Supply-Use Tables by State

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Background and Motivation

This presentation provides a summary of a multiyear effort to build the component statistics needed for state-level supply-use tables (SUTs) as part of a broader agenda to produce disaggregated U.S. national accounts. State SUTs reconcile production, consumption, and trade across states within a coherent accounting framework, enabling improved input-output modeling, supply chain mapping, and regional policy analysis. They also enhance the consistency of the regional accounts by aligning state-level production and expenditure measures and making cross-state linkages explicit. Existing statistics—such as value added by state and PCE by state—offer strong starting points, but the absence of detailed interstate trade flows, inventory movements, and several expenditure components has long limited the development of regional accounts at the SUT level.

What We Have

BEA's work consolidates several streams of measurement. Published components include value added by state and personal consumption expenditures by state, which provide core production and expenditure anchors. Building on these, we have constructed research estimates of gross output, interstate merchandise trade, private fixed investment, and some elements of international trade mapped to states. These expanding components already allow for richer analyses of production structure, supply-chain dependencies, and state exposure to traded goods markets. Complementing these are experimental estimates of government consumption and investment, constructed from administrative and survey data and aligned with national accounting concepts. Together, these components form the empirical foundation for a full state SUT system, while also being useful as standalone statistics.

Trade Modeling

A key element of the SUT system is interstate trade, which is not directly observed. Shipment data record movements of goods rather than true producer-to-user transactions and often reflect wholesaling, warehousing, and other distribution activities. To overcome this, we develop a flow model that decomposes observed bilateral shipments into local absorption, transshipments, and final producer-to-user flows. The model uses a set of simple, economically intuitive assumptions about how goods move through distribution networks and is implemented using a largescale numerical optimization framework. This approach allows us to infer economically meaningful interstate flows from shipment data that are otherwise

dominated by distribution activity. The resulting trade estimates behave consistently with known industry structure—producers, users, and ports of exit emerge naturally—and already support applications in supply-chain analysis and regional exposure measurement.

Roadmap

The broader agenda centers on integrating these components into a unified state-level SUT system.

1. Component consolidation and benchmarking: we continue to expand time series for gross output, refine merchandise trade flows, and finalize government consumption and investment statistics as SUT-consistent building blocks.
2. Commodity-based alignment: developing commodity detail for PCE, PFI, government use, and output will allow us to satisfy commodity identities and create balanced SUT rows and columns for each state.
3. Full SUT reconciliation and regional extensions. With remaining components in place—such as inventories and intermediate inputs—we can perform full SUT balancing across states and extend the system to a comprehensive regional supply-use framework, improving tools such as RIMS multipliers and enabling TiVA-style measures at the state level.

Future work

To complete the system, three major components require further development: interstate services trade, intermediate inputs, and inventory investment. Each is essential for balancing supply and use at the state level, but each also presents unique data and conceptual challenges, including limited direct observation and complex firm-to-establishment allocation issues. These areas are the focus of current and near term research.

Conclusion

Taken together, these efforts outline a coherent path toward a fully integrated set of disaggregated national accounts for the United States. The statistics already developed—published, research, and experimental—offer new insight into regional production, demand, and trade linkages. As remaining gaps are filled and the SUT framework is completed, this work will provide a robust empirical foundation for evaluating regional economic dynamics, supply-chain vulnerabilities, and policy impacts across the states.