Methodology statement: 2017 Esri Retail MarketPlace

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NOTE: This database is in mature status. While the data is presented in current-year geography, all supply and demand-related estimates remain vintage 2017.

Introduction

A complete, current, and accurate snapshot of the retail marketplace is critical to strategic decisions made by retail trade and related food service establishments to increase business. There are two ways to measure activity in a retail market—supply and demand. Analysis of consumer spending reveals market demand or retail potential. Examining business revenues—retail sales—reveals market supply. Esri offers both components of economic exchange for a complete assessment of the retail marketplace, including a measure of the difference between supply and demand—the Leakage/Surplus Factor.

History

Before the development of Retail MarketPlace, if data users needed current-year estimates of expenditures within the retail trade industry, the choice was limited to a partial snapshot of this industry. The data covered household demand, but the expenditure estimates were available only by product, not by source. There was no way to estimate retail potential by industry.

In 2002, Esri introduced Retail MarketPlace and expanded the data options. Esri was the first company to offer a complementary and complete portrait of the retail landscape. This groundbreaking database includes both supply and demand of retail expenditures by detailed industry. Since the retail business supply-side estimates represent sales to households only, Retail MarketPlace uniquely captures the comparison to the household-based retail potential profile. The Leakage/Surplus Factor exposes industries that are either oversaturated or underserved for any area. This analytic data source gives decision makers a complete portrait of the retail landscape.

The 2017 Retail MarketPlace database incorporated some significant changes in the Data Axle business database, which is used as an input. In general, this file will contain myriad changes in attributes over time, such as revised industry codes to different block group codes appended from the geocoding process. The file used last year contained fewer records because of an effort by the vendor to remove unverifiable businesses (locations deemed out of business). Moreover, the vendor refreshed and updated its sales model and methodology applied to the individual locations. While Esri incorporates Data Axle sales data in an indirect manner for small-area modeling, these changes will still affect the final industry sales estimates for summary areas.

The 2017 database

Esri continues to leverage and build on its years of analytic insight and experience with the 2017 Retail MarketPlace database. The database includes the latest market statistics for Retail Trade and Food Services and Drinking Places (the retail market). The dollar estimates, which represent total retail supply and demand conditions for the past year, are presented by the 2012 NAICS definitions. These datasets comprise an update of supply and demand for the 27 industry groups in the Retail Trade sector, NAICS 44–45, as well as the three industry groups within the Food Services and Drinking Places subsector, NAICS 722.

The database reflects updated geographic inventories and boundary definitions. Reports generated for user-defined polygons like rings and drive times leverage the Census 2010 block point inventory and Esri's annually updated weight file. The data is also available by Core Based Statistical Area definitions, places, congressional districts (116th Congress), designated market areas, county subdivisions, and ZIP Codes.

Finally, the estimation of retail potential by industry incorporates the latest product line tables from the 2012 Census of Retail Trade (CRT), as well as the latest Consumer Expenditure Surveys (2014 and 2015) from the Bureau of Labor Statistics.

Market supply (Retail sales)

Estimates of retail sales begin with the benchmark, the 2007 and 2012 CRT from the U.S. Census Bureau. Trends from the economic censuses are used to update the base along with Esri's extensive portfolio of demographic and business databases. These include commercial and government sources such as the Data Axle business database and economic statistics from the Bureau of Labor Statistics. Supply estimates also incorporate data from the Census Bureau's Nonemployer Statistics (NES) division. Smaller establishments without payrolls, such as self-employed individuals and unincorporated businesses, account for a small portion of overall sales. However, these businesses represent more than half of all retailers in the United States. Their inclusion completes the report of industry sales.

Esri's model captures economic change by first differentiating employer and nonemployer sales growth. Multivariate statistical techniques are used to model data that is subject to disclosure issues in CRT and NES. Disparities between independently derived input data sources exist and must be reconciled. For example, sales data from the Census Bureau's Monthly Retail Trade (MRT) survey, CRT, and Data Axle can diverge by industry at the U.S. level. The differences are magnified for lower levels of geography. Many of the discrepancies are due to differences in methodology and estimation as well as industry classification. Esri's small-area models place a greater emphasis on the CRT and Data Axle's reported business inventory. The power of the Retail MarketPlace profile lies in the ability to assess local demand and supply for any user-defined polygon.

The Data Axle business database also provides sales data for the retail market. Although Esri utilizes this database in the derivation of small-area estimates, its methods differ. Esri estimates retail sales only to households for implementation within the Retail MarketPlace data. Furthermore, the Data Axle business records are reviewed and cleaned to improve the model input data.

All estimates of market supply are in nominal terms and are derived from receipts (net of sales taxes, refunds, and returns) of businesses that are primarily engaged in the retailing of merchandise. Excise taxes paid by the retailer or the remuneration of services are also included, for example, installation and delivery charges that are incidental to the transaction.

Market demand (Retail potential)

To complete the profile of a retail market, Esri estimates consumer demand or retail potential. That is the amount expected to be spent by consumers on products in the retail market. Esri's 2017 consumer spending data provides expenditure estimates for more than 700 products and services consumed by U.S. households.

Esri draws estimates of consumer spending from the Bureau of Labor Statistics' annual Consumer Expenditure Surveys (CEX), which provide consumer spending information for hundreds of goods and services by households but not by source. The consumer spending model incorporates Esri's Tapestry Segmentation system. This yields improved differentiation of spending, particularly for smaller markets where distinctions can be difficult to measure and for big-ticket items where consumer preferences are more pronounced.

The product line sales from the 2012 Census of Retail Trade are the basis for the crosswalk to market demand by establishment from the consumer expenditure data. Esri's retail potential model incorporates methods to update product line sales, taking into account changes in retail activity since 2012.

The Leakage/Surplus Factor (Supply and demand)

Esri enables the comparison of supply and demand simply in one measure, the Leakage/Surplus Factor. Leakage/Surplus conveniently measures the balance between the volume of supply (retail sales) generated by retail industry and the demand (spending by households, in other words, retail potential) within the same industry. Leakage in an area represents a condition in which a market's supply is less than the demand. That is, retailers outside the market area are fulfilling the demand for retail products; therefore, demand is leaking out of the trade area. Surplus in an area represents a condition in which supply exceeds the area's demand. Retailers are attracting shoppers that reside outside the trade area, so the surplus is in market supply.

Esri's Retail MarketPlace data is available for standard levels of geography or any size ring or polygon. Data is reported for the following NAICS industry subsectors and groups:

Three-digit NAICS industry subsectors and four-digit NAICS industry groups

NAICS 441: MOTOR VEHICLE AND PARTS DEALERS	**NAICS 451: SPORTING GOODS, HOBBY, MUSICAL INSTRUMENT, AND BOOK STORES**
NAICS 4411: Automobile Dealers	NAICS 4511: Sporting Goods, Hobby, and Musical Instrument Stores
NAICS 4412: Other Motor Vehicle Dealers	NAICS 4512: Book Stores and News Dealers
NAICS 4413: Automotive Parts, Accessories, and Tire Stores	**NAICS 452: GENERAL MERCHANDISE STORES**
NAICS 442: FURNITURE AND HOME FURNISHINGS STORES	NAICS 4521: Department Stores
NAICS 4421: Furniture Stores	NAICS 4529: Other General Merchandise Stores
NAICS 4422: Home Furnishings Stores	**NAICS 453: MISCELLANEOUS STORE RETAILERS**
NAICS 443: ELECTRONICS AND APPLIANCE STORES	NAICS 4531: Florists
NAICS 4431: Electronics and Appliance Stores	NAICS 4532: Office Supplies, Stationery, and Gift Stores
NAICS 444: BUILDING MATERIAL AND GARDEN EQUIPMENT AND SUPPLIES DEALERS	NAICS 4533: Used Merchandise Stores
NAICS 4441: Building Material and Supplies Dealers	NAICS 4539: Other Miscellaneous Store Retailers
NAICS 4442: Lawn and Garden Equipment and Supplies Stores	**NAICS 454: NONSTORE RETAILERS**
NAICS 445: FOOD AND BEVERAGE STORES	NAICS 4541: Electronic Shopping and Mail-Order Houses
NAICS 4451: Grocery Stores	NAICS 4542: Vending Machine Operators
NAICS 4452: Specialty Food Stores	NAICS 4543: Direct Selling Establishments
NAICS 4453: Beer, Wine, and Liquor Stores	
NAICS 446: HEALTH AND PERSONAL CARE STORES	**NAICS 722: FOOD SERVICES AND DRINKING PLACES**
NAICS 4461: Health and Personal Care Stores	NAICS 7223: Special Food Services
NAICS 447: GASOLINE STATIONS	NAICS 7224: Drinking Places (Alcoholic Beverages)
NAICS 4471: Gasoline Stations	NAICS 7225: Restaurants and Other Eating Places
NAICS 448: CLOTHING AND CLOTHING ACCESSORIES STORES	
NAICS 4481: Clothing Stores	
NAICS 4482: Shoe Stores	
NAICS 4483: Jewelry, Luggage, and Leather Goods Stores	

Esri's data development team

Led by chief demographer Kyle R. Cassal, Esri's data development team has more than a 40-year history of excellence in market intelligence. The team's economists, statisticians, demographers, geographers, and analysts produce independent small-area demographic and socioeconomic estimates and forecasts for the United States. The team develops exclusive demographic models and methodologies to create market-proven datasets, many of which are now industry benchmarks, such as Tapestry™ Segmentation, Consumer Spending, Market Potential, and annual Updated Demographics. Esri® Demographics power ArcGIS® through dynamic web maps, data enrichment, reports, and infographics.

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