Texas
Demographic Characteristics and Trends

University of Texas
Division of Statistics and Scientific Computation
Statistics in Action Series

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Demography – the study of the size, distribution, and composition of populations; the processes determining these – namely, fertility, mortality, and migration; and the determinants and consequences of all of the above.

~ Bogue, 1968; Murdock & Ellis, 1991
Demographic Highlights

TEXAS is:

**big.** The population of Texas is the second largest in the United States, with 25,145,561 million people.¹

**young.** Approximately 27% of Texas’ population is under 18 and only 10% of the population is older than 65 years.¹ Webb County in Texas, has the youngest population in the U.S. with children younger than 5 comprising 12.8% of the population.⁸

**embracing of culture and diversity.** Approximately 9.5 million or 38% of Texans are of Hispanic descent, 2.9 million or 12% are African Americans, and 1.4 million or 6% are other (non-Anglo mainly of Asian descent).¹ In about a decade, it is expected that Texas’ population will have more persons of Hispanic descent than any other racial or ethnic group.⁵

**a desired place to live and work.** Net in-migration to Texas accounts for almost half of the population growth in recent years.² More than 171,900 college graduates moved into Texas each year between 2006 and 2008, placing Texas as 2nd in the Nation by this measure.

**urban.** Texas has three of the top 10 largest cities in the Nation. The Austin-Round Rock-San Marcos metropolitan area was the 8th most rapidly growing in the Nation.¹

Demographic Highlights

TEXAS is:

rural. Texas is the second largest state in the Nation in terms of square miles (268,601) and approximately 17% of the population lives in rural areas.²

a working state. Texas has a civilian labor force of more than 12 million workers and an unemployment rate lower than in most States.⁷

family oriented. Texas ranks 3rd among states for the percent of households which are married-couple families with children (24.4%).³

multigenerational. Texas ranks 3rd among states for percent of households which are multigenerational (4.5%).³

growing – fast. Texas gained more population than any other state in the last Census year (between April 1, 2000 and April 1, 2010), adding 4,293,741 people.¹ Among cities over 100,000 population in the U.S., 4 of the 10 fastest growing areas are in Texas (2007-2008 change).⁸
• Disseminate demographic and related socioeconomic data to the State and general public.
• Produce annual estimates of total populations of counties and places (cities) in the state and estimates of county populations by age, sex, and race/ethnicity.
• Produce biennial projections of the population of the State and all counties by age, sex, and race/ethnicity
Applying demographic methods and materials to government planning:

• Estimating and projecting the need for adult basic education

• Identifying geographic areas, and the characteristics of people within these areas, that are lacking public transportation
Estimating & projecting the need for adult basic education
Client: Texas Workforce Investment Council

Objective: to estimate and project the population in need of adult basic education services by age, sex, race, Hispanic ethnicity, and nativity at the state, local workforce development area level.
Defining Adult Basic Education

• 1998 Workforce Investment Act, Title II, Section 203(1)
  – At least 16 years old, not enrolled in secondary school, and lack basic educational skills to function effectively in society, not have a secondary diploma or equivalent, or be unable to speak, read, or write English.
Estimating & Projecting the Need for Adult Basic Education

• NCES 2003 National Assessment of Adult Literacy
  – Document Basic Literacy – Find BMI given height, weight, and look-up table.
  – Quantitative Basic Literacy – Calculate price of sandwich & salad from menu.
  – Prose Basic Literacy – Find the name of someone who performed an action in a given narrative.
  – Below Basic, Basic, Intermediate, and Proficient Literacy

• NAAL 2003 confirmed a correlation between educational attainment and literacy.
### Estimating & Projecting the Need for Adult Basic Education

**Source:** NAAL 2003 Literacy in Everyday Life

<table>
<thead>
<tr>
<th>Credential</th>
<th>Quantitative</th>
<th>Prose</th>
<th>Document</th>
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<tbody>
<tr>
<td></td>
<td>Below Basic</td>
<td>Basic</td>
<td>Int. +</td>
</tr>
<tr>
<td>&lt; high school</td>
<td>64</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td>GED</td>
<td>26</td>
<td>43</td>
<td>31</td>
</tr>
<tr>
<td>Diploma</td>
<td>24</td>
<td>42</td>
<td>34</td>
</tr>
<tr>
<td>Trade</td>
<td>18</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>Some Coll.</td>
<td>10</td>
<td>36</td>
<td>54</td>
</tr>
<tr>
<td>Assoc.</td>
<td>7</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>Bachelor's</td>
<td>4</td>
<td>22</td>
<td>74</td>
</tr>
<tr>
<td>Graduate</td>
<td>3</td>
<td>18</td>
<td>79</td>
</tr>
</tbody>
</table>
Estimating & Projecting the Need for Adult Basic Education

- American Community Survey 2006-2008
  - Age:
    - 16 to 64 years old (workforce ages),
    - 65 years plus.
  - School enrollment: not attended in last 3 months.
  - Educational attainment:
    - 1) Less than high school,
    - 2) High school and above,
    - Proportion for GED was extrapolated from ACS 1-YR 2008 and applied to ACS 3-YR estimate.
  - Ability to speak English:
    - 1) Not well & not at all,
    - 2) Well and very well.
• Need for adult basic education services largely driven by immigration in Texas.
• Immigrants to Texas more often undocumented, non-English speaking, lower levels of education.
• Migration component of Texas State Data Center projections does not include international migration.

• Incorporated foreign, native born rates from ACS 3-YR estimates.
• Adopted State Data Center’s (SDC) current rates based on age, sex, race, and Hispanic ethnicity.
• Modified SDC’s rates in order to separate the migration component into foreign born and native born.
• Used the 2006-2008 ACS to find the age, sex, race, and Hispanic ethnicity structure of foreign born.
Cohort Component Method

• Used the 2008 ACS to get our base population.
• After reviewing trends, used a 60%-40% split foreign versus native born migration component.
• Assumed equal survival rates for foreign and native born and by definition, were able to ignore fertility rates for foreign born.
• Aged the population and calculated two migration scenarios: 0.5 and 2.0.
## Estimating & Projecting the Need for Adult Basic Education

<table>
<thead>
<tr>
<th></th>
<th>Foreign Born</th>
<th>Native Born</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Ed, Fluent</td>
<td>Low Ed, Not Fluent</td>
</tr>
<tr>
<td></td>
<td>High Ed, Not Fluent</td>
<td>Low Ed, Fluent</td>
</tr>
<tr>
<td></td>
<td>Low Ed, Not Fluent</td>
<td>Low Ed, Not Fluent</td>
</tr>
<tr>
<td></td>
<td>High Ed, Not Fluent</td>
<td>High Ed, Not Fluent</td>
</tr>
<tr>
<td>ACS2008</td>
<td>496,643</td>
<td>1,666,345</td>
</tr>
<tr>
<td></td>
<td>1,106,745</td>
<td>115,109</td>
</tr>
<tr>
<td></td>
<td>418,206</td>
<td>51,822</td>
</tr>
<tr>
<td>2010</td>
<td>509,897</td>
<td>1,876,708</td>
</tr>
<tr>
<td></td>
<td>1,178,349</td>
<td>127,056</td>
</tr>
<tr>
<td></td>
<td>443,904</td>
<td>59,692</td>
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<tr>
<td>2015</td>
<td>573,346</td>
<td>2,108,779</td>
</tr>
<tr>
<td></td>
<td>1,333,482</td>
<td>155,098</td>
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<tr>
<td></td>
<td>484,964</td>
<td>69,791</td>
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<tr>
<td>2020</td>
<td>635,446</td>
<td>2,393,320</td>
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<tr>
<td></td>
<td>1,492,330</td>
<td>191,742</td>
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<td></td>
<td>523,007</td>
<td>82,105</td>
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<tr>
<td>2030</td>
<td>753,493</td>
<td>3,043,037</td>
</tr>
<tr>
<td></td>
<td>1,826,164</td>
<td>287,652</td>
</tr>
<tr>
<td></td>
<td>591,667</td>
<td>111,286</td>
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<tr>
<td>2040</td>
<td>859,811</td>
<td>3,680,269</td>
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<td></td>
<td>2,165,572</td>
<td>405,214</td>
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<tr>
<td></td>
<td>664,598</td>
<td>144,436</td>
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</table>

### 0.5 Migration Scenario
## Estimating & Projecting the Need for Adult Basic Education

<table>
<thead>
<tr>
<th></th>
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<th>Native Born</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Ed Fluent</td>
<td>Low Ed Not Fluent</td>
<td>High Ed Not Fluent</td>
<td>Low Ed Fluent</td>
<td>Low Ed Not Fluent</td>
</tr>
<tr>
<td><strong>ACS2008</strong></td>
<td>496,643</td>
<td>1,106,745</td>
<td>418,206</td>
<td>1,666,345</td>
<td>115,109</td>
</tr>
<tr>
<td><strong>PJ2008</strong></td>
<td>484,998</td>
<td>1,118,971</td>
<td>426,095</td>
<td>1,773,940</td>
<td>118,480</td>
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<tr>
<td>2010</td>
<td>520,301</td>
<td>1,200,154</td>
<td>453,462</td>
<td>1,911,241</td>
<td>131,599</td>
</tr>
<tr>
<td>2015</td>
<td>616,348</td>
<td>1,423,822</td>
<td>524,001</td>
<td>2,179,198</td>
<td>163,726</td>
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<tr>
<td>2020</td>
<td>721,874</td>
<td>1,674,291</td>
<td>600,528</td>
<td>2,512,795</td>
<td>207,072</td>
</tr>
<tr>
<td>2030</td>
<td>966,003</td>
<td>2,276,556</td>
<td>777,663</td>
<td>3,337,276</td>
<td>331,254</td>
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<tr>
<td>2040</td>
<td>1,260,359</td>
<td>3,023,997</td>
<td>1,005,710</td>
<td>4,261,991</td>
<td>509,204</td>
</tr>
</tbody>
</table>

### 2.0 Migration Scenario
Identifying geographic areas, and the characteristics of people within these areas, that are lacking public transportation
Identifying Urban Gaps

Client: Texas Department of Transportation

Objective: to quantify the size and composition of transit “urban gaps” present in urbanized areas (UZAs) in 2000 and projected for 2010
Identifying Urban Gaps

• Began with two sets of maps
  – 2000 urbanized areas
  – 2010 urbanized areas

• Plus maps of the transit service area boundaries for each of the transit service providers

• Overlayed transit service area boundaries onto each urbanized area

• Portions of the urbanized areas outside of the transit service area boundaries identified “urban gaps” in service
Urban gaps were identified in the following urbanized areas:

- Amarillo
- Austin
- Beaumont
- College Station – Bryan
- Corpus Christi
- Dallas – Fort Worth – Arlington
- Denton – Lewisville
- El Paso
- Galveston
- Houston
- Killeen
- Longview

- Lubbock
- Midland
- Odessa
- Port Arthur
- San Antonio
- Temple
- Texarkana
- Tyler
- Victoria
- Waco
- Wichita Falls
Characteristics of People in Urban Gaps

• Developed Transit Needs Index:
  – Households without automobiles
  – Percentage of seniors
  – Percentage of persons with disabilities
  – Household income

• Indicators estimated using 2000 Census Summary File 3 aggregate tables at the block group level.
Characteristics of People in Urban Gaps

- Households without vehicles
- Percent seniors
- Percent persons with disabilities
- Household income

- SF-3 Table P30: Means of Transportation to work
- SF-3 Table P11: Household type, including living alone, by relationship for the population 65 years plus
- SF-3 Table P42: Sex by age by disability status by employment status for civilian non-institutionalized population 5 years plus
- SF-3 Table P88: ratio of income in 1999 to poverty level \( \leq 1.5 \)
• Block groups containing urban gaps were visually inspected using aerial photography to determine estimated proportion of total block group population contained within the gaps.

• Estimates were made using a 20% category scale, with possible estimates equal to 0%, 20%, 40%, 60%, 80%, and 100%.

• These rates were applied to total block group population 2000 and 2010 to obtain estimated urban gap population.
Transit needs characteristic rates were calculated from 2000 Census population and SF-3 aggregate tables.

Rates were applied to estimated urban gap population at block group level.
### Projected Population in Urban Gaps

<table>
<thead>
<tr>
<th></th>
<th>UZAs, 2000</th>
<th>UZAs, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>15,085,079</td>
<td>18,601,000</td>
</tr>
<tr>
<td>Urban Gap Population Estimate</td>
<td>2,942,783 (19.5%)</td>
<td>4,169,641 (22.4%)</td>
</tr>
<tr>
<td>Urban Gap Population 65 years plus</td>
<td>207,433 (1.4%)</td>
<td>273,419 (1.7%)</td>
</tr>
<tr>
<td>Urban Gap Workers 16 years plus with transit needs</td>
<td>211,534 (1.4%)</td>
<td>291,976 (1.6%)</td>
</tr>
<tr>
<td>Urban Gap Population 5 years plus with at least one disability</td>
<td>424,417 (2.8%)</td>
<td>569,567 (3.1%)</td>
</tr>
<tr>
<td>Urban Gap Population with known poverty status at 150% poverty level and below</td>
<td>460,997 (3.1%)</td>
<td>596,453 (3.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>Projected 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas Population</td>
<td>20,851,820</td>
<td>25,373,947</td>
</tr>
</tbody>
</table>

*2000-2007 Migration Scenario*
Challenges & Future Developments

• International and domestic migration components in SDC estimates & projections program

• Small area estimation models in light of ACS data

• Parcel level data to facilitate estimation of small geographic areas
Demographics & Destiny
Office of the State Demographer

Office: (512) 463-8390 or (210) 458-6530
E-mail: State.Demographer@osd.state.tx.us
Website: http://osd.state.tx.us