Consumer Spending

AGS
APPLIED GEOGRAPHIC SOLUTIONS
Powering Smarter Market Decisions™

Version

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

Content

The Consumer Expenditure database covers most major household expenditures in a multi-level hierarchical classification. Expenditures can be expressed either as aggregate expenditure or per household expenditure for any geographic level from the block group to national. The major categories represented are:

- Total Expenditure
- Food and Beverages
- Shelter
- Utilities
- Household Operations
- Household Furnishings/Equipment
- Apparel
- Transportation
- Health Care
- Entertainment
- Personal Care
- Reading
- Education
- Tobacco Products
- Miscellaneous Expenses
- Cash Contributions
- Personal Insurance
- Gifts

Most of these categories include two or three levels of sub-category detail. For example, a typical classification for an item in the food group is:

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Total Expenditure
 FB Food and Beverage
  FB1 Food At Home
   FB106 Dairy Products
    FB10604 Cheese

This structure permits ready 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. FB106+FB10604 would double-count cheese)

The retail potential database consists of average household and total market potential estimates by each of sixty-eight 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
44312 Computer Stores
44313 Camera and Photography 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
44521 Meat Markets
44522 Fish and Seafood Markets

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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
44711 Gasoline Stations with Convenience Stores
44719 Gasoline Stations without Convenience Stores
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
45122 Record, Tape, and CD 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
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

While similar to the SIC classification, the NAICS recognizes several retail types which did not exist at the time the SIC system was defined, including Computer Stores, Home Centers, and Gasoline Stations with Convenience Stores, to name a few.

Consumer Expenditure Methodology

The consumer expenditure database consists of a multi-level hierarchical classification of household expenditures, which covers the majority of annual household expenditures. It is derived from an extensive modeling effort using the 2013 Consumer Expenditure Survey data from the Bureau of Labor Statistics. The BLS survey is a comprehensive survey that averages over 7,500 households four times a year using a rotating sampling frame. The use of several consecutive years of data provides a rich base of expenditure data from which to build expenditure models based on household demographics.

The database consists of a total of 396 base variables, which are aggregated in up to four levels of detail. A hierarchical structure is utilized throughout, so that it is possible to aggregate or disaggregate categories as required for analysis.

The survey includes a wide range of demographic attributes related to "consumer units" (generally households), which have been modeled separately for each discrete expenditure category. The older surveys were first inflated to the current price levels using the detailed consumer price index series. For each individual expenditure category in the survey, summary statistics were calculated for each separate element in the list below. In several cases, it was possible to utilize cross tabulation data (e.g. income by age of head of household). These variables are:

- geographic region (Northeast, South, Midwest, West)
- metropolitan status (metropolitan, non-metropolitan)
- housing tenure (owner or renter)
- age of head of household (<25 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, 65+ years)

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- size of household (1 person, 2 persons, 3 persons, 4 persons, 5 persons, 6+ persons)
- household income (<5000, 5-10000, 10-15000, 15-20000, 20-30000, 30-40000, 40-50000, 50-70000, 70000+)
- race (White, Black, American Indian, Asian) and Hispanic/Non Hispanic
- number of vehicles (none, 1, 2+ vehicles per household)

The total sample was utilized to obtain an average expenditure for each item. For each expenditure item, a series of adjustment factors were derived for each unique demographic attribute. These adjustment factors were then applied to the block group level using the same demographic variables in order to create estimates at the local level, which are consistent with local characteristics. Consistency checks were undertaken in order to ensure that the results at the block group level were consistent in the aggregate with overall income levels and published expenditures. Finally, the estimates were inflated using detailed consumer price indexes to current levels.

In total, there are 396 detail categories that can be aggregated using the field name. The field name will in all cases begin with the three-character sequence XCY (for an average expenditure) or TCY (for total geographic area expenditure) in order to distinguish these variables from those of other databases and from other years. The next two characters are the major group (e.g. AP for apparel). The primary detail level is a one-digit number (e.g. AP1 is men's apparel). Two sequences of two digits then follow to indicate the remaining two levels of potential detail. The entire variable list is included in the file layout section.

In addition to providing average household expenditures, AGS also provides total market estimates for use in market share and demand analysis.

Retail Potential Methodology

The primary data sources used in the construction of the database include:

- Current year AGS Consumer Expenditure Estimates
- 2007 Census of Retail Trade, Merchandise Line Sales
- Census Bureau Monthly Retail Trade

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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, 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.

Data Sources

2013 Bureau of Labor Statistics Consumer Expenditure Survey
2007 Census of Retail Trade, Merchandise Line Sales
Census Bureau, Monthly Retail Trade, current issue

Further Information

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