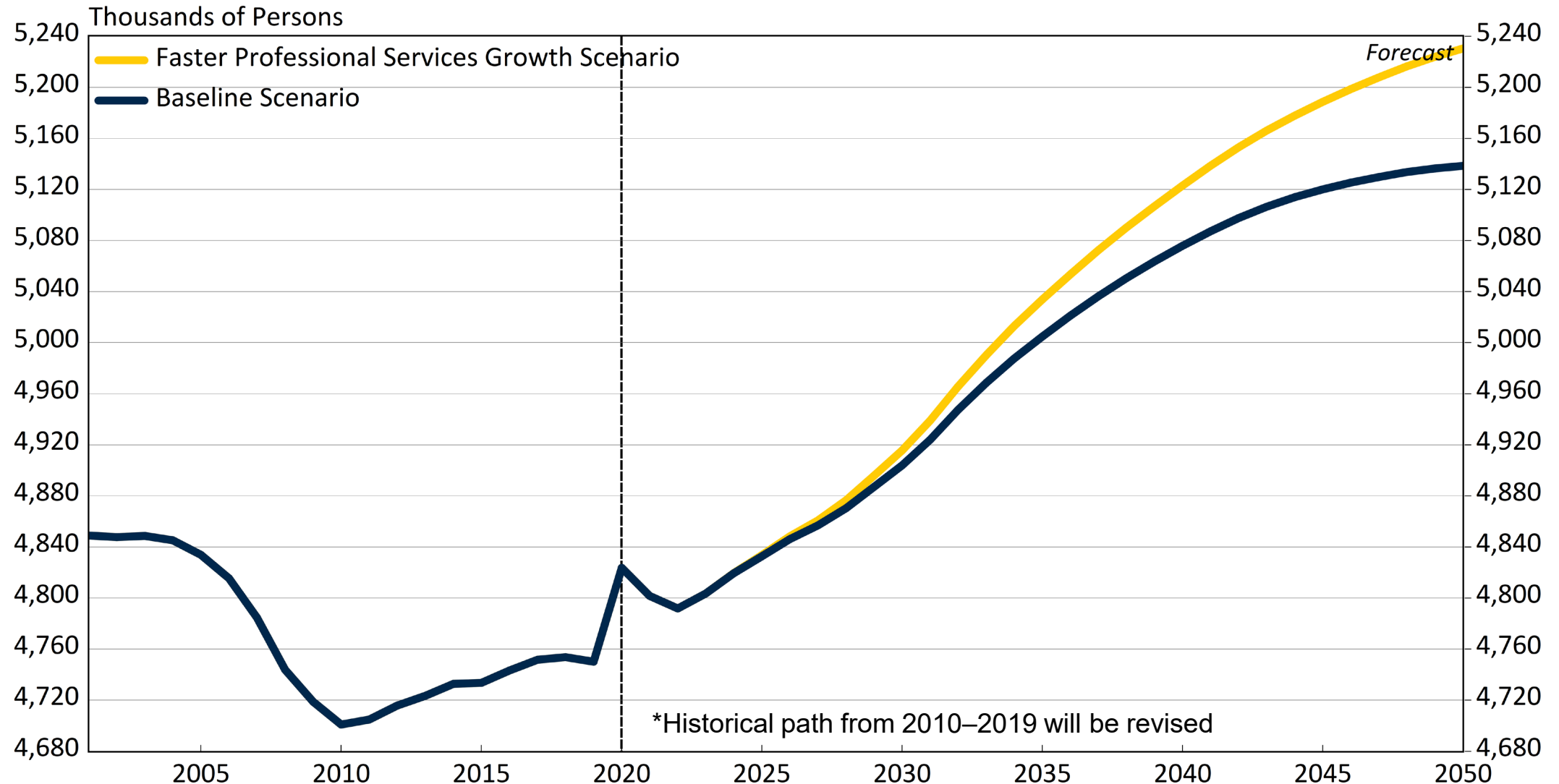
# Employment in Professional and Technical Services in Southeast Michigan



# Total Employment in Southeast Michigan

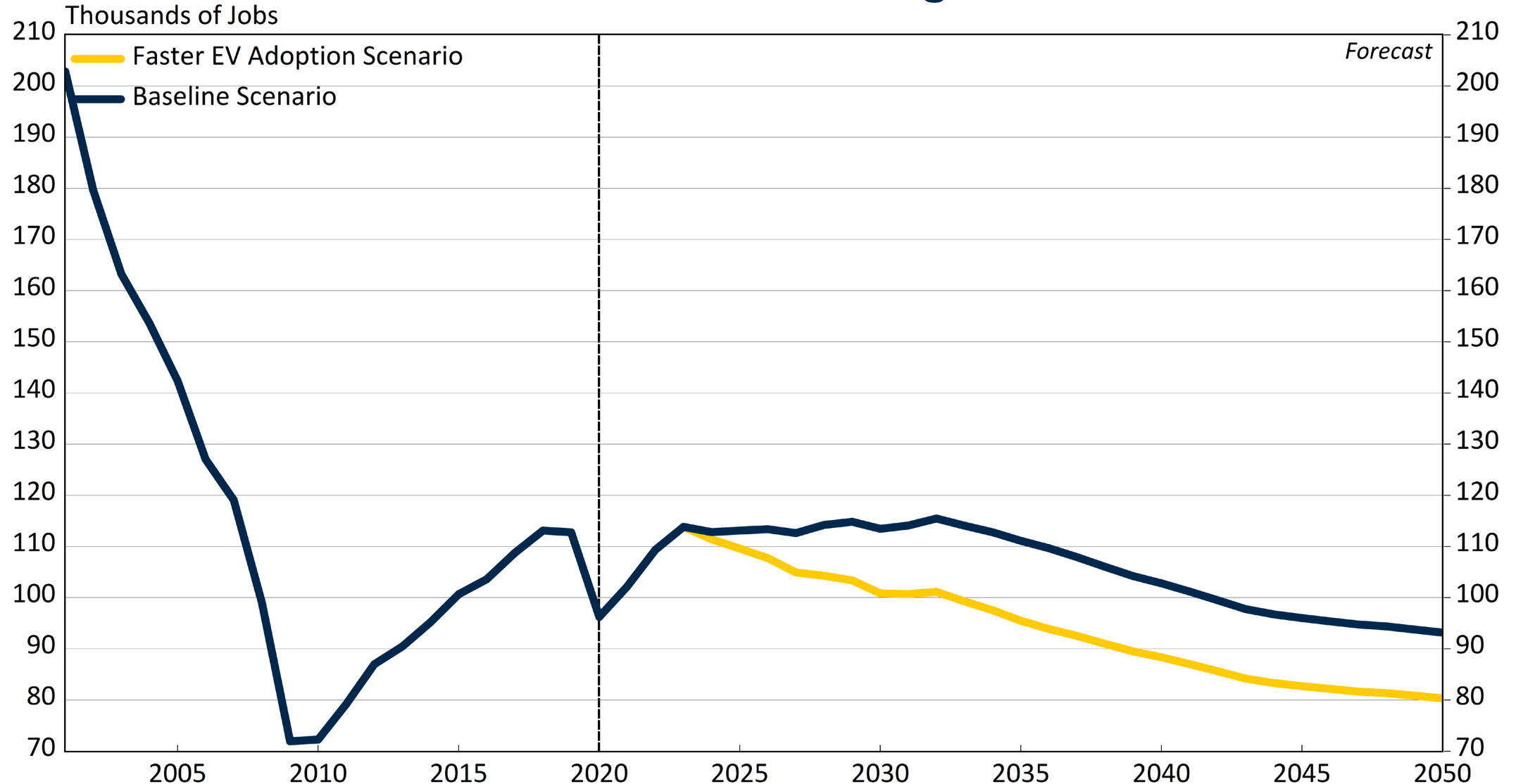


# Total Population in Southeast Michigan



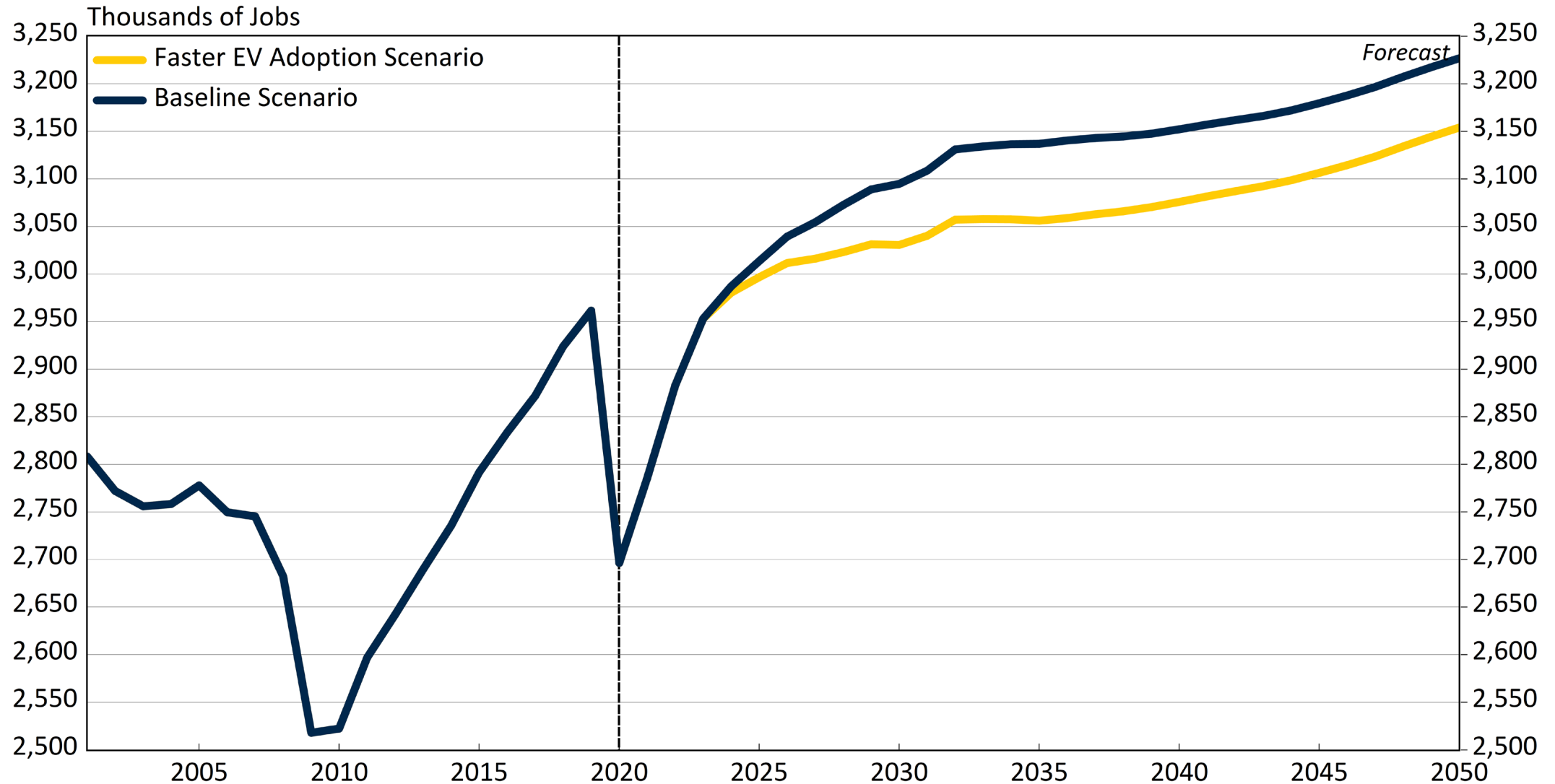
# **Faster EV Adoption Scenario**

# Employment in Motor Vehicle, Bodies, and Parts Manufacturing in Southeast Michigan

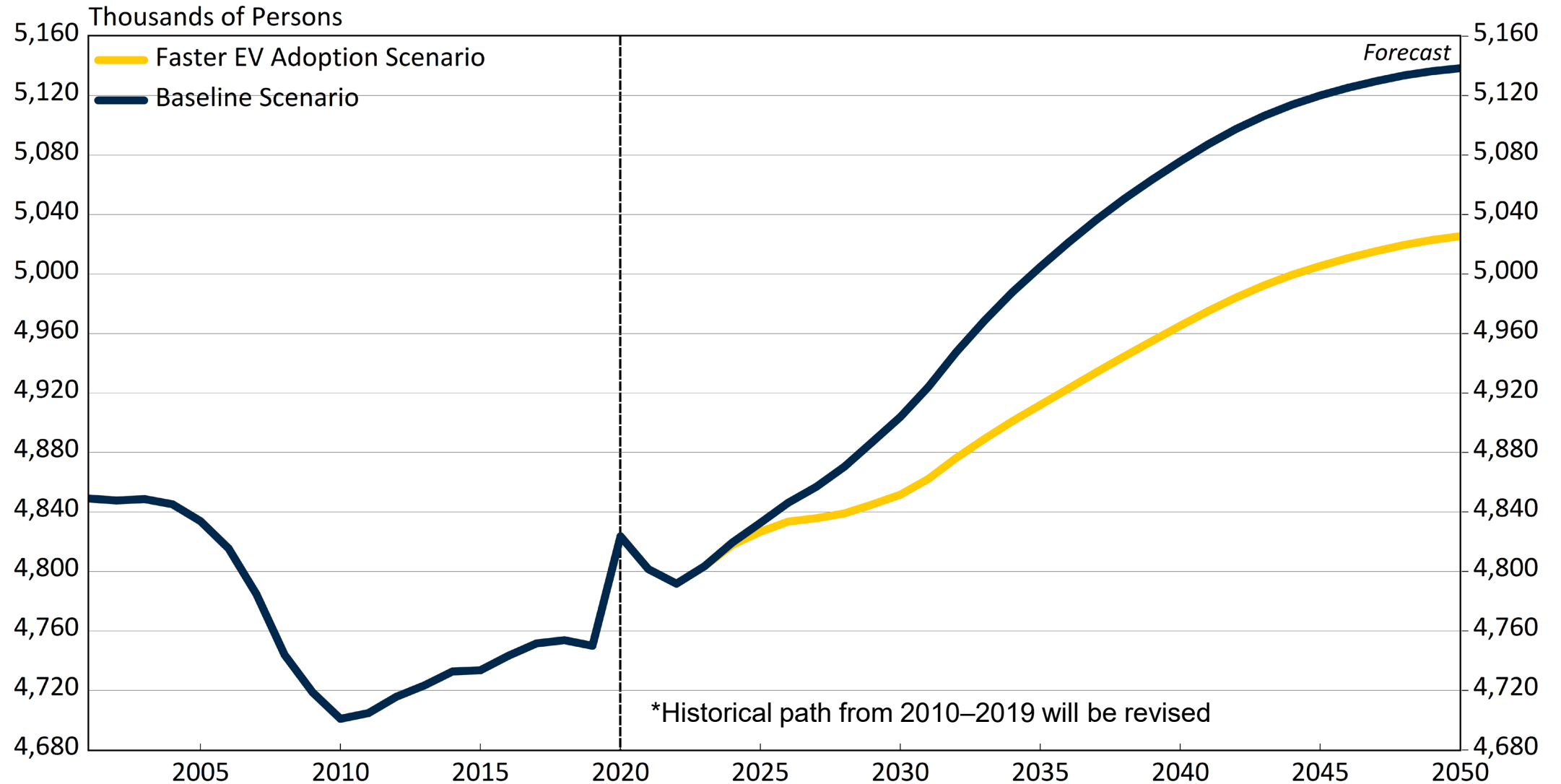




# Total Employment in Southeast Michigan

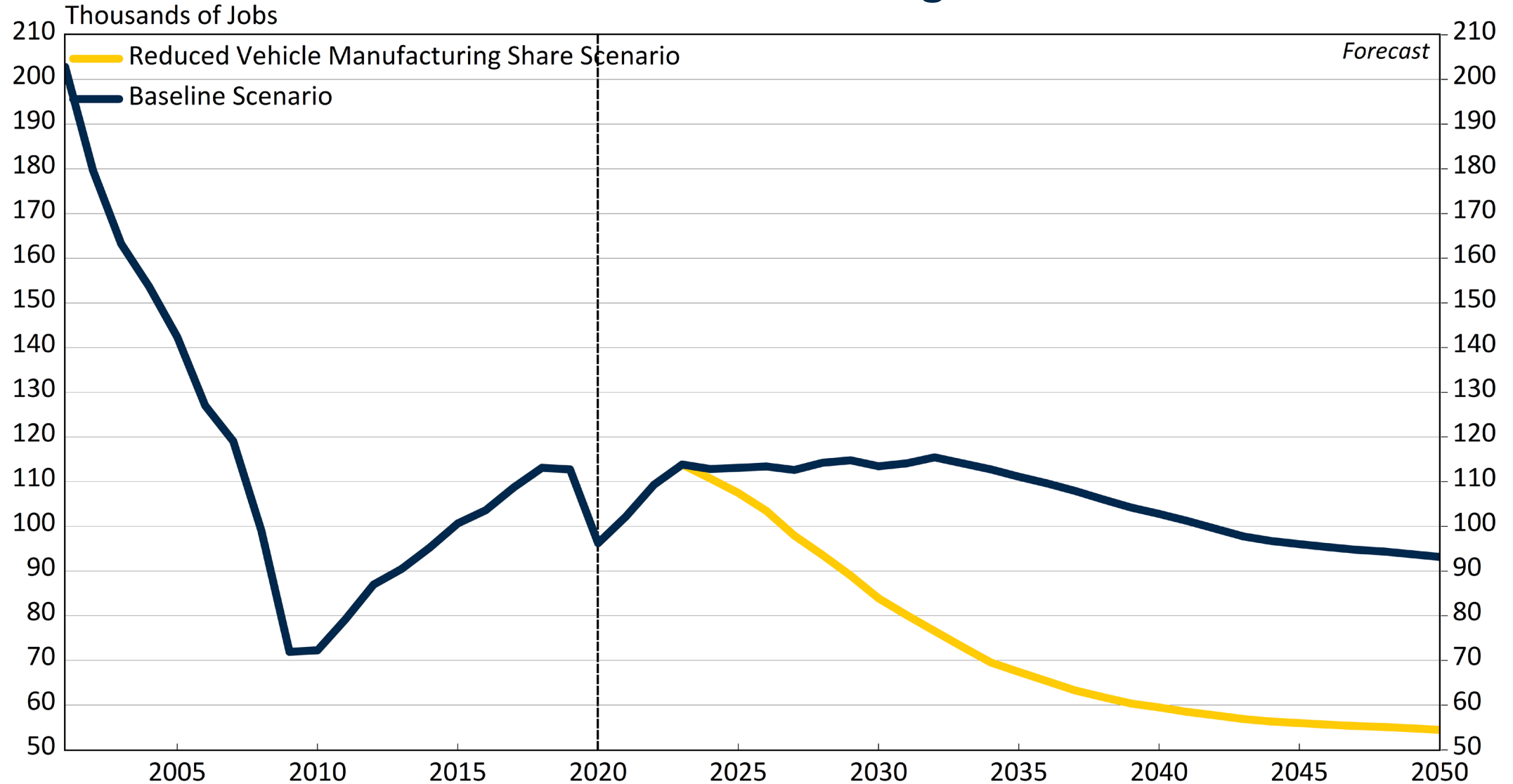


# Total Population in Southeast Michigan

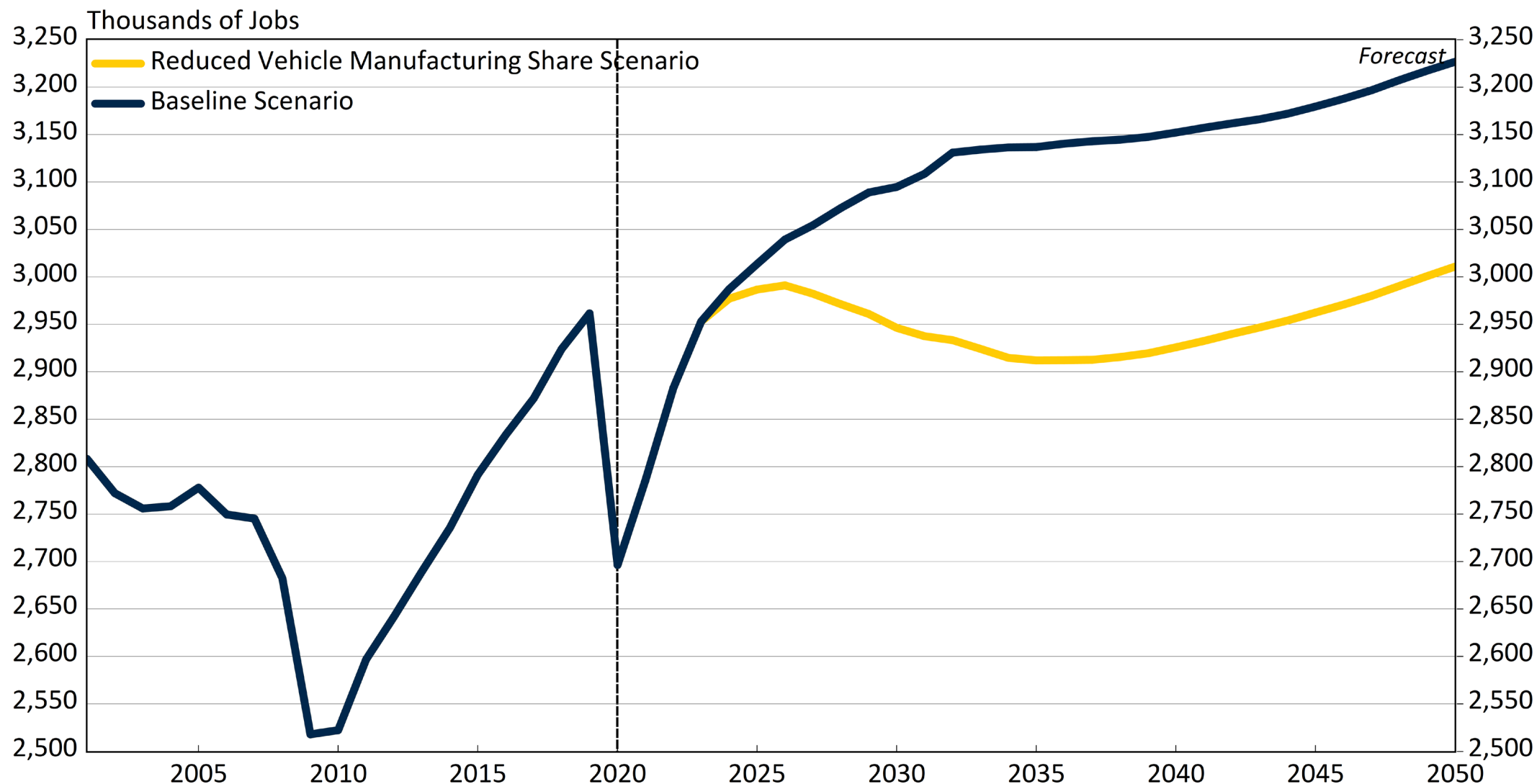


# **Faster EV Adoption and Reduced Vehicle Manufacturing Share Scenario**

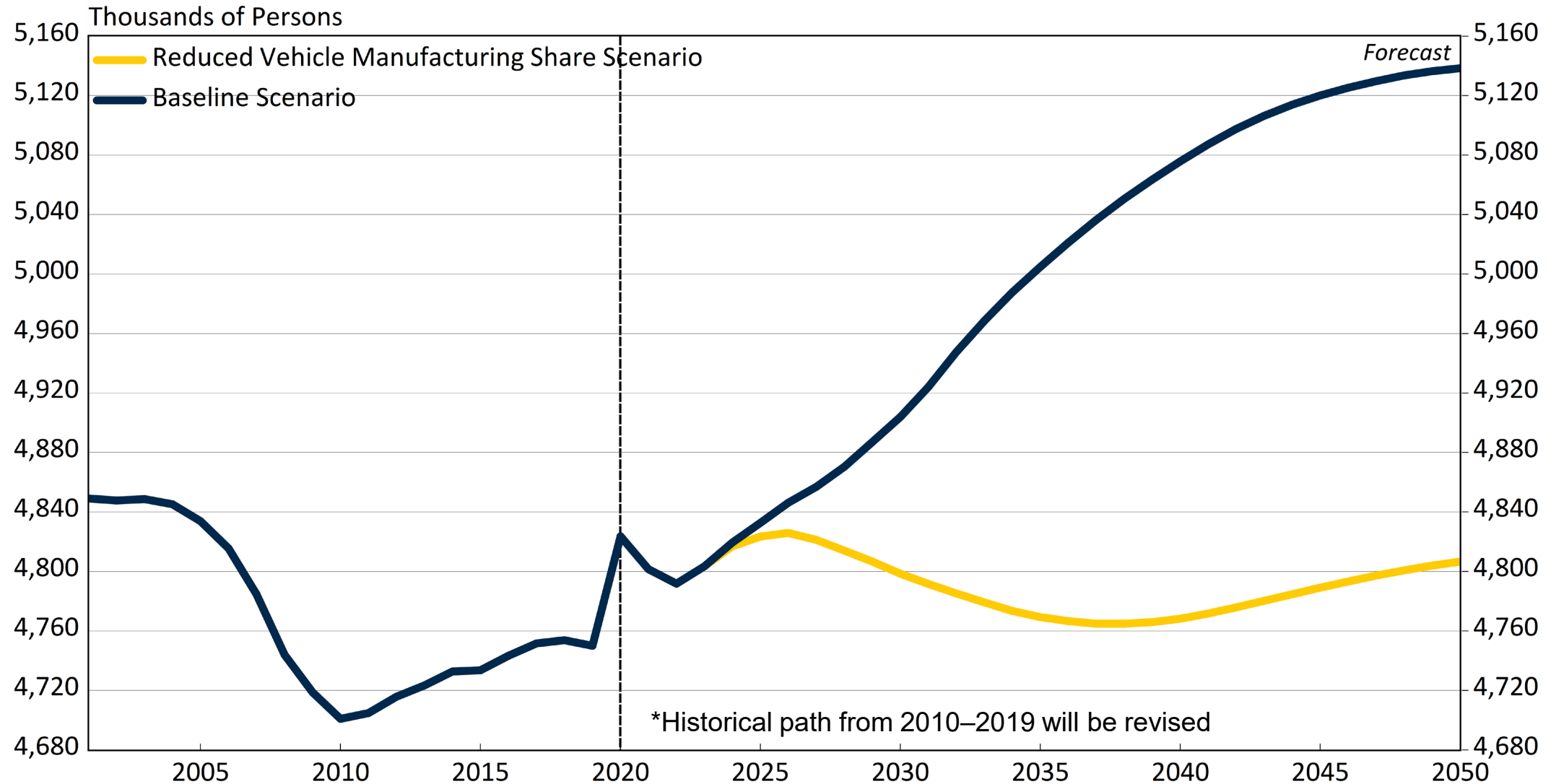
# Employment in Motor Vehicle, Bodies, and Parts Manufacturing in Southeast Michigan



# Total Employment in Southeast Michigan



# Total Population in Southeast Michigan





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## SAVE THE DATE!

The 70<sup>th</sup> Annual Economic Outlook Conference will take place on November 17–18, 2022 in Ann Arbor. The conference will feature RSQE's forecasts of the U.S. and Michigan economies plus a range of leading speakers from government, academia, and the private sector.

**For more information: [lsa.umich.edu/econ/rsqe](https://lsa.umich.edu/econ/rsqe)**

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