Introduction to Demographic and Business Data Products and Sources

RICE
Fondren Library
GIS/Data Center

Census Bureau Geographic Entities

Nation

Regions

Divisions

States

Counties

Census Tracts

Block Groups

Blocks

Census Bureau Data Products

- *People and Household Products*
    - Decennial Census
    - American Community Survey
    - Population Estimates
    - Population Projections

- *Business and Industry Products*
    - Economic Census
    - Annual Economic Surveys

People and Household Product Comparison

- *Decennial Census*
  - Actual counts based on limited census data of entire population

- *American Community Survey*
  - Estimates based on extensive survey data from a scientifically selected random sample of the population

- *Population Estimates*
  - Estimates based on past and present data

- *Population Projections*
  - Modeled based on assumptions of trends

Decennial Census

Historic Decennial Census Products

1790-1930

- Down to county level for entire nation

1940-1960

- Down to census tract level for select counties

1970-2000

- Down to census tract level 1970-1980 for entire nation
- Down to census block level 1990-2000 for entire nation
- Short Form (100%) – Count 1, STF1, SF1
- Long Form (Survey) – Count 3, STF3, SF3

2010

- Short Form Only
- Long Form replaced with American Community Survey

Decennial Census Variables

- *Race*

- *Ethnicity*

- *Sex*

- *Age*

- *Household Relationship (Family vs. Nonfamily, Married-couple family, Male vs. Female householder)*

- *Housing Tenure (Own vs. Rent)*

Decennial Census Products

- *Redistricting Data Summary File (PL 94-171)*
  - Population counts by race to block level

- *Demographic Profile*
  - All variables down to place level

- *Summary File 1*
  - All variables down to block or census tract level

- *Summary File 2*
  - All variables down to block or census tract level broken down into nearly 300 race-based groups

Decennial Census Products

- Congressional District Summary File

- State Legislative District Summary File

- American Indian and Alaska Native Summary File

- Summary Population and Housing Characteristics Report

- Population and Housing Unit Counts Report

- 2010 Census Briefs

- Special Reports

- Public Use Microdata Sample (PUMS) Files

- Advance Group Quarters Summary File

- Same-Sex Couple Households Summary File

Decennial Census Preparations

- **All territories are walked and every address is checked 4 times for those that need to be added or removed**

- **Addresses are also updated from a variety of sources, such as USPS, utility companies, and government entities**

- **Up to date addresses of all known living quarters are stored in the Master Address File (MAF)**

Decennial Census Data Collection

Every address in the MAF is:

- Mailed a census form
- If no response, visited by a census taker 5 times at different times of day
- If no response, neighbor is visited by a census taker
- April 1 reference date

American Community Survey

ACS Variables

Population Variables

- Marital status
- Birth place, citizenship, entry year
- School enrollment/education attainment
- Ancestry
- Migration
- Language spoken
- Veteran Status
- Disability
- Grandparents as caregivers
- Labor force status
- Place of work, journey to work
- Occupation, industry, class
- Work status
- Income
- Poverty

Housing Variables

- Value of home or monthly rent payment
- Units in structure
- Year structure built
- Number of rooms and number of bedrooms
- Year moved into residence
- Plumbing and kitchen facilities
- Telephone services
- Vehicles available
- Heating fuel
- Farm residence
- Utilities, mortgage, taxes
- Insurance and fuel costs

ACS Data Collection

- **Forms mailed at the start of each month**

- **Currently, 300,000 mailed per month, and 3.5 million mailed per year**

ACS Time Period Availability

1-Year Estimates- projections by single years
- (2005 through *2018*)

3-Year Estimates- projections over three years
- (2005-2007 through 2011-2013)

5-Year Estimates- projections over five years
- (2005-2009 through 2013-2017)

ACS Time Period Availability

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- (2005-2009 through 2013-2017)

ACS Geographic Availability

Population Requirements	1-Year Estimates	3-Year Estimates	5-Year Estimates
	Places County Subdivisions	Places County Subdivisions	Census Tracts Census Block Groups
> 65,000 people	x	x	x
> 20,000 people		x	x
< 20,000 people			x

Use multiyear estimates when:

- No 1-year estimate is available
- Margins of error for 1-year estimates are large
- Analyzing data for small population groups

ACS Geographic Availability

2009 Population Estimates	
Dallas County, TX	2,451,730
Cooke County, TX	38,650
Andrews County, TX	14,057

	1-Year Estimates	3-Year Estimates	5-Year Estimates
Dallas County, TX	X	X	X
Cooke County, TX		X	X
Andrews County, TX			X

ACS Margins of Error

% Bachelor's Degree or Higher

2005-2009 American Community Survey

5-Year Estimates

Texas	Dallas County	City of Dallas	Census Tract 122.04
25.5% +/- 0.2 MOE	27.5% +/- 0.6 MOE	28.3% +/- 0.9 MOE	20.1% +/- 5.3 MOE

Population Estimates

Population Estimates

Demographic components of change

- Births, deaths, migration

Estimates by demographic characteristics

- Age, sex, race

Down to county level

July 1 reference date

Population Projections

Population Projections

Population projections by demographics

- Age, sex, race

Modeled using the cohort-component method

- Components of change

  - Fertility, mortality, net migration

- Projected separately

  - For each birth cohort

People and Household Product Use

Decennial Census
- Use for population counts

American Community Survey
- Use for characteristics of the population and to view trends over time
- Block group

Population Estimates
- Use for population counts in intercensal years

Population Projections
- Use for future planning
- **County level

Business and Industry Products

- *Economic Census*
    - Conducted every 5-years
    - Down to county, place, and zip code level

- *Annual Economic Surveys*
    - Various surveys conducted monthly, quarterly, annually, and every 5 years
    - Varies, but usually down to county level

Economic Census Variables

- **Number of establishments**

- **Sales, receipts, revenue, shipments, business done**

- **Annual payroll**

- **Number of employees**

- **Employee wages**

Annual Economic Surveys

Annual Capital Expenditures Survey
Annual Public Employment Survey
Annual Retail Trade Survey
Annual Survey of Manufactures
Annual Survey of State and Local Government Finances
Annual Wholesale Trade Survey
Building Permits
Business Dynamics Statistics
Business R & D and Innovation Survey
Consolidated Federal Fund Report
County Business Patterns
Current Industrial Reports
E-Stats (E-Commerce Statistics)
Exports from Manufacturing Establishments
Federal Audit Clearinghouse
Information and Communication Technology Survey
Local Government School System Finance Survey
Medical Expenditure Panel Survey
Nonemployer Statistics
Profile of U.S. Exporting Companies
Service Annual Survey
State Government Tax Collections Survey
State and Local Government Public-Employee Retirement Systems
Statistics of U.S. Businesses
Survey of Construction
Tax Collections

Data Sources

Demographic and Business Data Sources

- **Census Bureau FTP Server (Census only)**

- **Data.census.gov (Census only)**

- **National Historical GIS (Census only)**

- **Social Explorer (Census only+)**

- **IPUMS (Census only)**

- **SimplyAnalytics (Census and Business)**

- **Esri Community Analyst and Business Analyst Online (Census and Business)**

- **Infogroup InfoUSA/ReferenceUSA (Business only)**

Data.census.gov Data Products

Decennial Census (2000-2010)

American Community Survey (2005-2017)

Economic Census (2002-2012)

Population Estimates (2011-2017)

Selected Annual Economic Surveys
- Annual Survey of Manufacturers
- Business Expenses Survey
- Commodity Flow Survey
- County Business Patterns
- Non-employer Statistics
- Survey of Business Owners

National Historical GIS Data Products

Decennial Census (1790-2010)

American Community Survey (2009-2016)

Agricultural Census (1840-1950)

Census of Religious Bodies (1850-1952)

County Business Patterns (1970-2002)

SABINS (School Attendance Boundaries)

NHGIS National Historical Geographic Information System

Social Explorer Data Products

Decennial Census (1790-2010)

American Community Survey (2005-2016)

Religion Data (1980-2010)

Crime Data (2010-2015)

Health Data (2008-2016)

Environmental Data (2001-2011)

Citizen Voting Age Population (2000-2015)

United Kingdom and Canadian Census (2011)

European Statistics Data (1990-2014)

World Development Indicators (1960-2015)

∴: Social Explorer

SimplyAnalytics Data Products

Census Data

Consumer Expenditure

Business Counts

Market Segments

Quality of Life

Consumer Price Index

Retail Sales

Sales Potential

Claritas PRIZM

SimmonsLOCAL

Business Points

Esri Community Analyst Data Products

Esri Demographics (2010/15, 2011/16)

Access to Care

Adult Preventive Services Use

American Community Survey

Birth Measures

Building Permits

Business Locations (BAO only)

Business Summary

Decennial Census (1990-2010)

Consumer Spending

Crime Indices

Death Measures

EPA Enforcement

Food Access

Food Consumption

Food Stamps

Health Insurance

Health Status

Housing Affordability

HUD Income Limits

HUD Subsidized Households

Infant Mortality

Infectious Disease Cases

Major Shopping Centers

Map Data (BAO only)

Market Potential

Poverty

Retail Marketplace

Risk Factors for Premature Death

Supplemental Security Income

Tapestry Segmentation

Traffic Counts

Esri Community Analyst

Esri Business Analyst Online

InfoUSA/ReferenceUSA Data Products

- **US Businesses (14 million businesses)**
- **US New Businesses (4 million businesses)**
- **US Standard White Pages (89 million residents)**
- **US Healthcare (855,000 physicians and dentists)**
- **US Consumers/Lifestyles (203 million consumers)**
- **US New Movers/Homeowners (300,000 weekly)**

Data Sources Export Comparison

Tabular Data	Data.census.gov	NHGIS	Social Explorer	SimplyAnalytics	Esri Community Analyst
Presentation Ready Formats					
Microsoft Excel (.xls)	X		X	X	
Portable Document Format (.pdf)	X				
Rich Text Format (.rtf)	X				
Database Compatible Formats					
Database File (.dbf)				X	
Comma delimited text (.csv)	X	X	X	X	
Tab delimited text (.txt)					
SAS (.sas)	X	X	X		
SPSS (.sps)		X	X		
STATA (.dct and .do)		X	X		
Map Displays					
Presentation Ready Formats					
Microsoft PowerPoint (.ppt)			X		
Portable Document Format (.pdf)	X			X	X
JPEG Image (.jpg)	X			X	X
PNG Image (.png)			X	X	
GIF Image (.gif)					
Scalable Vector Graphics (.svg)				X	
GIS Compatible Formats					
Shapefiles (.zip)	X	X		X	

Census GIS Products

TIGER/Line Shapefiles
- 2000, 2007-2015
- Full geographic detail
- Extensive attributes

Shapefiles with Demographic Data
- 2010
- Selected variables from SF1 Demographic Profile, including total population, total housing units, median age, population 16 and over, population 65 and over, race, relationship, average household size, etc.

Cartographic Boundary Files
- Generalized geographic detail (1:500k, 5m, 20m) with accurate coastlines
- Limited attributes

Keyhole Markup Language (KML)
- 2010
- For use in Google Earth