

2015 Methodology Statement: Esri Retail MarketPlace

An Esri® White Paper
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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.

Continual improvements to the Retail MarketPlace data include a major revision to the 2015 model that anticipates the upcoming release of the 2012 Census of Retail Trade. In this fast-paced, data-driven economy, the importance of local area accuracy is ever present. Our new model features sophisticated data-cleansing techniques that are applied to a new business data source, plus an innovative approach to demand measurement at the industry level.

The 2015 Database Esri continues to leverage and build on its years of analytic insight and experience with the 2015 Retail MarketPlace. 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 in the North American Industry Classification System (NAICS). 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 four industry groups within the Food Services and Drinking Places subsector, NAICS 722.

The database reflects new geographic inventories and boundary definitions, starting with standard geographic areas like block groups, tracts, and counties based on 2010 geography. Reports generated for user-defined polygons like rings and drive times

leverage the 2010 block point inventory and updated weight file. The data is also available in the latest Core Based Statistical Areas, places, Congressional Districts (114th Congress), Designated Market Areas, County Subdivisions, and ZIP Codes.

New this year is the reincorporation of business data from Infogroup in the production of the estimates. Its 2015 database differs from Esri's former business data source with regard to data collection methodology and maintenance, industry classification, and employment and sales estimation. This source change will hinder comparison of an area's retail profile with earlier databases. Esri has also updated and enhanced the retail sales and retail potential modeling methodology to improve the quality of industry estimates for small areas.

Lastly, the estimation of retail potential by industry incorporates the latest product line tables from the 2007 Census of Retail Trade (CRT), as well as the latest Consumer Expenditure surveys (2011 and 2012) from the Bureau of Labor Statistics.

Market Supply (Retail Sales)

Estimates of retail sales begin with the benchmark, the 2002 and 2007 CRT from the US 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 Infogroup 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 Infogroup can diverge by industry at the US 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. New this year, Esri has reworked the small area models by placing a greater emphasis on the CRT and Infogroup'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. While these model changes represent a break from the past that precludes temporal review, they yield an improved, ground-level view of the retail landscape by industry group going forward. These enhancements were made in anticipation of the new 2012 CRT data that will be incorporated in the next release of Retail MarketPlace in 2016.

The Infogroup business database also provides sales data for the retail market. Although Esri utilizes this database in the derivation of small-area estimates, our methods differ. Esri estimates retail sales only to households for implementation within the Retail MarketPlace data. Furthermore, the Infogroup 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 2015 consumer spending data provides expenditure estimates for more than 700 products and services consumed by US households.

Esri draws estimates of consumer spending from the Bureau of Labor Statistics' annual Consumer Expenditure Surveys, which provide consumer spending information for hundreds of goods and services by households but not by source. The 2015 consumer spending model incorporates Esri's new generation of the 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 2007 Census of Retail Trade are the basis for the crosswalk to market demand by establishment from the consumer expenditure data. In preparation for the release of product line sales in the 2012 Census of Retail Trade, Esri's 2015 model introduces new methods to update product line sales. This takes account of change in retail activity since 2007 from the Monthly Retail Trade Survey. Without this step, the impact of the Great Recession cannot be captured. The economic downturn has shifted the structure of the retail market in small areas. Spending habits of consumers have shifted drastically in many areas, with consumers preferring to shop at discount stores and local shops.

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 [i.e., retail potential]) within the same industry. Leakage in an area represents a condition where 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 where 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, BOOK, AND MUSIC STORES
NAICS 4411: Automobile Dealers	NAICS 4511: Sporting Goods, Hobby, and Musical Instrument Stores
NAICS 4412: Other Motor Vehicle Dealers	NAICS 4512: Book, Periodical, and Music Stores
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 7221: Full-Service Restaurants
NAICS 447: GASOLINE STATIONS	NAICS 7222: Limited-Service Eating Places
NAICS 4471: Gasoline Stations	NAICS 7223: Special Food Services
NAICS 448: CLOTHING AND CLOTHING ACCESSORIES STORES	NAICS 7224: Drinking Places (Alcoholic Beverages)
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 Lynn Wombold, Esri's data development team has a 35-year history of excellence in market intelligence. The combined expertise of the team's economists, statisticians, demographers, geographers, and analysts totals nearly a century of data and segmentation development experience. The team develops datasets, including Updated Demographics, Tapestry Segmentation, Consumer Spending, Market Potential, and Retail MarketPlace, that are now industry benchmarks. For more information, call 1-800-447-9778.



Esri inspires and enables people to positively impact their future through a deeper, geographic understanding of the changing world around them.

Governments, industry leaders, academics, and nongovernmental organizations trust us to connect them with the analytic knowledge they need to make the critical decisions that shape the planet. For more than 40 years, Esri has cultivated collaborative relationships with partners who share our commitment to solving earth's most pressing challenges with geographic expertise and rational resolve. Today, we believe that geography is at the heart of a more resilient and sustainable future. Creating responsible products and solutions drives our passion for improving quality of life everywhere.



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