

**Questions and answers are subject to change!**

**Is there an IO-Snap trial version?**

We provide a Demo/Trial version so that students can have free and easy access for coursework, and so that those evaluating the software for potential purchase have ready access to a trial version. We encourage those interested in buying IO-Snap to download the demo for a thorough evaluation. This allows us to have a no-returns/no refunds policy.

The Demo/Trial version never expires! Use it for as long as you like! Licensed versions are available on an annual subscription basis. During active license periods, all data and program updates are included. A comparison of the available version options are shown in the linked pricing table. IO-Snap is sold as an individual license subscription and volume discounts are available.

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**What will happen when my current version expires?**

When a paid license expires, IO-Snap will continue to launch and operate but will be excluded from automatic software and data updates.

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**Can I use the software on more than one computer?**

Check the table above for license details. Installations are limited in number but moving from one computer to another is relatively straightforward. Under the Help menu item, you will find a Deactivate option. This frees up an installation associated with your license that can now be used to activate an installation on another computer.

Be sure to keep track of your license registration key!

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**Is there a more disaggregated version of the software available that is based on benchmark year data?**

The full version, IO-Snap Pro, has virtually the same classification as the annual BEA input-output accounts. BEA refers to this as the Summary level. We aggregate the housing and real estate sub-sectors because there are no employment and income data for them.

We are working on a method for adding targeted benchmark-level detail for sectors of special interest that we believe will address many users' needs. Accounts for smaller economies with full benchmark-level detail will necessarily rely more heavily on imputed as opposed to reported data, which potentially introduces parametric error.

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**How often will data be updated?**

We rely on the most recently published data and distribute new databases within about a month of the release of the final data needed to complete the database for a given year. This typically happens about once a year. You will note that some other vendors provide accounts for more recent years. However, those sources rely very heavily on estimates using limited published data.

For example, as of February of 2016, the 2015 state gross product data release had been announced, but a closer look would have revealed substantial missing data for most states. We could extrapolate or otherwise impute the missing data as some other vendors do, but we've also observed that the reported values in early releases often change — sometimes substantially and sometimes often — by the time the series are more fully populated. This suggests that building estimates around the early published data introduces a substantial risk of fairly large margins of error.

We prefer to wait until the data are more complete and stable. If you have a specific need for more recent accounts and are willing to accept these risks, contact us and we will construct a custom database for you.

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**What data come with the software application?**

The data for the US and for all states (including Washington, D.C.) for the years 1998-2021 are included with IO-Snap.

Data that come with the Demo/Trial version are limited to a smaller number of historical years at a higher level of aggregation.

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**Why are the data limited to 1998 - 2022?**

We use the Annual Input-Output Accounts data after redefinitions along with employment and gross domestic product data by state as the primary foundation for IO-Snap. Although data for years prior to 1998 that were originally collected and classified using SIC codes have recently been converted to NAICS, we chose to use only the Annual Input-Output Accounts data that were reported originally using the North American Industry Classification System (NAICS) sectors. Further, we decided that the value of adding pre-1998 data did not justify the additional effort that would have been required.

The 2021 data are the most recent available for all national and state variables with sufficiently high reporting to be considered to be reliable.

Look for the 2022 data update soon!

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**Are the base tables before or after redefinitions?**

We use the Make and Use tables Before Redefinitions and Reallocations. The most important reason for this decision is that there are no data sources for employment that correspond to the After Redefinitions and Reallocations accounts.

There is a very nice paper that we recommend, called "[From Make-Use to Symmetric I-O Tables: An Assessment of Alternative Technology Assumptions](#)."

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**Can I group states in my own choice of geographical aggregation?**

Absolutely! We provide some standard multi-state aggregation schemes (Census Bureau Regions and Divisions, Bureau of Economic Analysis Regions, etc.), but you have the option of combining any set of state into a single region. You could even construct multi-state regions from non-contiguous state if you had a justification for doing so, though we haven't been able to come up with a valid one!

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**Can I create models for sub-state regions?**

Yes! But, you'll have to use your own regional data in the format of the state data we provide. National table regionalization is driven by regional personal income and value-added data by industry. You can enter employment or income data (or both) for a sub-state region if you have them, or even if you simply want to make them up for a hypothetical region of some idealized type. Once you've entered the regional driver data, you can generate the regional accounts.

You also can contact us to discuss special order IO-Snap data for custom regions and levels of sectoral detail.

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**Can I generate tables and conduct analyses at more aggregated levels?**

Yes, you can. However, aggregated national tables cannot be regionalized. And, there are few reasons for aggregating regional tables, because as long as the more detailed data are accurate, you'll get more accurate results at the detailed level.

For display or reporting, IO-Snap includes a \*Summarize\* feature that creates an aggregated version of many key data windows, e.g., multipliers. We are adding this feature to more data windows with each new release.

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**Will more analytical features be added?**

Yes, we have a long list of potential features, from shift-share modeling through industrial clustering analyses to hypothetical extractions and more. We are also designing graphical displays for select data.

[Register for our Newsletter](#) to be kept apprised!

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**How does IO-Snap deal with missing data in BEA's gross domestic product and employment series?**

We do our best to impute data using inter-variable relationships from national data and from data for Census Division. So, for example, if we have employment but no employment compensation for a given industry in a region, we use the employment / employment compensation ratio from the relevant Census Division to estimate the missing value. This is sometimes referred to in the economics literature as the Kendrick-Jaycox method.

More importantly, we mark all imputed input data with a light yellow background so that users have the option to apply their own imputation methods if and as preferred. We trust in the judgment and ability of our users, who oftentimes will have greater local or regional expertise to apply to the imputation process, and we support data editing to take advantage of that expertise.

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**How are regional supply percentages (RSP) handled in IO-Snap impacts assessments?**

This is another important consideration that is often overlooked. In the impacts data entry dialog box is a check-box that can be selected to modify the entered impacts values to reflect the region's industries' abilities to satisfy their own demand. As an example, if a user is interested in the increase in output levels in a given industry or set of industries, then the check-box should be left unchecked. In contrast, if a user wants to evaluate the impact of a decline in consumer demand for the output of a given industry or set of industries, then checking the check-box will modify the demand-change estimate to reflect the fact that some of the new demand will be satisfied by industries in other regions.

The IO-Snap approach to regionalization and the theoretical basis for applying RSPs to final demand shocks are documented more formally in Jackson, R. and P. Járosi (2020). "[IO-Snap regionalization.](http://econalyze.com/TechDocs)" [IO-Snap Technical Document 2020 - 01](http://econalyze.com/TechDocs), EconAlyze LLC, Morgantown, WV 26508. <http://econalyze.com/TechDocs>.

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**Does IO-Snap support the conversion of final demand shocks from purchaser to producer prices?**

Yes! This step is often neglected by casual users and can result in some substantial impacts estimate errors. You will note that the conversion option is only available in "commodity-driven" analyses, and this is because industry output is almost always composed of more than one commodity, so the adjustment needs to occur in commodity space, not industry space.

Note that this price conversion should only be used with the unaggregated initial sectoral classification.

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**Does IO-Snap adjust for cross hauling?**

The foundation for IO-Snap regionalization is the supply-demand pooling method with an adjustment for cross-hauling as described by Randall Jackson in Regionalizing National Commodity-by-Industry Accounts. *Economic Systems Research*, 1998, Volume 10, Number 3, pages 223-238. We use a default estimate of cross hauling in IO-Snap and implement it as described in the Jackson article, and provide the opportunity for advanced users to override the default cross-hauling values.

Users who want more information on our underlying methods will find the above-referenced article and a set of IO-Snap Technical Documents on the [EconAlyze website](http://econalyze.com).

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**How does this product compare with IMPLAN?**

*Great question!* We don't see IO-Snap as competing directly with IMPLAN, which can be a terrific solution for a wide variety of analytical purposes. We've used it often ourselves and highly recommend it. The folks at IMPLAN go to great lengths to generate and provide highly detailed, disaggregated IO accounts for not only states, but also counties and even Zip codes, whereas we only provide state level summary data by default. And let's not forget that IMPLAN also has the ability to generate estimated interregional IO accounts. IO-Snap will be a useful tool for those who wish to have data for one or more states at what BEA refers to as the Summary level of reporting.

Many applications don't require highly disaggregated IO accounts, and the fact that we provide all data for all states over a series of years -- and in a friendly format -- facilitates interregional and inter-temporal comparisons. We also think there is a group of users who would prefer to effectively construct their own IO accounts. IO-Snap provides a good foundation for these analysts, with a high level of control over what goes into the process.

We also acknowledge that working at greater levels of sectoral and geographic detail comes at the cost of relying more heavily on data imputation. That is, each increase in levels of detail results in a higher proportion of missing data, and in some cases, also requires additional assumptions. This suggests that there exists a trade-off between, e.g., sectoral detail and accuracy. Given the need for a significant amount of imputation even at the Summary level, we have chosen to sacrifice some detail in exchange for greater parametric certainty (accuracy).

We also suspect that we put somewhat less effort into regionalizing final demand than does IMPLAN (though we don't know all of the IMPLAN procedures). We make some basic assumptions, but leave any necessary refinement of regional final demand estimates to the user. Prior to generating direct requirements and multipliers, final demands, industry production functions and output distributions can be directly edited by the user.

IO-Snap will be useful for both professional application and in the classroom. We hope that the simple and intuitive IO-Snap interface will make input-output data and analysis more accessible to students.

Finally, we hope that the affordability of IO-Snap relative to Implan will make input-output analysis more accessible and to a wider audience.

So, the bottom line is that those who truly need high levels of detail and those who have become accustomed to IMPLAN's functionality will probably continue to find IMPLAN very well suited to their purposes. But we also think there is room for a product that fills a different set of needs, and IO-Snap is that product!

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