

# Dimensions



## 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.

## 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.

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.

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

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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.

## Methodology: Demographic Dimensions

Demographic Dimensions contains 26 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

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- By type (family, non-family)
- By size of household
- By structure (e.g. married couple w children)
- By age of householder

## Population Characteristics

- Recent and historical growth (1970-2010)
- Projected growth (2010-2015)
- Age
- Sex
- Race
- Hispanic origin
- Detailed Hispanic Origin (e.g. Mexico, Puerto Rico)
- Marital status
- Highest level of education
- Language spoken at home (% Spanish, % Asian)
- School enrolment (public versus private)
- Number of vehicles available

## Labor Force

- Employment status (e.g. employed, unemployed)
- Industry
- Occupation
- Employment of women with children
- Travel time to work
- Means of transportation to work
- Unemployment rate

## 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

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.

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## Demographic Dimensions Variables

- 01 Affluence and Education
- 02 Family Status
- 03 Hispanic (Mexican)
- 04 Age
- 05 Asian
- 06 Black
- 07 Institutionalized Populations
- 08 Commuters
- 09 College Students
- 10 Retirement Income
- 11 Seasonal Housing
- 12 Government Employment
- 13 Military
- 14 Hawaiian and Pacific Islander
- 15 Native American
- 16 New Growth Areas
- 17 Self Employed Home Workers
- 18 Puerto Rican
- 19 Miners
- 20 Blue Collar Shift Workers
- 21 Private Schooling
- 22 Cuban
- 23 Pakistani and East Indian
- 24 Construction Workers
- 25 Non-Family Households
- 26 Maturing Growth Areas

## Business Dimensions

Business Dimensions was built using the BusinessCounts database, with the source data from InfoBase. 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 Healthcare
- 02 Education
- 03 Professional Services
- 04 Heavy Manufacturing

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05	Restaurants
06	Non-Profit Establishments
07	Small Construction Firms
08	Shopping Centers
09	Government Employment
10	General Office
11	Central Business District
12	Utilities
13	Hotels and Related
14	Real Estate and Financial
15	Solo Entrepreneurs
16	Agricultural
17	Construction
18	Independent Retailers
19	General Commercial
20	Outdoor Recreation and Sports
21	Automotive Service
22	Small/Light Manufacturing
23	Large Establishments and Headquarters
24	Theatres and Libraries
25	Business Services
26	Unclassified Businesses
27	Mining
28	General Industrial

## Further Information

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