



PI⁺ v3.1
TranSight v5.1
Tax-PI v3.1
Metro-PI v3.1
E3+ v3.1

(changes from v3.0/5.0)

Major Economic Data Sources

Employment

County	BEA (sector industries; 2001-2021) ¹ CBP (detail industries; 2020)
State	BEA (summary industries; 2001-2021) ² CBP (detail industries; 2020)
National	BEA (summary industries; 2001-2021) ² CBP (detail industries; 2020) BLS EP (detail industries; 2001-2021 and 2031) ³

Wages

County	BEA (total; 2001-2021) CBP (detail industries; 2020)
State	BEA (summary industries; 2001-2021) CBP (detail industries; 2020)
National	BEA (summary industries; 2001-2021) CBP (detail industries; 2020)

¹ The BEA Regional Economic Accounts county data series used for v3.1/v5.1 is based on their 11/16/2022 release. The estimates for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011-2016 are based on the 2012 NAICS. The estimates for 2017 forward are based on the 2017 NAICS.

² The BEA Regional Economic Accounts state data series used for v3.1/v5.1 is based on their 09/30/2022 release. The estimates for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011-2016 are based on the 2012 NAICS. The estimates for 2017 forward are based on the 2017 NAICS.

³ The BLS Employment Projections (EP) data used for PI⁺ v3.1/v5.1 is based on their 09/08/2022 release.

Personal Income and Earnings

County	BEA (components and summary industries; 2001-2021)
State	BEA (components and summary industries; 2001-2021)
National	BEA SPI (components and summary industries; 2001-2021) BLS EP (components; 2001-2021 and 2031) RSQE (components; 2023-2024) ⁴

Compensation

County	BEA (components and summary industries; 2001-2021)
State	BEA (components and summary industries; 2001-2021)
National	BEA (components and summary industries; 2001-2021)

Commuter Flows

County to County	BEA (gross flow of earnings by county; 2001-2021) BEA (total number of workers commuting between counties of residence and counties of work; 1990, 2000) BEA (commuting patterns between counties of work and counties of residence by major industry; 2000) ACS (residence county to residence workplace county flows; 2009-2013)
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Technology Matrix

National	BLS (detailed industries; 2001-2021 and 2031)
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Detailed Industry Policy Variables

National	BEA Benchmark 2012 IO Table
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Final Demand

State	BEA (consumption for major categories; 2001-2021)
National	BEA (components; 2001-2022) RSQE (components; 2023-2024) BLS EP (components and industry value added; 2001-2021, 2031)

GDP by Industry

County	BEA GDP by County (21 major categories; 2001-2021)
State	BEA GDP by State (summary industries; 2001-2021)
National	BLS EP (detailed industries; 2001-2021 and 2031)

Occupation Matrix

National	BLS EP (employment by industry and occupation; 2021 and 2031)
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Price Deflators

State	BEA Implicit Price Deflators (aggregate; 2008-2021)
National	BEA Personal Income Price Deflator (aggregate; 2001-2021)
National	BEA Commodity Prices (detailed categories; 2001-2021)
National	BLS EP (detailed industries; 2001-2021 and 2031)

⁴ The 11/17/2022 RSQE Forecast is used for v3.1/v5.1.

Major Demographic Data Sources

Population

County	BEA (total; 2001-2021)
County	Census (age, sex, race; 2000-2021)

Demographic Components of Change

County	Census (2000-2021)
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Labor Force

County	BLS (total; 2000-2021)
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Nativity Rates

Nation	Census (2001-2100)
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Birth Rates

State	CDC (2001-2020)
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Survival Rates

Nation	Census (2001-2100)
Nation	Congressional Budget Office (2023-2096)

Net International Migrants

Nation	Census (2001-2100)
Nation	Congressional Budget Office (2023-2096)

Participation Rates

Nation	BLS (2001-2031)
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Active Military

Nation	DoD (2001-2021)
County	American Community Survey (2005-2021)

Military Dependents

Nation	DoD (total; 2003-2021)
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Prisoners

County	Census (sex, race, facility; 1990; 2000; 2010)
	Bureau of Justice Statistics (50 largest jail jurisdictions mapped to counties; 2001-2021)
	Bureau of Prisons (facilities mapped to counties; 2005-2021)
	Various state-specific correctional websites

College Enrollment

County	Census (2000; 2010)
	American Community Survey (2005-2021)
State	National Center for Education Statistics (2000-2020)
National	National Center for Education Statistics (2000-2020)

Incorporation of BLS 2021-31 Employment Projections

National projections include the input-output table, employment, output, value-added, labor productivity, and deflators by detailed industry: final demand by component; personal income by component; labor force; and occupations by detailed industry.

From the BLS:

“The 2021 annual average levels do not reflect much of the employment recovery and reallocation that has already occurred in the aftermath of the COVID-19 pandemic and the accompanying recession, given total employment continued to grow rapidly through the first half of 2022. As a result, total employment for the 2021–31 projections, and projected growth in many sectors, reflects fast projected growth resulting from low base year employment levels. However, the pandemic also has been a catalyst for some structural changes in demand for certain goods and services, which are expected to affect long-term demand for employment in a select group of industries and occupations.

Updates to Local Area Personal Income

From the BEA website:

“The estimates for 2021 incorporate the results of BEA's annual update of county and metropolitan area personal income. The annual estimates of county and metropolitan area personal income for 2014 to 2020 were revised. The update incorporates revised source data that are more complete and more detailed than previously available, the results of the September 2022 annual update of the National Income and Product Accounts, and the results of the September 2022 annual update of state personal income.”

Updates to GDP by County

From the BEA website:

“The estimates for 2021 incorporate the results of BEA's annual update of GDP by county and metropolitan area. The annual estimates of county and metropolitan area GDP for 2017 to 2020 were revised. The update incorporates revised source data that are more complete and more detailed than previously available, the results of the September 2022 annual update of the National Income and Product Accounts, the September 2022 annual update of GDP by industry, the September 2022 annual update of GDP by state, and the November 2022 annual update of personal income by county.”

Updated Personal Consumption Expenditures by State

From the BEA website:

“The BEA released revised PCE statistics for 2017 to 2020 (table 5). The update incorporates revised source data that are more complete and more detailed than previously available. The update includes the results of the September 2022 annual update of the National Economic Accounts and the September 2022 annual update of the state personal income statistics.

Demographic Data

For the following datasets, the estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results. The estimates add births to, subtract deaths from, and add net migration to the enumerated resident population from the 2010 Census.

Annual Resident Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for States and Counties: April 1, 2010 to July 1, 2020

National Population Estimates by Age, Sex, Race, and Hispanic Origin for the United States: April 1, 2010 to July 1, 2020

Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin: April 1, 2010 to July 1, 2020

For the following datasets, the estimates are developed from a base that incorporates the 2020 Census, Vintage 2020 estimates, and 2020 Demographic Analysis estimates.

National Population Estimates by Age, Sex, Race, and Hispanic Origin for the United States: April 1, 2020 to July 1, 2021

Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin: April 1, 2020 to July 1, 2021

Annual Resident Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for States and Counties: April 1, 2020 to July 1, 2021

The population totals displayed in the model come from the BEA dataset Personal Income by Major Component and Earnings by NAICS Industry. For 2010 through the first quarter of 2020, BEA produced intercensal annual state population statistics for 2010 to 2019 and quarterly statistics for the second quarter of 2010 through the first quarter of 2020 that are tied to the Census Bureau decennial counts for 2010 and 2020. BEA developed intercensal population statistics because this data was not published when Census released state population data for 2020 through 2022, which are based on the 2020 decennial counts. Census will release official intercensal population data in 2023.

Updated Detailed Occupation List

The BLS redefined the detailed occupations reported in their 2021-2031 National Employment Matrix. REMI has revised the detailed occupation list according to the updated BLS occupation list.

Embalmers (39-4011) has been replaced by *Embalmers and crematory operators (39-4010)*
Crematory operators and personal care and service workers, all other (39-9098) has been replaced by *Personal care and service workers, all other (39-9099)*

Input-Output Tables

The format of the input-output tables and the final demand tables provided by the BLS Office of Employment Projections, Employment Outlook: 2021-2031 has changed from previous years. The categories 'Scrap' and 'Used and secondhand goods' have been combined into the single category 'Scrap, used and secondhand goods', and the categories 'Noncomparable imports' and 'Rest of world adjustment' have been combined into the single category 'Noncomparable imports and rest of world adjustment'. REMI has separated these categories so they can be treated differently when combining the make and use tables to form symmetric input-output tables.

The BLS has improved its methodology for estimating input-output tables and is incorporating the BEA's real industry output time series into their real tables. Their industry output chain weighed deflators have changed from previous releases, but they are now more similar to the BEA series.

REMI has improved the methodology for distributing the margins and the valuation adjustments for imports from the final demand tables.

REMI has improved the methodology for projecting the input-output table coefficients.