



December 2015 News & Updates

Alward Institute for Collaborative Science Launches Community Intelligence Research Lab

The Alward Institute for Collaborative Science* is proud to announce the creation of its Community Intelligence Research Laboratory. This laboratory includes Tapestry, a data warehouse of time-series social accounts built using historical IMPLAN data. The Laboratory also includes four dashboards of software applications to explore the contents of the Tapestry data warehouse and apply best practice economic analysis techniques. Dashboards consist of procedures and applications oriented around four broad topics: (1) Economic Structures; (2) Economic Connections; (3) Analysis Models; and (4) Satellite Accounts.

- Explore the Community Intelligence Laboratory Tapestry Data Model
- Use the Community Intelligence Laboratory Analysis Dashboards
- Multiregional Social Accounts of the entire US economy for multiple years built using historical IMPLAN© data with high levels of spatial and sectoral granularity (1990-2013).
- Economic Structures Dashboard. Methods and Applications include: Contribution Analysis; Structural path analysis; Income Distribution; Time Series / Comparative Advantage; Cross-Sectional / Economic Diversity.
- Economic Connections Dashboard. Methods and Applications include: Supply chains & Value chains; Trade Modeling; Trade MRIO; Trade Mapping; Power Series; Labor force (Occupations & KSAs).
- Analysis Models Dashboard. Methods and Applications include: Traditional IMPLAN© Input-Output Models (Advanced IMPLAN Modeling Techniques); Computable General Equilibrium Models; I-O Price Models; Ghosh-type Supply Models.
- Satellite Accounts Dashboard. Methods and Applications include: Adding/modifying production functions; Using Agricultural Budgets to modify production functions; Adding Capital Accounts; Integrating current-year Quarterly Covered Employment and Wage data to social accounts; expanding government fiscal accounts in social accounts.

The IMPLAN product provides a regional data model that includes disclosed and balanced industry control totals, an estimation of domestic commodity trade, and a software tool that builds and makes use of classic Leontief multiplier models. To-date this product has provided many analysts with a convenient method for calculating marginal economic impacts. However, it's important to distinguish between social accounting data and regional economic models derived from this data. The IMPLAN system uses regional social accounts to derive the Leontief economic impact model. However, this is just one model within a wide family of economic models that can be calibrated using regional social accounts.

For example, the economic-base contribution model derived by Watson, et al. (2015) uses regional social accounts to simultaneously derive both gross and base measures of output for all industries in a region.

These two measures vary by industry but sum to the regional output total observed in the underlying social accounts. When used as a comparative statistic, these two measures provide additional insight into the role an industry plays in supporting economic activity through export expansion or import-substitution. Furthermore, social accounting data can also be used to model the comparative advantage, economic diversity, and labor force endowment of any number of regions throughout the United States. Although these models cannot be built using either IMPLAN Pro software or IMPLAN online, they can be derived from the time-series of multi-regional social accounts housed within the Alward Institute's Community Intelligence Laboratory.

The Alward Institute for Collaborative Science is currently offering researchers access to these regional social accounts and derivative modeling products through its Community Intelligence Research Laboratory. If you are interested in partnering with us to explore the research potential of this unique data source, please visit our website at www.AlwardInstitute.org, email us at info@AlwardInstitute.org, or call us at 970-217-3942.

*The Alward Institute for Collaborative Science is an independent, 501c3 non-profit institution with a mission to partner with academic and government clients in order to extend the use of historical social accounting data in regional economic modeling.