

Consumer Spending

Consumer Expenditures, Retail Potential & Retail Gap



Version Release 2024B

Purpose The Consumer Spending datasets consist of both the Consumer Expenditure and Retail Potential databases. The consumer expenditures cover most major household expenditures for both current and projected year, and for retail-oriented expenditures, aggregated to retail store types.

The Retail Gap database measures the difference between consumer expenditures on retail (Retail Potential) and brick and mortar Retail Sales. A positive number, or “Leakage,” indicates that local consumers are spending their retail dollars out of the area where they live, and a negative number, or “Surplus,” indicates that the area is drawing in (and selling to) consumers that are not local. The retail gap data is available at five, four and three-digit NAICS categories.

The Consumer Spending data is highly useful for demand estimation and market share analysis.

Base Geography Census Block (Consumer Expenditures and Retail Potential)
Census Block Group (Retail Gap)

Content For the 2024B release, the **Consumer Expenditure** (CEX) database has been completely redesigned using the AGS Synthetic Household model, discussed below in the Methodology section. The content of the model, as well as the variable naming conventions, have changed to reflect this significant methodological change.

The major categories have been redesigned and expanded to include:

- Total Expenditure
- Food at home (Grocery)
- Food away from home
- Alcoholic Beverages
- Shelter
- Utilities
- Household Operations
- Household Furnishings/Equipment
- Apparel
- Transportation

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- Health Care
- Entertainment
- Personal Care
- Education
- Tobacco Products
- Miscellaneous Expenses
- Cash Contributions
- Tax and Retirement Savings

The structure of the variable names has been modified slightly, but still readily permits an analysis of expenditures at any level of detail and between levels of detail. It is possible to analyze any individual category within the context of its parent category (e.g. cheese expenditures as a share of total dairy product expenditures or total food at home expenditures). It is also readily apparent that one should not add together certain categories (e.g. APP01 + APP0101 would double count APP0101)

The retail potential database consists of average household and total market potential estimates by each of sixty-four retail store types. The store types are based on the NAICS classification and are listed below:

- 44111 New Car Dealers
- 44112 User Car Dealers
- 44121 Recreational Vehicle Dealers
- 44122 Motorcycle and Boat Dealers
- 44131 Auto Parts and Accessories
- 44132 Tire Dealers
- 44211 Furniture Stores
- 44221 Floor Covering Stores
- 44229 Other Home Furnishing Stores
- 44311 Appliances and Electronics Stores
- 44411 Home Centers
- 44412 Paint and Wallpaper Stores
- 44413 Hardware Stores
- 44419 Other Building Materials Stores
- 44421 Outdoor Power Equipment Stores
- 44422 Nursery and Garden Stores
- 44511 Grocery Stores
- 44512 Convenience Stores

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44521 Meat Markets
44522 Fish and Seafood Markets
44523 Fruit and Vegetable Markets
44529 Other Specialty Food Markets
44531 Liquor Stores
44611 Pharmacy and Drug Stores
44612 Cosmetics and Beauty Stores
44613 Optical Goods Stores
44619 Other Health and Personal Care Stores
44719 Gasoline Stations
44811 Men's Clothing Stores
44812 Women's Clothing Stores
44813 Childrens' and Infant's Clothing Stores
44814 Family Clothing Stores
44815 Clothing Accessory Stores
44819 Other Apparel Stores
44821 Shoe Stores
44831 Jewelry Stores
44832 Luggage Stores
45111 Sporting Goods Stores
45112 Hobby, Toy, and Game Stores
45113 Sewing and Needlecraft Stores
45114 Musical Instrument Stores
45121 Book Stores
45211 Department Stores
45291 Warehouse Superstores
45299 Other General Merchandise Stores
45311 Florists
45321 Office and Stationary Stores
45322 Gift and Souvenir Stores
45331 Used Merchandise Stores
45391 Pet and Pet Supply Stores
45392 Art Dealers
45393 Mobile Home Dealers
45399 Other Miscellaneous Retail Stores
45411 Mail Order and Catalog Stores
45421 Vending Machines
45431 Fuel Dealers
45439 Other Direct Selling Establishments

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7211 Hotels and Other Travel Accommodations
7212 RV Parks
7213 Rooming and Boarding Houses
7221 Full Service Restaurants
7222 Limited Service Restaurants
7223 Special Food Services and Catering
7224 Drinking Places

Retail Gap is laid out like the Retail Potential variables shown above. For each NAICS classification, Retail Sales (from the BusinessCounts database) are deducted from Retail Potential. The Retail Gap variables have also been aggregated to three and four-digit NAICS levels as well. At the US level, most categories show a “leakage” based on the portion of retail sales estimated to go towards e-commerce. Note: For the accommodation industry categories (7211, 7212 & 7213), the sales amounts specifically refer to retail sales at these locations.

Consumer Expenditure Methodology

The 2024B redesign includes a two level modeling system undertaken at the household level in order to more accurately reflect consumer spending for small area geographic areas. The AGS Synthetic Household model is discussed in a separate document.

The model utilizes the latest two years of the Consumer Expenditure Survey, conducted by the US Census Bureau on behalf of the Bureau of Labor Statistics. Data were analyzed at the response (household) level by constructing two levels of statistical models. The top level model consists of 84 expenditure groups, with each group having a separate model that accounts for differences in expenditure by:

- Age of householder (lifestage)
- Size of household
- Household income
- Number of vehicles available
- Tenure (owner / renter)

Several of the expenditure groups are unique to subsets of the household base only – renters, homeowners, and vehicle owners. By modeling at the household level, we are able to capture the often dramatic differences in

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household expenditures. Most of the models predict either per person or per vehicle expenditures.

The second level model allocates expenditures within the 84 groups to a total of 402 categories based on differences in lifestage (age and household size) and income.

The results were then aggregated across all households and standardized to the published averages for the 84 groups.

Coverage is significantly expanded to include:

- Income tax payments (federal, state, local)
- Social security deductions
- 401k / IRA contributions
- Expanded charitable contributions to include type of charitable organization
- Food away from home classified by type of restaurant and meal

At the same time, the classification was collapsed from 5 to 3 levels of hierarchy in order to simplify reports. Further, most gifts were allocated to a separate gift category within the appropriate group. For example, gifts of infants' apparel were moved from the gift group to the apparel group.

Retail Potential Methodology

The primary data sources used in the construction of **Retail Potential** include:

- Current year AGS Consumer Expenditure Estimates
- 2012 Census of Retail Trade, Merchandise Line Sales
- 2017 Annual Retail Trade Survey

The Census of Retail Trade presents a table known as the Merchandise Line summary, which relates approximately 120 merchandise lines (e.g. hardware) to each of the store types. For each merchandise line, the distribution of sales by store type can be computed, yielding a conversion table which apportions merchandise line sales by store type.

The AGS Consumer Expenditure database was re-computed to these merchandise lines by aggregating both whole and partial categories,

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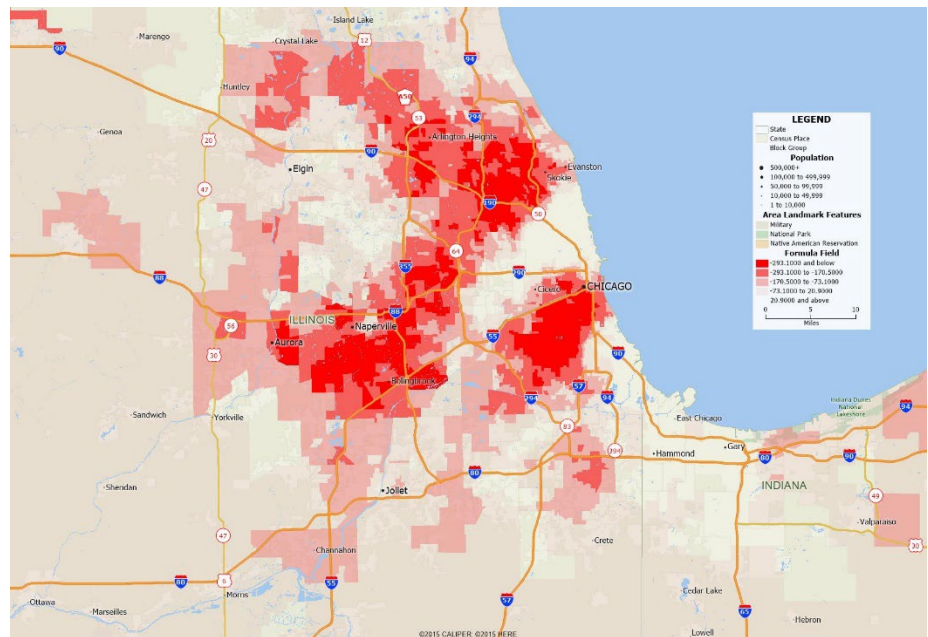


yielding, at the block group level, a series of merchandise line estimates which are consistent with the AGS Consumer Expenditure database.

These two components were then combined in order to derive estimated potential by store type. The results were then compared to current retail trade statistics to ensure consistency and completeness.

Retail Gap Methodology

Retail Gap is created using the Retail Potential database (above) and the Retail Sales database. The specific methodologies for Retail Sales can be found in the "Business Counts" documentation.



Grocery store retail gap map for Chicago, showing areas of red which are highly underserved by the grocery store chains.

Data Sources

- 2021-2023 Bureau of Labor Statistics Consumer Expenditure Survey
- 2012 Census of Retail Trade, Merchandise Line Sales
- 2017, 2022 Annual Retail Trade Survey
- 2017, 2022 Services Annual Survey
- 2022 County Business Patterns
- 1998-2023 Estimated Annual U.S. Retail Sales - Total and E-commerce

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Further
Information

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