# Exploring Background Data

## Comparing Study Area Data and Social Accounts Views into Commodity Demands

The ***Study Area Data* information found on the Model Overview** contains tabs that describe local production and total regional commodity demand.

* Demand is divided by households and governments
  + Households are broken down by income group
  + Governments are broken down by activity type.
* We can sum the appropriate columns across a row to find total demand for a particular commodity
  + 3004 Fruits: Total Household Demand is $24,353,675
  + 3309 Semiconductor Mfg: Federal Government Total Demand is $4,836,161

These tabs allow us to see what our region spent in the year of the Model on each of the 536 commodities, regardless of whether that commodity was produced locally, which can give us interesting insights into the workings of a local economy.

The ***Social Accounts* view found on the Model Overview** describes commodity production, trade, and the amount value of local demand filled by local suppliers/production. Although the values are always smaller in the Social Accounts reports, the breakout of the information is identical to that of the Study Area Data reports.

* We can sum the appropriate columns across a row to find total demand for a particular commodity
  + 3004 Fruits: Total Household Local Commodity Demand is $2,522
  + 3309 Semiconductor Mfg: Federal Government Total Local Demand is $1,774,243
* The difference between what we consume (Study Area Data view) and the portion of our demand that is met by local production (Social Accounts view) can be used to evaluate the rate at which local supply is used to meet local demand.
  + If we divide the Local Demand by the Total Demand we get the RPC value.
  + So we can see that Local Supply meets 0.010% of our local demand for fruit while the Federal government can purchase 36.69% of it’s semi-conductor needs from local producers.

**One more thought**

Why don’t households demand tobacco? When a product doesn’t show demand by households although you might expect it to, this indicates that the commodity you are looking requires additional processing before it becomes available for household consumption. In this case, the household demand is for commodity 3111 which produces tobacco products.

Industry and Commodity Balance Sheets

**Understanding the difference between byproducts and market share.**

Byproducts and market share are two valuable pieces of information that can tell us a lot about the underlying economy. They help us to understand:

* What an Industry makes outside of its primary product.
* Who produces specific commodities in our region in the year of the data. This can include not only Industry production but also sales from Institutions and from Inventory.
* How much of the total commodity production of a giving commodity in our region is produced by a specified Industry.

**Byproducts** describe the primary and secondary products an Industry makes. The secondary products, cannot require significant changes in the input structure of the Sector. The spending pattern and technology used to make the primary product must also work to make byproducts.

**Market share** describes what portion of the total commodity production/sales for that year is attributed to each producing Industry or Institution.

**Industry Balance Sheets** describe in detail in each IMPLAN Sector. These sheets help us to see:

1. **Commodity Production** describes the commodity or commodities that an Industry produces within the region.
   1. The percentage of total annual sales for the Sector (Output) that each commodity produced represents (**Byproduct coefficient**).
2. The **Commodity Demand** tabtells us the commodities needed to produce each Sector’s production and the amount of each commodity that is required for production including:
   1. Total requirement for each commodity (Gross Absorption) and
   2. The amount of each commodity that can be obtained from local sources (Regional Absorption).
3. The portion of total sales that go to each of the Value Added factors is described by the **Value Added** tab.

**Commodity Balance Sheets** describe all local producers of a specified commodity and which Institutions and Industries demand those commodities. These sheets help us to understand:

1. The **Industry-Institutional Production** tab describes who produces a specified commodity in our economy. These include:
   1. The type of producer;
      1. Industry production
      2. Government production
      3. Sales from Inventory
   2. What percentage of the total local commodity production is attributed to each producer (**Market Share**).
2. **Industry** **Demand** tells us which local businesses demand the commodity in our region and in what amount.
3. **Institutional Demand** describes which local Institutions “demand” a commodity and the amount commodity production they purchase.

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| View:  Term: | Industry Balance Sheet | Commodity Balance Sheet |
| Byproducts | **Must equal 100%** because all of Industry’s production, regardless of the commodities produced must be accounted for in the Industry Balance Sheet. | Because this shows the portion of total regional commodity production associated to the selected Industry this **may or may not equal 100%**. When it doesn’t equal 100% other local producers are present. |
| Market Share | Because this shows the portion of total regional commodity production associated to the selected Commodity this **may or may not equal 100%**. When it doesn’t equal 100% other local producers are shown. | **Must equal 100%** because all of the local commodity production must be accounted for regardless of who produced/sold the commodity. |

**Understanding Gross Absorption and Regional Absorption**

* **Gross Absorption**: Describes the total amount of each commodity that is needed for production. The Gross Absorption \* Annual Industry Output (captured in the drop-down menu) = **Gross Inputs**.
* **Regional Absorption**: Describes the amount of the required inputs (Gross Absorption) that can be obtained locally. Regional Absorption \* Annual Industry Output = **Regional Inputs**. Hence, regional absorption and inputs show us the total amount of production requirements that can be sourced within the model’s geographic boundaries.   
    
  The dollar amounts for both are based on the Total Industry Output for the modeled region.