Dimensions

AGS
APPLIED GEOGRAPHIC SOLUTIONS
*Powering Smarter Market Decisions™*

Vintage

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Purpose

The Dimensions database consists of two distinct components – one demographic the other business. These unique datasets are intended for use in statistical models, neighborhood description, and site analysis.

An example map of the Norfolk, Virginia metropolitan area showing areas of high "Neighborhood Distress" is shown below:
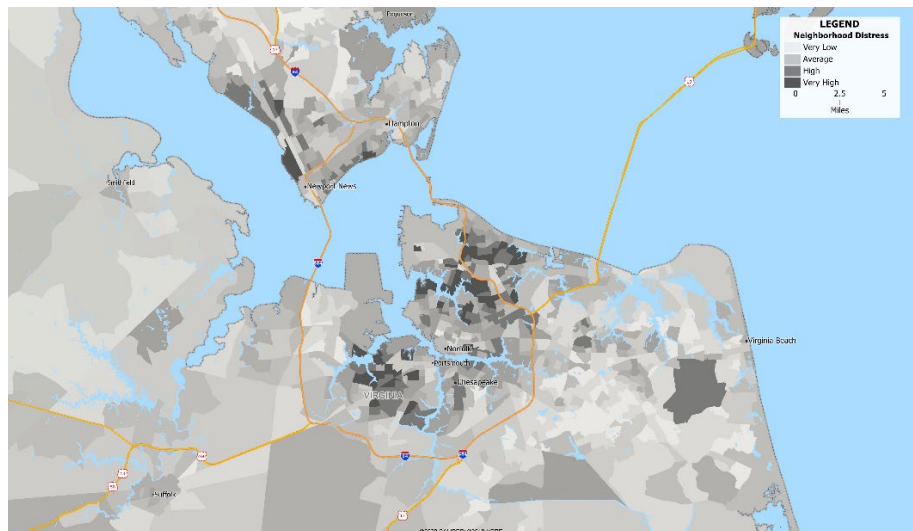
Content

The Dimensions databases, both demographic and business, are intended for use in statistical models and for neighborhood description.

Both **Demographic Dimensions** and **Business Dimensions** are modeling databases at the block group and higher levels of geography that is useful in creating statistical models, site signature reports, and general executive summary information. Unlike discrete neighborhood classification systems (e.g. Panorama), these databases provide continuous measurement scores across the dominant demographic and business components that differentiate neighborhoods.

Dimensions

Both databases are based on the well-known data reduction tool of Principal Components Analysis, in which the common patterns found within a large number of variables are reduced to a core set of discriminating factors.

Each Dimensions database is normally provided as a set of continuous variables which are minimally auto correlated and have a mean of zero and unit variance. For graphic site signature charts, a consistent scale of 0 – 1000 is available.

Both sets of data have been rebuilt, changing both the variable inputs and the number of dimensions used. For users of the existing (2019) model who wish to continue to use it, please contact AGS.

Factors are useful in a broad spectrum of applications, including:

Direct Marketing
Demographic Dimensions, when used in conjunction with Panorama and other targeting tools, can yield significant improvements in direct marketing results. By fine-tuning a Panorama profile, sub-groups of Panorama segments can be targeted effectively.

Model Development
Dimensions are minimally correlated and are therefore very suitable for use in the construction of sales performance and site location models. Statistical models developed using factors tend to be less prone to prediction error as a result of multi-collinearity. Note that while it is possible to utilize both Dimensions databases within a single model, the Demographic Dimensions and Business Dimensions variables are not statistically uncorrelated.

Neighborhood Description
Factors can be used to effectively describe the dominant characteristics of neighborhoods for use in demographic reporting systems. Site "signatures" are easily defined and analyzed, since each of these factors is independent and reflect the dominant neighborhood differentiators.   SnapSite includes a site signature model as one of its core analytical tools.

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Methodology: Demographic Dimensions

Demographic Dimensions contains 32 dimensions, based fully upon our current year estimates. Several hundred input variables were used in the analysis, which are summarized below by type of variable and source year. Note that in many cases, both average (or median) and distribution data were used (e.g. median age, % population age < 18, etc.).

Geographic Characteristics
- Metropolitan status (e.g. metro, non-metropolitan area)
- Population density

Housing Characteristics
- Units in structure (e.g. single family detached, apts 20+)
- Dwelling age
- Tenure
- Vacant dwellings by reason (e.g. seasonally vacant)
- Boarded up status (boarded up / not boarded up)
- Owner occupied dwellings by value
- Households by rent
- Dwellings by number of rooms
- Dwellings by heating type
- Dwellings by water service and sewage service

Household Characteristics
- By type (family, non-family)
- By size of household
- By structure (e.g. married couple w children)
- By age of householder
- Number of vehicles available by tenure
- Language and linguistic isolation

Population Characteristics
- Recent and historical growth (1970-2010)
- Projected growth (2010-2015)
- Age and sex
- Race and Hispanic origin
- Detailed Hispanic Origin (e.g. Mexico, Puerto Rico)
- Marital status
- Highest level of education
- School enrolment (public versus private)

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Labor Force
- Employment status (e.g. employed, unemployed)
- Industry
- Occupation
- Employment of women with children
- Travel time to work
- Means of transportation to work
- Worked at home
- Unemployment and labor force participation rates

Income
- Sources of income (e.g. social security, wage and salary)
- Households by income
- Households by net worth
- Households by income growth (2000-2010)
- Households by income by age of householder
- Poverty Status

Non-Resident Population
- Annual average leisure tourism (staying at hotels, family and friends, vacation homes and rentals, camping, recreational vehices)
- Seasonality

The SPSS principal components analysis module was used, with varimax rotation in order to maximize variable loading on each factor. Correlation between factors is minimal but non-zero in the resulting solution.

Demographic
Dimensions
Variables

01	Affluence and Education
02	Age
03	Hispanic (Mexican)
04	Family Status
05	College
06	Neighborhood Age
07	Commuting Times
08	Economic Distress
09	Density
10	Asian
11	Institutional Population
12	Black

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13	Seasonal Housing
14	Manufacturing Workers
15	Educators
16	Recent Growth
17	Rental Affordability
18	Government Workers
19	Agriculture
20	Hispanic (Puerto Rican and Dominican)
21	Construction Workers
22	Central Business District
23	Military
24	Health Care Workers
25	Hawaiian And Pacific Islander
26	Retirement
27	Rising Fortunes
28	Native American
29	Hospitality Workers
30	Sales Workers
31	Transportation Workers
32	Service Workers

Business Dimensions

Business Dimensions was built using the AGS Business Counts database, with the source data from dmPlus (Devonshire Associates). The entire dataset was utilized by computing employment and establishment density, average size and percent of employment by detailed NAICS codes, and land use classification. The methodology employed was the same as the Demographic Dimensions dataset.

Business Dimensions Variables

01	Medical
02	General and Light Manufacturing
03	Restaurants
04	Construction
05	Tech
06	Tourism
07	Retail
08	Small Business
09	Government

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10	Agriculture
11	Transportation
12	Grocery
13	Large Employers
14	Repair and Maintenance
15	Nursing and Residential Care
16	Religious Institutions
17	Small Finance Insurance and Real Estate
18	Arts and Outdoor Recreation
19	Personal Services
20	Legal Services
21	Automotive Sector
22	Accommodations
23	R&D
24	Wholesale and Warehousing
25	Engineering
26	Mining
27	Cultural
28	General Industrial

Further Information

Contact customer service at 877-944-4AGS or email support@appliedgeographic.com.