# Informing Legislative & Tax Decisions: Economic and Fiscal Analysis with REMI Tax-PI

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what does REMI say?℠

# About Us

We are the nation's leader in dynamic local, state and national policy modeling.

From the start, REMI has sought to improve public policy through economic modeling software that informs policies impacting our day-to-day lives.

We were founded in 1980 on a transformative idea: government decision-makers should test the economic effects of their policies before they're implemented.

At REMI, we're inspired by a single goal: *improving public policies*.



# Today's Economic and Fiscal Analysis Roadmap

1

## Potential questions on the table

What DORs and legislative fiscal offices are being asked heading into 2027

2

## What it takes to answer them

Why a static score isn't enough, and what a credible analysis needs

3

## How Tax-PI models them

Policy input, economic response and fiscal feedback, plus a live Ohio walkthrough

4

## Informing tax policy impacts

Framing outputs for legislators, budget staff, local governments and the public

The flow: the questions you're being asked → answers you can defend → findings decision-makers can act on

# Part 1 of 4: Potential Questions on the Table

What revenue departments and legislative fiscal offices are being asked heading into 2027

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# Five Potential Questions on the 2027 Agenda

| | | |
|---|---|---|
| **Federal policy** | 1 | What are the revenue and economic effects of imposed and/or change federal policy changes? |
| **Income tax structure** | 2 | How do changes to rate levels and bracket structures affect revenue and the economy? |
| **Property tax relief** | 3 | How would relief be financed, and how would it affect local revenue and services? |
| **Federal program financing** | 4 | What are the budget and economic effects of accommodating new SNAP and Medicaid costs? |
| **Incentives and tax bases** | 5 | What is the net fiscal return on incentives, and how would new tax bases perform? |

# Five Key Questions That Inform Every Proposal

| THE POLICY QUESTIONS | | THE MODELING APPROACH |
|---|---|---|
| What will it cost, this year and in year ten? | › | Project revenues and spending year by year |
| Will the economy respond, and does that change the cost? | › | Feed behavioral responses back into the tax bases |
| What happens to jobs, wages and population? | › | Link the budget to a full regional economic model |
| Who gains and who pays? | › | Report detail by industry, region and demographic group |
| How do competing proposals compare? | › | Run every scenario against the same baseline and budget rules |

# Part 2 of 4: What It Takes to Answer Them

Why a static score is only the starting point

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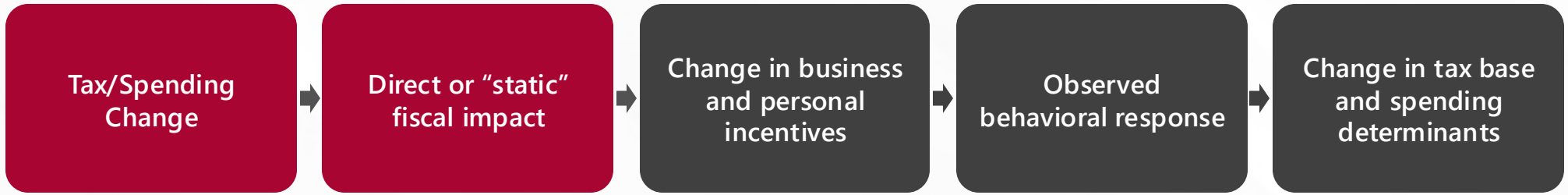
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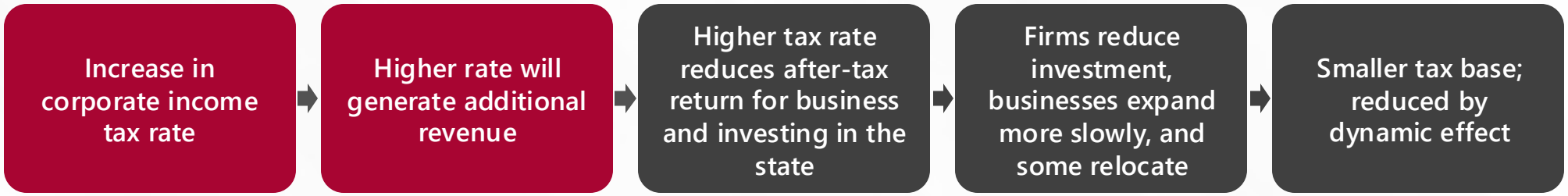
## Communicating tax policy impacts

Framing outputs for legislators, budget staff, local governments and the public

# A Static Score Stops at the Second Box




*(the cycle repeats as behavior continues to adjust)*



# How the Feedback Loop Works

A fiscal change moves the economy, and the economy moves the fiscal result.




Example: a lower income tax rate raises household income and spending; broader economic activity then returns part of the revenue through wider tax bases.

# Part 3 of 4: How Tax-PI Models Them

From a policy input, to the economy's response, to the fiscal feedback

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# How REMI Tax-PI Works

Tax and budget choices move the economy; the response feeds back into the budget.

**1**

### Define policy

Change income, sales, property or corporate taxes, or government spending.

**2**

### Economic response

Tax PI simulates consumption, investment, jobs, prices, migration and output.

**3**

### Tax bases change

Income, sales, property values, profits and other revenue drivers move with the economy.

**4**

### Fiscal feedback

Revenues and spending requirements update year by year; budget rules set the offset.

**5**

### Compare results

Measure revenue, budget balance, jobs, GDP, income and population against the baseline.

STATIC ANALYSIS
Tax change → initial revenue effect

›

**TAX-PI DYNAMIC ANALYSIS**
Tax change → economy → tax bases → budget

**Core idea:** economic and fiscal impacts are solved together, year by year.

# The Methodology Behind the Model

*REMI's 46-year history of rigorous academic research and software development has led to the industry standard in macroeconomic research methodology:*

1

**Input-Output**

Close analysis of inter-industry relationships

2

**General Equilibrium**

Estimate of long-run stability of the economy allows for analysis of policy decisions

3

**Econometrics**

Advanced statistical analyses underpinning the model

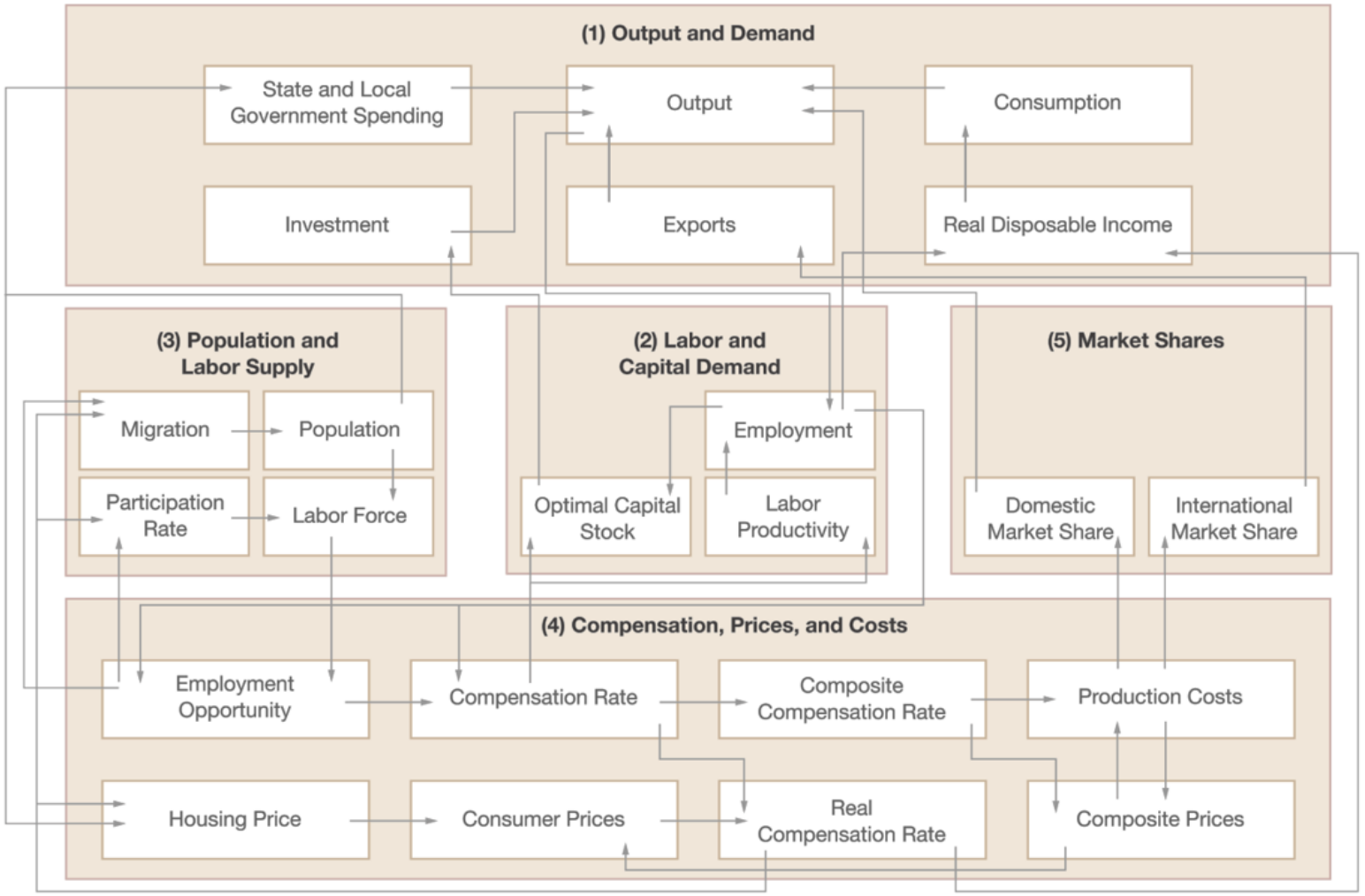
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**Economic Geography**

Effects of geographic concentration of labor and industry

**Integrated REMI Economic Modeling Approach**

# How the Model Fits Together



# A Baseline Built on Federal Data

| BEA | QCEW | Census |
| --- | --- | --- |
| • State-level data at the 70-sector detail<br>• Data on personal income, wages and salaries, compensation, and employment<br>• Discontinued on September 27th, 2024 | • National, state, and county level data<br>• Wage and employment data<br>• Replacement source after BEA discontinuation | • Primary population source<br>• County Business Patterns (CBP) is also used<br>• Provides detailed employment and wage data on the county level |

# Forecast Detail

| | | | |
|---|---|---|---|
| Time Frame | **Historical Data**<br>Historical data from 2001 to 2024 is benchmarked in the model | **Forecast Data**<br>First forecast year is 2025 and forecasted up to 2060. (2080 is available) | **Model Updates**<br>Updated yearly with new data |
| Geography | **Regions Available**<br>National, state-level, and county-level | **County Data**<br>3000+ Counties | **Customization**<br>Any groups of counties and states can be created |
| Industry / Population | **Industry Level**<br>Based on NAICS Codes, done on a 23, 70, and 160 sector level | **Detailed Industry**<br>400~ detailed industries available with custom industry option | **Population**<br>Broken out by gender, race group, and year-by-year age |

# Mapping 2027 Proposals into Tax-PI

| Policy question | How it enters Tax-PI | Behavior to watch | Headline fiscal outputs |
|---|---|---|---|
| **Federal policies** (e.g. tariffs & immigration) | Increased production cost, lower immigrant population | Investment, expansion and business location | Corporate revenue, static vs. dynamic; sales and income tax feedback |
| **Income tax rate change** | Personal tax change in the Budget Calibration | Consumer spending; migration effects | Income and sales tax revenue; population-driven spending |
| **Property tax relief** | Lower housing and business property costs; local backfill or service cuts | Housing affordability, migration, local government demand | State and local revenue by source; net fiscal impact |
| **Federal cost shifts** (SNAP, Medicaid) | Higher state spending, or lower transfers and health-care demand | Household consumption; health-care jobs | Spending requirements; size of offset needed |
| **Incentives and megaprojects** | Industry sales or jobs, plus the credit or abatement cost | Supplier and induced effects; construction vs. operations | Revenue payback period; net impact over time |

# Walkthrough: Creating a Budget and Running Tax-PI

A step-by-step walkthrough in Tax-PI v3.4 (Ohio example)

1

## Set up the baseline

Add and calibrate a budget, then build a regional control that uses it

2

## Build the simulation

Create a simulation off the control and add a $1B machinery manufacturing sales change

3

## Run and review

Run the forecast and read the economic and fiscal results

# Workflow Overview

| | | |
|---|---|---|
| **Set up the baseline** | 1 | Add a new budget and calibrate it |
| | 2 | Create a regional control that uses the budget |
| | 3 | Review the forecast and save the control |
| **Build the simulation** | 4 | Create a new simulation off the control |
| | 5 | Add an income and sales tax change |
| | 6 | Add a $1B machinery manufacturing sales change |
| **Run and review** | 7 | Run the forecast |
| | 8 | Review the results |

# Tax-PI Demo

# Part 4 of 4: Communicating Tax Policy Impacts

Translating model results for legislators, budget offices and stakeholders

1

## The questions on the table

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# What Tax-PI Reports

## Economic Results

**Employment :** total jobs supported or displaced, including impacts by industry
**Gross Domestic Product :** change in regional/state economic activity
**Economic Output :** change in total production and sales
**Personal Income :** changes in earnings and other income received by households
**Population :** migration and demographic changes resulting from economic conditions
**Industry Effects :** how impacts are distributed across sectors of the economy

## Fiscal Results

**Tax Revenues :** changes in state and/or local revenues
**Revenue by Source :** impacts on major taxes such as personal income, corporate income, sales, and property taxes
**Government Expenditures :** changes in spending requirements associated with population and economic activity
**Net Fiscal Impact :** resulting change in the government budget after accounting for both revenues and expenditures

# Communicating Key Outputs to Different Audiences

## Legislators

THEY ASK

*What does it do for my district and the budget?*

LEAD WITH

Net fiscal impact by year; jobs and income by region

## Budget and revenue offices

THEY ASK

*Is the estimate defensible, and how does it move over time?*

LEAD WITH

Static vs. dynamic revenue by source; spending requirements

## Local governments

THEY ASK

*Will our tax base and service demand change?*

LEAD WITH

Population, local revenue and property-related bases

## Business and industry

THEY ASK

*Does this make us more competitive?*

LEAD WITH

Output, investment and jobs by industry

## Residents and advocates

THEY ASK

*What does it mean for household budgets?*

LEAD WITH

Real disposable income, prices and migration

# Informing Near-Term & Long-Term Impacts

Policy effects unfold over time. Tax-PI integrates the economy and the budget together, year by year.

**Year 1**

## Direct effect leads

The revenue change is close to the static score. Households and firms begin to adjust.

**Years 2–5**

## Behavior builds

Investment, hiring and spending respond, and tax bases grow or shrink with them.

**Years 6–10+**

## Structure shifts

Migration changes population, and spending requirements follow.

Helps answer: what happens in year one, year five and year ten?

# Supporting Analysis Through 2027 Session

| As Bills are Introduced | As Bills are Amended | During budget session | After session |
|---|---|---|---|
| Score new proposals quickly against a baseline reflecting the enacted budget | Re-run scenarios as provisions change, keeping assumptions consistent across versions | Compare competing policies side by side, with static and dynamic results | Compare forecasts with actual collections and refine the calibration |

## Let's talk about the questions your office is facing.

Contact us at info@remi.com to set up a scenario walkthrough for your state.

# Tax-PI in Practice

- Washington State Aerospace Tax Credit Analysis – Washington Joint Legislative Audit and Review Committee

- Arkansas Tax Reform Legislative Impact Statement – Prepared for the Arkansas Bureau of Legislative Research by REMI

- Economic and Fiscal Impact of Establishing a Semiconductor Manufacturing Facility in Onandaga County, New York – Prepared for Empire State Development by REMI

# Thank you for attending!

For more information, please contact
info@remi.com

# Technical Appendix

Data sources, forecast construction and model equations

1

## Data sources

BEA, Census, QCEW and EIA inputs to the model

2

## National forecast

How BLS, RSQE, CBO and EIA forecasts are layered

3

## Regional forecast

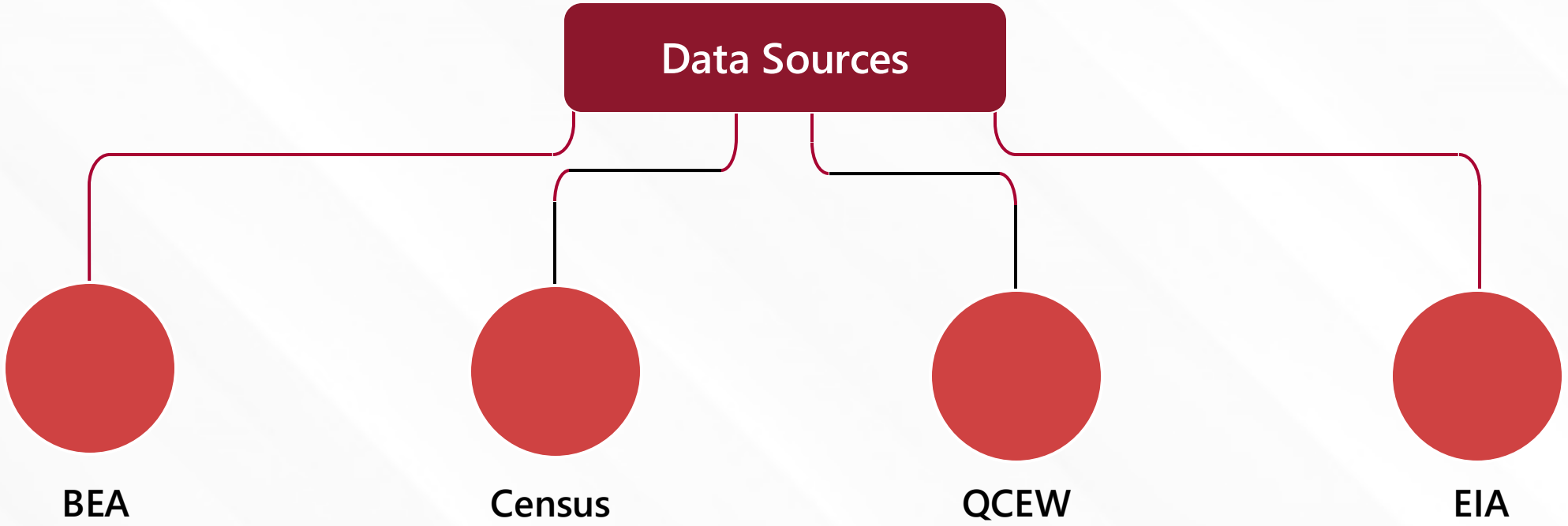
From national control totals to state and county detail

4

## Migration equation

How after-tax real compensation drives economic migration (hidden slide)

# Data Sources



# How the REMI national forecast is built

The national forecast is assembled in four passes: a long-run structural base from BLS Employment Projections, a labor-force anchor, a short-run business cycle from RSQE, and long-run growth rates from CBO and EIA.

1

## Structural base
## BLS Employment Projections

2022–2032 projections (Sept. 2023 release). MAKE and USE matrices converted to industry-by-industry I-O coefficients; final demand bridge, output, value added, productivity, deflators, and a 95-occupation matrix.

Non-benchmark years interpolated; 2032 coefficients extrapolated to 2080.

2

## Labor-force anchor
## GDP and final demand

2022–2032: a labor-force-growth-trended forecast for GDP and its components.

After 2032, BLS participation rates plus REMI's U.S. population projection (Census births, deaths, and international migration) set the labor force. Final demand is adjusted until employment growth lines up with it.

3

## Short-run cycle
## RSQE

The U.S. Macroeconomic Values procedure in PI+ overlays the latest short-term national forecast from the University of Michigan's Research Seminar in Quantitative Economics.

v3.4 / v5.4 uses the Feb. 27, 2026 RSQE forecast, covering 2026–2027.

4

## Long-run growth
## CBO and EIA

GDP and component growth rates from CBO's Long-Term Budget Outlook and EIA's Annual Energy Outlook are applied to the outer years.

CBO also supplies the net international migration path (2025–2099) behind the standard baseline population forecast.

### Underlying national data

BEA: NIPA, National Income by Type of Income, Fixed Assets, commodity prices, Benchmark 2017 I-O table · BLS: Employment Projections, QCEW, CES, CPS, OES occupation matrix · IRS Statistics of Income · Census: population projections, government finances · EIA: State Energy Data System, Annual Energy Outlook · RSQE · CBO

# From the national forecast to the regional forecast

The national forecast sets the control totals. Regional shares are then driven by relative production costs, market and labor access, and amenity, on top of a fully reconstructed regional history.

NATION

STATE

COUNTY

Sums to state; state sums to nation; industries sum to their parent industry

## Regional history

BEA Regional Economic Accounts supply personal income, earnings, compensation, and population for states and counties, 2001–2024. Last historical year for v3.4 / v5.4 is 2024.

## Employment calibration

BEA discontinued state industry employment (Sept. 27, 2024) and county employment (Nov. 14, 2024), final data year 2022. REMI replaced it with QCEW wage and salary employment — about 95% of BEA's former estimate — plus IRS SOI proprietors, USDA farm, ACS private households, DoD military, CBP detail industries, and LEHD for Connecticut.

## Solving suppressions

Minimum and maximum bounds are derived from the full hierarchy, the best available estimate inside those bounds is selected, and constrained iterative proportional fitting forces every cell to sum correctly across industry and geography. A feasible, internally consistent solution.

*Demographics follow the same logic: Census age-sex-race cohorts and components of change, CDC natality, Census survival rates, with military, college, and prisoner populations handled separately.*

*Source: REMI, Data Sources and Estimation Procedures, PI+ v3.4 / TranSight v5.4 (2026).*