E-Government Services and Computer and Internet Use in Texas
A Report from the Telecommunications and Information Policy Institute
University of Texas, Austin TX 78712
(512) 471-5826; (512) 471-6667
June, 2000

Dr. Sharon Strover, sstrover@mail.utexas.edu
Dr. Joe Straubhaar, jdstraubhaar@mail.utexas.edu

The authors gratefully acknowledge the assistance of Lon Berquist and Erin Fitzgerald in the preparation of this report. This study was conducted for the Electronic Government Task Force and sponsored jointly by the Texas Department of Information Resources and the Texas Public Utility Commission. Copies are available from TIPI at www.utexas.edu/tipi and from DIR at http://www.dir.state.tx.us/egov/. The DIR contact is Phil Barrett at (512) 475-4754 or phil.barrett@dir.state.tx.us.
# Table of Contents

**EXECUTIVE SUMMARY** .......................................................................................................................................................................................... 1

**BACKGROUND OF THE STUDY** ................................................................................................................................................................................ 5

  - **Context** ................................................................................................................................................................................... 5
  - **Overview** ............................................................................................................................................................................... 5
  - **The Sample and Procedures** ................................................................................................................................................ 7

**COMPUTER AND INTERNET USE** ........................................................................................................................................................................... 7

**THE IMPORTANCE OF PLACE AND PURPOSE** ............................................................................................................................................................. 12

  - **Reasons for Not Using the Internet** ........................................................................................................................................ 13
  - **Probable Access Sites for Using the Internet** .................................................................................................................................... 15

**ATTITUDES TOWARD THE INTERNET, COST AND OTHER FACTORS** ........................................................................................................... 16

  - **Connections** .................................................................................................................................................................. 19
  - **Expectations for the Internet** .................................................................................................................................................. 20

**USING GOVERNMENT SERVICES OVER THE INTERNET** ................................................................................................................................. 21

  - **Attitudes Toward Providing Government Information or Services Through the Internet** .......................................................... 22

**PRIVACY AND SECURITY ISSUES AND ATTITUDES** .................................................................................................................................................. 26

  - **Opt-In v. Opt-Out Data Release** ............................................................................................................................................. 27
  - **Confidence and Concern Regarding Use of Information** ....................................................................................................... 28

**ATTITUDES TOWARD POSSIBLE SUPPORT SCHEMES FOR E-GOVERNMENT** .................................................................................................. 31

**CONCLUSIONS** ........................................................................................................................................................................................................ 33

**APPENDIX A: SURVEY QUESTIONNAIRE** ........................................................................................................................................................................... 36

**APPENDIX B: SURVEY AND ANALYSIS PROCEDURE DETAILS** ....................................................................................................................................... 73

  - **The Weighted Sample** ......................................................................................................................................................... 73
  - **Defining Rural** ........................................................................................................................................................................ 73
  - **Demographics of the Sample** .................................................................................................................................................... 74
List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Reasons for Not Using the Internet</td>
<td>13</td>
</tr>
<tr>
<td>Table 2</td>
<td>Race/Ethnic Group by Reasons for Not Using the Internet</td>
<td>14</td>
</tr>
<tr>
<td>Table 3</td>
<td>Connecting to the Internet from Home</td>
<td>19</td>
</tr>
<tr>
<td>Table 4</td>
<td>Percent Interested in Broadband</td>
<td>20</td>
</tr>
<tr>
<td>Table 5</td>
<td>E-Government Services: Use, Internet Interest, and Payment</td>
<td>21</td>
</tr>
<tr>
<td>Table 6</td>
<td>Percentage Agreement on Internet &amp; E-Government</td>
<td>22</td>
</tr>
<tr>
<td>Table 7</td>
<td>Percentage Confidence in State Government</td>
<td>30</td>
</tr>
<tr>
<td>Table 8</td>
<td>Percentage Confidence in Federal Government</td>
<td>30</td>
</tr>
<tr>
<td>Table 9</td>
<td>Race and Ethnic by Education</td>
<td>75</td>
</tr>
<tr>
<td>Table 10</td>
<td>Household Income by Location</td>
<td>76</td>
</tr>
</tbody>
</table>
List of Figures

FIGURE 1 Percentage of Texas Households Using Computers ............................................. 7
FIGURE 2 Percentage of Types of Computer and Internet Use ........................................ 8
FIGURE 3 Ethnicity/Race by Type of Use (%) ........................................................................ 8
FIGURE 4 Type of Use by Age .............................................................................................. 9
FIGURE 5 Type of Use by Income ....................................................................................... 10
FIGURE 6 Type of Use by Education .................................................................................. 11
FIGURE 7 Rural and Nonrural Computer & Internet Use ..................................................... 12
FIGURE 8 Average Frequency of Using Internet Access Sites by Ethnicity ................... 13
FIGURE 9 Rural/Nonrural Reasons for Not Using the Internet .......................................... 14
FIGURE 10 Time on Internet and Transactions per Year by Rural/Nonrural ................... 15
FIGURE 11 Mean Likelihood of Using the Internet by Site ............................................... 16
FIGURE 12 Agree/Disagree “I am worried about privacy on the Internet.” ..................... 16
FIGURE 13 Percent Agree/Disagree with “I would use the Internet more if it had more things in Spanish.” ................................................................. 17
FIGURE 14 Percent Agree/Disagree with “I have easy access to the Internet.” ............... 17
FIGURE 15 Mean Nonuser Ratings on Internet Uses ......................................................... 20
FIGURE 16 Agree/Disagree “I prefer to see someone in person if I need something from a government office.” ................................................................. 23
FIGURE 17 Ethnicity/Race by Agree/Disagree on Prefer to See Someone (%) .............. 23
FIGURE 18 Agree/Disagree “The Internet is not sufficiently available to everyone to use it for providing government information and services.” .................. 24
FIGURE 19 Agree/Disagree “I am concerned about the quality of services the government would provide through the Internet.” ............................................. 24
FIGURE 20 Agree/Disagree with “I am concerned about the quality of service the government would provide through the Internet.” by Race/Ethnicity ............... 25
FIGURE 21 Agree/Disagree “Having government information on the Internet would make government more available to the people.” ........................................... 25
FIGURE 22 Agree/Disagree with “Having information on the Internet would make government more available to the people.” by Race/Ethnicity ............................ 26
FIGURE 23 Acceptability of Releasing Information about Driving History .................... 27
FIGURE 24 Breakdown of Preferred Strategies for Control over State Use of Data ........ 28
FIGURE 25 Percent Levels of Concern Regarding Giving Financial Information over the Internet to Government Agencies ......................................................... 29
FIGURE 26 Percent Levels of Concern Regarding Giving Nonfinancial Information over the Internet to Government Agencies .............................................. 30
FIGURE 27 Percentage Reporting “How confident are you that [the state] is using your personal, confidential information properly?” ................................::::: 30
FIGURE 28 Percentage Reporting “How confident are you that [the federal government] is using your personal, confidential information properly?” ......................... 31
FIGURE 29 Acceptability of Users Paying for E-government ........................................... 32
FIGURE 30 Acceptability of Advertising on E-government Web Pages to Support Service ........ 32
FIGURE 31 Acceptability of Using General Revenues to Fund E-government ................... 33
FIGURE 32 Acceptability of the State Selling Data to Support E-government Services .......... 33
FIGURE 33 Ethnicity and Race Percentages by Location ................................................ 75
FIGURE 34 Age by Ethnicity ............................................................................................... 77
E-Government Services and Computer and Internet Use in Texas

Executive Summary

This research project was conceived as a way to assess factors that could influence the development and use of e-government services in the State. The Department of Information Resources (DIR) has been investigating how to deploy what many perceive to be the next generation of government services. These e-government services will be dependent on a web-based or computer network based delivery system. Consequently, who has access to computers and the Internet, how people use these technologies, their attitudes toward both, and how they feel about various privacy and security issues associated with sharing personal information on the Internet are important considerations. If an insufficient number of people use and feel comfortable with computer and Internet systems, then moving government services to e-government may be questioned. The prospect of significant numbers of people not being able to use such services is an issue and could jeopardize e-government’s legitimacy.

Understanding why people do not use the Internet may indicate what resources would be required to educate many Texans about the advantages of e-government services in order to catalyze equitable use by all citizens. Understanding which e-government services are most attractive to people will help the State of Texas plan implementation of those services. Awareness of people’s concerns about privacy, control over personal information, and forms of payment can help Texas structure e-government in ways that people will most support and use.

Specifically, this study examines (1) who in Texas does and does not use the Internet, (2) what sort of Internet connectivity Texans have, particularly in rural areas, (3) Texans’ attitudes toward and behaviors in using computers and the Internet for various services, and (4) how people might use e-government services, (5) how much they might be willing to pay for these services, and (6) what related issues concern them. Thus broadband services in rural Texas, privacy and security matters, and the nature of Texas’ digital divide are addressed in this study.

The data for this study came from a survey conducted in March-April, 2000 using telephone interviews with 1,002 respondents. Of those, 800 comprise a random sample survey of households in the state, while an additional 202 households are exclusively from rural counties.

Key findings include the following.

- 67% of the sample currently uses computers.
- 60% of the sample uses the Internet.

1For information on the digital divide, see the NTIA report, “Falling Through the Net III” (http://www.ntia.doc.gov/ntiahome/digitaldivide/) or see the Benton Foundation site (http://www.benton.org/Library/Low-Income/).
2Consequently, 328 respondents (126 from the original sample and 202 from the rural oversample) are from rural areas while 674 respondents are from non-rural regions. We interviewed individuals in households over 18 years of age, using last birthday in order to randomly sample within the household. The questionnaire was constructed largely of closed-ended items. The telephone interview used a Computer Assisted Telephone Interviewing (CATI) system and took approximately 14 minutes to administer.
Who doesn’t have access?

- The main reasons people give for not using the Internet are that they don’t use computers, are concerned about kids and the Internet, aren’t interested, don’t have time or can’t afford it.
- People who do not use the Internet tend to be older, poorer, and are more often members of minority groups.
- About 50% of the population over 60 do not use the Internet and frequently do not use computers.
- Lower income and education levels are associated with not using the Internet.
- Hispanics and African Americans, especially those below the $30-40,000 income threshold, are less likely to use the Internet.
- Being in a rural location seems only slightly to influence Internet use.
- Nevertheless, rural residents report that they have less Internet access and that it is too expensive. At the same time, they have the same interest in having a broadband connection to the Internet as non-rural residents.
- Those who do not now have access to the Internet are most likely to go to libraries or schools to get access, and less likely to go to malls or other community centers for access.

What do people think about the idea of putting e-government services on the Internet?

- While people see the Internet as potentially very useful and think that having government services on it would be useful, people also agree that they would prefer to see someone in person when using a government service. They also show some concern for the quality of services they would receive on the Internet. Older respondents and African-Americans were most concerned about quality of e-government services.
- People are also concerned that the Internet is not sufficiently available to offer public services through that means.

What e-government services are people most interested in and most willing to pay for?

- The e-government services that people are most likely to use are registering to vote, paying traffic tickets or vehicle fees, voting, enrolling in educational programs, filing and paying taxes, and requesting personal information. People were also somewhat interested in using e-government services to obtain hunting or fishing licenses and obtaining information on public safety or the environment. Of interest to smaller groups were participating in public meetings, receiving or renewing professional licenses, filing paperwork for building or other permits, and applying for health, welfare or social services.
- The e-government services that the most people are willing to pay for include renewing driver’s licenses, paying traffic tickets, enrolling in courses, filing taxes and requesting personal information.
What are the fears and concerns people have about e-government services on the Internet?

- Most respondents oppose both the use of general tax funds and the sale of government-collected data on individuals to pay for e-government services; they would rather see advertising on screen or pay directly for services.

- Two thirds were worried about privacy on the Internet. African Americans were particularly worried.

- People strongly prefer to give specific permission ahead of time before data about themselves is released (an opt-in strategy), rather than giving a blanket permission or being notified after the fact.

- Older people and African Americans seem to have the least confidence in government handling of their personal, confidential information, although overall confidence in state or federal government handling data appropriately was rather low as well among the general population.

This study generated several specific recommendations, based on public opinion:

(1) This study shows that Texans who are poorer, older, or African American or Latino are less likely to use computers and the Internet. E-government services should be aware those populations may be the least able to use the new services and consider alternative strategies to make them accessible. The State may also consider how it can educate people to use and feel comfortable with computer- or Internet-based e-government services.

(2) If e-government services cannot assume that everyone has a computer or Internet access, then providing widespread access to computers that are linked to the Internet is important. Understanding where people are comfortable using computers - which places, specifically - and how they interact with Internet-based services may help guide decisions regarding possible sites for supplying e-government services.

(3) Since this survey confirms evidence from other studies that access to the Internet may be slower and more expensive in rural areas, the State should seek to better understand and address problems in rural access that may be necessary to help e-government serve rural areas and gain legitimacy.

(4) This survey shows that Texans are already sensitive to the privacy and security concerns related to e-government applications, and underscores that people would prefer some level of control over how personal information is handled by the State. People prefer an opt-in strategy of safeguarding the use of data about themselves: they strongly prefer to give permission ahead of time before such information is released. This finding rejects the idea that the State can directly emulate the business practice of disclosing personally identifiable information to others for a fee. For both financial and nonfinancial information, people expect the government to safeguard the public’s interests and control over personal information.

(5) Peoples’ opinions about how to financially support e-government services are quite clear in this survey. They prefer using advertising or charging the people who use electronic services. They are not supportive of paying for e-government through sale of personal or transactional data or using revenues from general funds. These results suggest at least two conclusions: that people are unaware that the state already sells data it gathers on residents, and that in any case people believe that such data should not be part of an economic equation for e-government; second, that there should be some quid pro quo when it comes to finding money for such services, making a fee-for-service or paid advertising basis of support more acceptable.

These results highlight some possible directions for state efforts:

- Continue to monitor Internet use among the population in order to assess who does and does not use the Internet, and why;
• Consider ways to target the groups using the Internet the least and conduct pilot experiments with different settings, technologies, or interfaces that can address such individuals’ hesitations about the Internet and e-government services;
• Develop and publicize privacy and security standards that address people’s concerns;
• Implement a method of facilitating opt-in data sharing/disclosure strategies.
Background of the Study

Context

Internet commerce has developed significantly since 1997, led by efforts in the private sector. As the public gains more experience with emerging online tools and information resources, people will come to expect a similar level of service from government entities. Many state, county, and municipal governments now view the Internet as a way to bring services to the public in electronic form.

In the state of Texas, the legislature and state leadership have promoted an electronic government agenda. The state's efforts are focusing on multiple aspects of an Internet-based model of service delivery. However, the state government also wants to ensure that citizens, the potential users of e-government services, are prepared to accept and use such services.

The Electronic Government Task Force is addressing citizen and business interaction with government. The task force is working on an initial project that will show the ability of the state to:

- Send documents issued by a state agency or local government to customers
- Receive applications for licenses and permits and receive documents for filing from members of the public
- Receive payments from people regulated by a state agency or local government.

Additionally, an initial survey of other states' activities was undertaken in this area to define possible best practices or areas for Texas to improve upon in order to ensure a successful project. That review of other states’ practices identified key issues for the task force, including the fact that some underlying benefits of e-government can include convenience, greater access to information, and the potential to reduce costs of individual transactions. However, to our knowledge, few other states have yet surveyed actual public interest in these potential benefits.

A number of states have proceeded with models for e-government projects that have both financial and privacy implications that may be problematic. Consequently the State of Texas sought to assess public opinion on these sensitive public issues before proceeding with its design of an e-government model.

It is clear from the number of efforts in Texas that technology is an essential concern for the state, with significant impacts on both the public and private sectors. The government efforts in Texas, however, are moving forward with the recognition that e-government is a developing area. E-government models must ensure that the needs of the public and Texas businesses are met at the same time that government seeks to use technology to operate more effectively.

This public opinion research project was conceived as a way to assess a variety of issues related to public access necessary to use e-government services as well as public opinion about the proper form and emphases of those services among the residents of Texas. Such feedback could positively influence the development and use of e-government services in the state.

Overview

How we use computers and the Internet intersects several policy issues now that more social and civic practices, economic transactions, and government programs rely on them. The Texas Department of Information Resources has been investigating how to deploy what many perceive to be the next generation of government services. This will be dependent on a web-based or computer network-based delivery system. Consequently, how people use computers and the Internet, their attitudes toward both, and how they feel about various privacy and security issues associated with sharing personal information on the Internet are important considerations.

This study had several specific questions:

(1) What percentage of the Texas population uses computers and the Internet? How do people use these tools? Are there differences in use associated with race, ethnicity, income and education levels, age, or location?

Previous studies have demonstrated that there are systematic differences in computer and Internet use by these background or structural factors. Race, ethnic group membership, income and education levels, age, and whether one lives in a rural area show up repeatedly as important factors. To the extent that differences appear among Texas residents, e-government services should be aware of which populations may be the most able and the least able to use the new services. If certain groups do not use computers or the Internet, e-government services must consider alternative strategies to make them accessible. The State may also consider how it can insure that more people use and feel comfortable with computer- or Internet-based services.

(2) Where do people feel comfortable using computers and the Internet? For what purposes do they use the Internet? Why do they NOT use the Internet?

If e-government services cannot assume that everyone has a computer or Internet access, then providing widespread access to computers that are linked to the Internet is important. Understanding individuals’ uncertainties or concerns about using the Internet also is essential. Where people are comfortable using computers - which places, specifically - and how they interact with Internet-based services may help guide decisions regarding possible sites for supplying e-government services.

(3) What are peoples’ attitudes toward the Internet and the costs of its use?

There is evidence from other studies that access to the Internet may be slower and costlier in rural areas. With current attention toward broadband services, speed/bandwidth limitations may leave Internet users dissatisfied with using the network for certain purposes. Other questions concern the Internet’s predominant English language bias or perceptions about its vulnerability to hackers.

(4) Would people use government services if they were available on the Internet? How much would they pay?

State government provides numerous services to residents, ranging from constructing highways to undertaking epidemiological studies to supporting a higher education infrastructure. Some services are likelier than others to be early candidates for being provided via the Internet. Which services are people most amenable to using over the Internet? What factors might discourage them from using those services?

(5) What are the privacy and security concerns of Texans with respect to e-government applications?

Numerous studies have found that people in the United States are increasingly wary about maintaining the privacy of personal information. Various well publicized "cracks" in Internet security have underscored that this technology is not failsafe. Moreover, it is amply clear that the Internet itself generates information about people as they use the Internet, which in turn raises more concerns from people regarding the use of information based on their Internet transactions. In addition, the sale of data about people that the State has collected is a growing source of revenue for Texas government; the Internet and digitization generally enable that data collection (and sale) to be lucrative. What are peoples’ attitudes toward the state’s handling of what many believe is personal information? How might these influence attitudes toward using e-government services?

(6) What are peoples’ opinions with respect to financially supporting e-government services?

---


5 The Federal Trade Commission has held numerous hearings on this subject and produced numerous reviews and reports. See www.ftc.gov for details of their findings and their varied sources.

Telecommunications and Information Policy Institute, University of Texas, Austin TX 78712
Internet-based government information and services will incur certain costs. Texas, like several other states, faces several choices with respect to supporting this change. Using revenues from general funds or charging people who use electronic services are suggestive of some of the alternative payment schemes being considered. How do Texas residents feel about such payment plans? Each of the above question areas is addressed in this study.

The Sample and Procedures

The database for this study is a survey conducted in March-April, 2000. This survey used a Computer Assisted Telephone Interviewing (CATI) system to conduct telephone interviews with 1,002 respondents. Of those, 800 comprise a random sample survey of households in the state, while an additional 202 households represent a sample of people exclusively from rural counties. Consequently, 328 respondents represent people from rural areas while 674 respondents are from non-rural regions. We interviewed individuals (sometimes in Spanish if necessary) in households over 18 years of age, using last birthday in order to randomly sample within the household. The questionnaire was constructed largely of closed-ended items (See Appendix A). The telephone interview took approximately 14 minutes to administer.

Our analyses include basic percentage reports on the survey responses as well as tables regarding how the factors of race, income and education, age, and rural/nonrural location seem to affect the responses. Because the goal of this study is to get a picture of current Texans’ computer and Internet uses, our primary goal is descriptive.

Throughout this report we have analyzed a weighted sample. As explained in Appendix B, we developed weights to insure that our sample most accurately reflects the race and ethnic distribution of the Texas population. Appendix B also provides details on the demographic (race, ethnic origin, income, education, age, rural v. nonrural) composition of the sample.

Computer and Internet Use

In general terms, a large majority – 67.3% - of the Texas population currently uses a computer (Figure 1). Most of the computer users also use the Internet. As Figure 2 illustrates, fully 60.1% of the entire sample use computers as well as the Internet; people who use neither computers nor the Internet represent just 17.5% of the sample. This means that most of the people who use computers also use the Internet.

---

6 When we note that there are “differences” by various age, race/ethnic, education, income or location factors, we refer to statistically significant differences. These have been identified through chi square analyses.
Throughout this report, we differentiate among different types of people by how they use computers and the Internet. The largest group (67.3%) of the sample consists of those who use computers regularly. Most of those people also use the Internet, 60.1% of the sample. Nearly everyone who uses a computer regularly also uses the Internet. The next largest group, non-users, includes those who do not use computers or the Internet (17.5%), called "nonusers". There also is a group of people who do not use computers regularly but report having used them occasionally (5.7% called “light computer use”). These people also may use the Internet (9.5%, called “light Internet use”).

**Figure 2** Percentage of Types of Computer and Internet use

**Figure 3** Ethnicity/Race by Type of Use (%)
The differences in the ethnic composition of computer and Internet users in the state are shown in Figure 3. Nearly 68% of the Anglos used the Internet, compared to 45.2% of the Hispanics and 32.8% of the African American members of the sample. The reverse pattern holds for nonusers: 32.8 percent of the African Americans fall into that category, compared to 28% of the Hispanic members and 14.2% of the Anglo members of the sample.

Among people who routinely use the Internet (“Internet users”), ethnic differences are negligible in terms of the amount of time groups normally spend on the Internet (10.6 hours per week for Anglos, 10.8 for Hispanics, and 9.5 for African Americans), but the numbers of commercial transactions they undertake are very different. Anglos report an average of 13.8 financial transactions over the Internet per year, while Hispanics reported 10.1 and African Americans reported 7.9.

There are predictably higher percentages of people in older age categories who do not use computers or the Internet. About 50% of the people 66 and older used neither, although nearly 26% were in fact computer and Internet users. People in the lower age ranges, under 55, were far more likely to use the Internet than older people.

There are differences in the amount of time and transactions made on the Internet across demographic categories. Figure 4 shows the distribution of Internet use by age.

The 18% of the sample who do not use computers or the Internet can generally be characterized as older, poorer, and often members of a minority group (Figure 4). They also tend to be less well educated. Throughout our analyses, the results for income and education were generally very symmetrical: the better educated and wealthier one is, the more one can be expected to use computers and the Internet. As Figure 5 suggests, nonusers fall into lower income categories while most of the Internet users are in households that make over $30,000 annually.

The income one makes is more powerful than ethnic group membership when it comes to the Internet at the higher income levels; there are virtually no differences in Internet use by ethnic group, but at lower income levels, there are some differences: Anglos in lower income groups use computers and the Internet in greater numbers than do African Americans or Hispanics.
As income and education increase, so do computer and Internet use. Figure 5 indicates that people making less than $10,000 represent the largest cluster of people who use neither computers nor the Internet, and at incomes over $30-$40,000, Internet use is very common; the results for high and lower levels of education are similar, with more highly educated people using the Internet more commonly than those less well educated.

As Figure 6 demonstrates, most Internet users have had some education beyond high school, while the nonusers are disproportionately composed of people who did not complete high school.

The national level data from the Department of Commerce’s 1999 study reported that membership in ethnic and racial minority groups and in lower income and education groups, living in a rural location and being a female head of household meant that one was less likely to use computers or the Internet. Texas’ “digital divide” resembles most national trends in all of these respects save the findings on rural location: here, our findings suggest that the penetration of computers and Internet use generally is higher than studies undertaken by the U.S. Department of Commerce have found. However, as will be evident later, there are still some important differences between rural and nonrural segments of the population. For example, in comparing those two groups, we find that the rural population spends somewhat less time on the Internet, and also undertakes fewer commercial or financial transactions on the Internet. This is explored further in later pages.

---

7 The Department of Commerce has sponsored three surveys to date, and the latest one released in 1999 is based on 1998 data.
There is concern nationwide about the effects of less well-developed telecommunications infrastructure in rural areas. The Texas Public Utility Commission is producing a rural broadband report for the 77th Texas Legislature, and the FCC has done similarly on the federal level. Poor telecommunications infrastructure means that people often pay more for Internet access and the access they have is of a lower quality than that enjoyed by people in metropolitan regions.

In this sample, counties were coded as “rural” if they had no Metropolitan Statistical Area (See appendix B for more details on defining rural). Out of 1,002 respondents, 328 are from rural counties and 674 are located in non-rural counties. Various analyses compared the two sets of respondents (Figure 7).

This study’s results differ from national studies in the finding that people in rural areas are only somewhat less likely to use the Internet than are people in metropolitan areas: 55% of rural respondents in Texas use the Internet compared to 60.2% of nonrural respondents. Other studies have shown a larger gap between those two groups. Nonusers account for 23.6% of the rural households, compared to 17.3% of the nonrural households.

---

8 The PUC study, pursuant to PURA 51.001, is called “report to the 77th Legislature on the Availability of Advanced Services in Rural and High Cost Areas,” and at this writing is not yet published. The FCC’s Report on the availability of advanced telecommunications systems is in CC Docket No. 98-146, Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment, pursuant to Section 706 of the Telecommunications Act of 1996 (CC 99-5).

9 Rural v. nonrural comparisons were done with the two groups, one rural and the other nonrural (including central cities and suburbs) using the weighting factors. All other analyses were done only with the random sample of 800 people.
The Importance of Place and Purpose

Most of the people in this sample report using computers at home. Using computers at work, where Internet access often is faster, is less frequent than home use, a finding opposite that reported in some national studies.

Of the people who use computers...

- 83.4% use them at home
- 67.8% use them at work
- 24.9% use them at school
- 30.8% use them at a friend’s house
- 24.5% use them at libraries

As noted above, most computer users are also Internet users. Home is the predominant place for connecting to the Internet. Places Texans access the Internet include:

- Home, 80% of Internet users
- Work, 55.5% of Internet users
- Libraries, 23% of Internet users
- Other places, 9.6% of Internet users

When we examine these sites by ethnic groups, it is clear that minorities lag Anglos in accessing the Internet at home and at work, but they use the library a little more frequently than do Anglos (“1” means not at all and “5” means very frequently in Figure 8 below). People at higher income levels also use the Internet more frequently at home and at work, while the library is a more important place for people at lower income levels although home use still far exceeds library Internet use for people at lower income levels.
**Reasons for Not Using the Internet**

The reasons for not using the Internet are varied. Predictably, the leading reason is associated with not using a computer (Table 1). Beyond that, however, this sample reflects that people have concerns about children using the Internet and report that they do not have the interest or time to use the Internet. Some individuals also reported that phone bills or ISP charges were too high.

**Table 1 Reasons for Not using the Internet**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t use computers</td>
<td>47.5%</td>
</tr>
<tr>
<td>Concerns over kids</td>
<td>45%</td>
</tr>
<tr>
<td>Not interested</td>
<td>38.1%</td>
</tr>
<tr>
<td>Not enough time</td>
<td>31.3%</td>
</tr>
<tr>
<td>Phone bill too high</td>
<td>23.1%</td>
</tr>
<tr>
<td>ISP charge too high</td>
<td>15%</td>
</tr>
<tr>
<td>Too difficult</td>
<td>11.3%</td>
</tr>
<tr>
<td>Need special equipment</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Rural/nonrural differences in reasons for not using the Internet (Figure 9) emphasize (1) that rural respondents did not have computers, (2) that ISP charges were high, and (3) that concerns for children and the Internet were more prominent for rural households.

Table 2 highlights the differences across ethnic groups that stand out in terms of why people do not use the Internet. For example, it appears that Hispanics and African Americans identify some of the cost factors (ISP and phone charges) as impediments more than do Anglos, and they also agree that the Internet is “too difficult” for them disproportionately more often. Not having enough time also appears to be a more significant factor for members of minority groups. The Hispanic members of the sample did not claim “lack of interest” in the Internet as often as did the other groups.
Another aspect of rural Internet use concerns how much time rural residents spend on the Internet. If their Internet connection is slower, it makes sense that rural residents might spend less time on the Internet simply because connecting and downloading take too long. As Figure 10 suggests, rural Texans do in fact spend less time on the Internet than their nonrural counterparts, and they also use the Internet for fewer commercial transactions, perhaps another function of overall time spent with the medium as well as their assessment of its utility or trustworthiness for those purposes.
Probable Access Sites for Using the Internet

One possible solution particularly pertinent to having important public institutions move toward making services available online concerns locating access points in public places. Since many of those who are not now using the Internet will begin to do so soon, it is important to note where they might seek access. This is particularly important for the State as it tries to convince current nonusers to find access so that they can use e-government services.

When asked how likely they would be to use the Internet at four different places - a mall, a community service site, a public library and a K-12 school - relatively few people said they would consider public access at a mall, which is one scenario for expanded public use that some have suggested. Likewise, relatively few people said they would consider using public access to the Internet at a community site, another scenario for expanded public access that with which some towns have experimented. However, more were interested in this option than in Internet access at malls. People in general also said they were not likely to go to schools as a place to access the Internet. Adults may view such sites as places for children rather than adults, and this sample includes only adults.

More people said they were likely to consider using public access to the Internet at a library, indicating that these are seen as likely places for public access. Indeed, many libraries already provide public Internet access, and people may be aware of that already. Figure 11 reports the ratings on how likely each site is as a point of public Internet access, where "1" is not at all likely and "5" is very likely.

![Figure 10 Time on Internet and Transactions per Year by Rural/Nonrural](image-url)
Attitudes toward the Internet, Cost and Other Factors

Ideas about the Internet’s usefulness, its cost, and its effectiveness factor into how willing people are to avail themselves of the technology’s benefits. Several questions inquired into these considerations by asking about privacy, language, cost, and ease of access. About 65% of the entire random sample agreed or strongly agreed that they were worried about privacy on the Internet (Figure 12). This was true across all age, income and education groups. African Americans were particularly worried about the privacy aspects of the Internet: 64.2% of them agreed they were worried about privacy compared to 44.7 of the Anglo and 45.8% of the Hispanic groups.

Figure 12 Agree/Disagree “I am worried about privacy on the Internet.”
Only about 12% of the sample agreed or strongly agreed that they would use the Internet more if it were in Spanish (Figure 13). When asked if they would use the Internet more if it were in Spanish, almost 37% of the Hispanic respondents generally agreed or strongly agreed, compared to very small percentages from the other ethnic/racial groups (8.6% African American and 2.6% Anglo). Tracking with the Hispanic population, people in lower income and education groups also agreed that they would use the Internet more if it were in Spanish. There was no difference across age groups.

![Would use Internet more if in Spanish](image)

**Figure 13 Percent Agree/Disagree with “I would use the Internet more if it had more things in Spanish.”**

Overall, 67% of the sample agreed or strongly agreed that they had easy access to the Internet (Figure 14). Predictably, younger age groups, nonrural residents and higher income and education groups especially agreed with that statement. African Americans and Anglos agreed with this statement more than did the Hispanics in the sample. As another side to the access issue, Hispanics also agreed more often than did Anglos or African Americans that the Internet was too expensive: 34% of the Hispanics agreed compared to 26% of the African Americans and 19% of the Anglos (Figure 15). Rural residents also significantly differed from nonrural residents on the matter of expense: 33% agreed or strongly agreed it was too expensive versus 23% among nonrural residents. However, only about 20% of the entire random sample agreed or strongly agreed that the Internet was too expensive.
Figure 14 Percent Agree/Disagree with "I have easy access to the Internet."

Figure 15 Percent Agree/Disagree that “The Internet is too expensive for people like me.”
I have easy access to the Internet

Figure 16 Percent Agree/Disagree with "I have easy access to the Internet."

Connections
The common types of Internet connection from the home are shown in Table 3. Not too surprisingly, dial-up modems were the most common way of connecting to the Internet from home. Rural residents were far less likely to have a broadband connection to the Internet. While about 12% of the nonrural residents had either cable modems or DSL, only 6% of the rural residents made the same claim.

Table 3 Connecting to the Internet from Home

<table>
<thead>
<tr>
<th>Connection</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dial up modem</td>
<td>77.9%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>9.2%</td>
</tr>
<tr>
<td>Cable Modem</td>
<td>7.1%</td>
</tr>
<tr>
<td>DSL</td>
<td>4.0%</td>
</tr>
<tr>
<td>Other</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Most Internet users were satisfied with the speed of their connection: only 17.7% of the sample said they were not satisfied. About 57% stated they were “satisfied” and another 20.9% stated they were very satisfied. However, at the same time, most of the sample also stated they were interested or very interested in a broadband connection (Table 4). There was no difference between rural and nonrural members of the sample on this point. Fully 53.8% of the random sample indicated they were interested in broadband.

DSL, or digital subscriber line, and cable modems, are the two most widely available broadband Internet access technologies in the U.S. The FCC has defined broadband as any connection faster than 200 kbps.
Table 4 Percent Interested in Broadband

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Interested in Broadband</td>
<td>38.4%</td>
</tr>
<tr>
<td>Interested</td>
<td>24.4%</td>
</tr>
<tr>
<td>Very Interested</td>
<td>29.4%</td>
</tr>
</tbody>
</table>

Expectations for the Internet

People who did not use the Internet were asked to rate their perceived usefulness of different sorts of services, “based on what they might have heard about the Internet.” This was a way to explore some perceptions about the Internet that might influence ideas about using e-government services. Figure 15 reports the average ratings on usefulness, where “1” means not at all useful and “5” means extremely useful.

Family communication and undertaking school or homework research are the two most highly rated applications among these nonusers. There were no structural (age, race/ethnicity, income, education, location) differences on the former, although on the latter question younger people were more likely to highly rate the usefulness of doing school research.

![Figure 15 Mean Nonuser Ratings on Internet Uses](image)

Figure 15 Mean Nonuser Ratings on Internet Uses

Lower rated uses like obtaining business or government information also showed no differences across the various subgroups within the population. Both of these were rated on average as “useful” or “very useful.” Job information uses of the Internet received relatively high ratings, although Hispanics or African Americans rated it higher than did Anglos. Younger age groups and people in lower income groups also thought it would be more useful for job information. Finally, using the Internet to shop or pay bills received the lowest ratings. The more highly educated groups rated it less useful for these purposes than did other income categories.

Overall, these ratings suggest that nonusers believe the Internet could be useful for them, and they suggest that there are no or few difficulties regarding perceptions around how using the Internet could be beneficial for various tasks.
Using Government Services over the Internet

In order to investigate how people might feel about using government services on the Internet, we asked a series of questions about peoples’ current use of various services. If they already made use of a service, we followed this up by asking if they would use it if available on the Internet; if they indicated they would use that service on the Internet, we asked how much they might pay for the convenience of using it that way.

Perhaps not too surprising, the most frequently used services included renewing a driver’s license, filing and paying taxes, registering to vote, and voting. As the table below (Table 5) indicates, many of the actual users of the services are very interested in having an Internet-based delivery system:

- 55% indicated they would use the Internet to register to vote,
- 53% of the entire sample said they would use the Internet to renew a driver’s license,
- Nearly 47% said they would use it to actually vote,
- and 39% said they would use the Internet to file and pay taxes.

With respect to how much people might pay for the convenience of such services, responses varied depending on the nature of the service. People were willing to pay more to renew a driver’s license over the Internet, for example, than they were for a fishing license. These results do indicate that people are willing to pay a fee to use Internet-based services, and that prices perhaps could vary depending on public demand.

Among these questions, there was some variation by income and by ethnic/race group. For example,

- Interest in using the Internet for voting was most favored among Hispanics as well as wealthier people;
- Using the Internet to register to vote was of more interest to Anglos and Hispanics, as well as to people in higher income brackets;
- There were different responses regarding using the Internet to file and pay taxes among different ethnic groups but not among different income groups; the amount one would pay also varied by ethnic group but not by income group for that particular service.
- Using the Internet to renew a driver’s license varied in its acceptability across ethnic groups as well as across income groups.

There were no systematic patterns in these variations. Wealthier people did not automatically accept a higher payment level, and ethnic group reactions to different services on the Internet seemed to follow no particular rule. Each service appears to be unique to Texas residents, and they evaluate the utility of having that service on the Internet and how much they would pay in unique ways.

Table 5  E-government services:  Use, Internet Interest, and Payment

<table>
<thead>
<tr>
<th></th>
<th>Voted in state or local elections</th>
<th>Filed and paid taxes</th>
<th>Registered to vote</th>
<th>Renewed a driver's license</th>
<th>Paid Traffic or vehicle tickets or fees</th>
<th>Enrolled in education -al programs</th>
<th>Requested Personal Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use service</td>
<td>87.5%</td>
<td>82.1%</td>
<td>80.4%</td>
<td>79.0%</td>
<td>54.7%</td>
<td>53.8%</td>
<td>53.4%</td>
</tr>
<tr>
<td>Would use service if on Internet</td>
<td>46.8%</td>
<td>39.1%</td>
<td>55.3%</td>
<td>53.1%</td>
<td>32.3%</td>
<td>40.4%</td>
<td>34.2%</td>
</tr>
</tbody>
</table>

11 Although state government does not assess property taxes, this question was used in part because it is increasingly common to use electronic means to pay a variety of bills.
<table>
<thead>
<tr>
<th>How much would you pay?</th>
<th>Under $3</th>
<th>N/A</th>
<th>Up to $10</th>
<th>N/A</th>
<th>Over $10</th>
<th>N/A</th>
<th>Nothing at all</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.6%</td>
<td></td>
<td>11.7%</td>
<td>7.3%</td>
<td>5.6%</td>
<td>8.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.0%</td>
<td></td>
<td>16.9%</td>
<td>8.3%</td>
<td>10.1%</td>
<td>9.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.5%</td>
<td></td>
<td>10.1%</td>
<td>5.1%</td>
<td>7.3%</td>
<td>1.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.6%</td>
<td></td>
<td>8.1%</td>
<td>7.9%</td>
<td>11.0%</td>
<td>8.6%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Obtained fishing or hunting licenses</th>
<th>Participated in Community or State mtgs.</th>
<th>Received professional licenses from state agencies</th>
<th>Obtained info. on public safety/environment</th>
<th>Obtained paperwork for building or other sorts of permits</th>
<th>Applied for health, social, or welfare services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use service</td>
<td>38.1%</td>
<td>27.8%</td>
<td>24.8%</td>
<td>23%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Would use service if on Internet</td>
<td>26.6%</td>
<td>17.6%</td>
<td>14.9%</td>
<td>21.2%</td>
<td>14.2%</td>
</tr>
<tr>
<td>How much would you pay?</td>
<td>Under $3</td>
<td>7.9%</td>
<td>3.7%</td>
<td>2.5%</td>
<td>3.9%</td>
</tr>
<tr>
<td></td>
<td>Up to $10</td>
<td>5.7%</td>
<td>3.9%</td>
<td>3.7%</td>
<td>3.1%</td>
</tr>
<tr>
<td></td>
<td>Over $10</td>
<td>4.4%</td>
<td>1.1%</td>
<td>3.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td></td>
<td>Nothing at all</td>
<td>4.9%</td>
<td>6.8%</td>
<td>3.4%</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

* Each number represents a percentage of the entire weighted sample.

**Attitudes toward providing government information or services through the Internet**

The Table above illustrates several services that are likely candidates for e-government services that much of the public is ready to accept. In assessing other attitudes toward e-government services, we asked people some more general questions about their ideas of computer-based delivery of government services.

We find there are contradictions in the sample when it comes to evaluating the Internet’s usefulness for government services (Table 6). While on the one hand most of the sample evaluates the Internet as potentially very useful and that having government services on it would be useful, people also agree that they would prefer to see someone in person when using a service, and that they are concerned that the Internet is not sufficiently available to make public services available through that means. They also show some concern for the quality of services they would receive on the Internet.

**Table 6 Percentage Agreement on Internet & E-government**

<table>
<thead>
<tr>
<th></th>
<th>Prefer to see someone in person</th>
<th>Internet makes govt. more available</th>
<th>Internet not sufficiently available</th>
<th>Concerned about the quality of services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>9.5%</td>
<td>4.1%</td>
<td>8.1%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Disagree</td>
<td>17.5%</td>
<td>8.1%</td>
<td>20.5%</td>
<td>23%</td>
</tr>
<tr>
<td>Neither agree nor disagree</td>
<td>11.9%</td>
<td>7%</td>
<td>10.9%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Agree</td>
<td>31.6%</td>
<td>49.7%</td>
<td>44.5%</td>
<td>42.5%</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>29.4%</td>
<td>31.1%</td>
<td>16%</td>
<td>16.8%</td>
</tr>
</tbody>
</table>

As is evident from these data, there is fairly high agreement with each statement about the Internet, and it is especially encouraging that the great majority of the sample – 81% - believes that the Internet can make government more available. On the other hand, 61% agreed or strongly agree that they prefer to see
someone in person, and 59.3% have concerns regarding the quality of services they would receive over the Internet. About the same percentage acknowledge that the Internet is not sufficiently available to everyone in order for the government to rely on it for providing services. Detailed responses appear below.

![Figure 16 Agree/Disagree “I prefer to see someone in person if I need something from a government office.”](image)

However, there are some ethnic group differences on these questions. African Americans and Hispanics agreed more often that they would prefer to see someone for a government service. We found similar differences by age, with older people more frequently agreeing or strongly agreeing with this statement, and poorer and less educated people also tend to agree.

![Figure 17 Ethnicity/Race by Agree/Disagree on Prefer to See Someone (%)](image)
Figure 18 Agree/Disagree “The Internet is not sufficiently available to everyone to use it for providing government information and services.”

There is clearly strong general agreement with the idea that the Internet is unavailable to everyone (Figure 18), but older people tend to agree even more strongly.

Figure 19 Agree/Disagree “I am concerned about the quality of services the government would provide through the Internet.”

The people who especially express concern about Internet service quality tend to be those who have used the Internet less, particularly people at lower educational levels. African Americans are particularly concerned (Figure 20).
Concern about Service Quality

Figure 20 Agree/Disagree with “I am concerned about the quality of service the government would provide through the Internet.” by Race/Ethnicity

Makes Govn. More Available

Figure 21 Agree/Disagree “Having government information on the Internet would make government more available to the people.”

There clearly is overwhelming agreement concerning that having government information on the Internet would make government more available, although more highly educated and higher income groups tend to agree even more strongly. African Americans disagree to a greater extent than do other groups [Figure 21].
Privacy and Security Issues and Attitudes

As mentioned earlier and in line with other current survey results in the U.S., nearly 70% of Texans agreed that they were worried about privacy on the Internet. Beyond privacy, this study also asked if people found certain government information handling practices acceptable. Because Texas already sells some data produced through its normal functions (licensing drivers, recording births, etc.), and because e-government will produce much more data about people, the State is interested in public perceptions regarding the acceptability of selling that data as well as public concerns about security and privacy associated with state government’s handling of personal data.

As a rule, people who used the Internet less frequently expressed more concerns than did those who used it more often. We asked people how they felt about the release of personal information (driving history), and what permission method regarding releasing personal data they would prefer. As shown in Figure 23, nearly 53% of the sample felt that the release of this sort of information was “unacceptable,” while 14% were uncertain and another 29% thought it was acceptable. People with higher incomes and more education particularly felt it was unacceptable.

The latest “WWW User Survey” survey (the 8th) from the Graphics, Visualization and Usability (GVU) Center at Georgia Tech revealed that 72% of Internet users believe there should be new laws to protect privacy on the Internet. The survey also found that 82% of users object to the sale of personal information. The survey suggests a sharp increase in privacy concerns since the Center’s prior GVU poll. In their prior poll, users favored anonymity and new laws to protect privacy and opposed direct marketing and the sale of personal information according to the GVU’s Seventh WWW User Survey. See http://www.gvu.gatech.edu/user_surveys/survey-1997-10/.

Figure 22 Agree/Disagree with “Having information on the Internet would make government more available to the people.” by Race/Ethnicity
Opt-In v. Opt-Out Data Release

The generally acknowledged methods that policymakers discuss when it comes to releasing personal information are the opt-in and the opt-out strategies. Opt-in refers to people actively deciding what personal data can be released; without explicit permission, no data would be released. Opt-out, the strategy generally preferred by people or organizations collecting data, allows people to request that their data be withheld; without such an affirmative request, personal data are released. Consequently, there is a greater burden on the individual in the latter strategy.

When we asked if people would prefer to opt-in (give permission ahead of time) or opt-out (notify the state when they would like to be removed from an existing database), the overwhelming majority, 72.4%, preferred the opt-in strategy of giving permission ahead of time [Figure 24].
Previous studies have shown that people are sometimes less concerned about the handling of nonfinancial personal information than about financial personal information. Our sample was, on average, extremely concerned about giving financial information about themselves on the Internet to government agencies. Roughly 70% were in the top two categories of “concern.”
Concern re: Financial Info to Govn.

As shown in Figure 25, there was substantial concern regarding providing financial information over the Internet to government agencies as well, although the top two categories total roughly 60% of the sample, as the figure below suggests. Older people and African Americans more frequently express higher levels of concern on these two points.

Concern re: Nonfinancial Info to Govn.

As shown in Figure 26, there was substantial concern regarding providing nonfinancial information over the Internet to government agencies as well, although the top two categories total roughly 60% of the sample, as the Figure below suggests. Older people and African Americans more frequently express higher levels of concern on these two points.
Finally, whether people feel confident that the State will use their personal information appropriately is another area pertinent to e-government services. Whether people trust the State or Federal government to responsibly divulge or shelter such data may have a strong bearing on how well people accept e-government services in the future. Tables 7-8 and Figures 27-28 illustrate a weak level of confidence in either type of government handling personal, confidential information. Only very small percentages of the population express strong confidence in how these organizations handle their personal information.

<table>
<thead>
<tr>
<th>Table 7 Percentage Confidence in State Government</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Not at all confident</td>
</tr>
<tr>
<td>Not very confident</td>
</tr>
<tr>
<td>Somewhat confident</td>
</tr>
<tr>
<td>Very confident</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 8 Percentage Confidence in Federal Government</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Not at all confident</td>
</tr>
<tr>
<td>Not very confident</td>
</tr>
<tr>
<td>Somewhat confident</td>
</tr>
<tr>
<td>Very confident</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Confident - state govt

![Figure 27 Percentage Reporting “How confident are you that [the state] is using your personal, confidential information properly?”](image-url)
Older people tend to have less confidence in both the State and the Federal government’s use of personal information, perhaps part of a pattern of caution that appears among older persons’ responses to many questions concerning government agencies. African Americans likewise express less confidence in the State and Federal government’s handling of personal, confidential information.

**Attitudes Toward Possible Support Schemes for E-government**

We suggested four alternative methods of financially supporting e-government services, and opinions were most favorable toward two plans: (1) using advertising to underwrite the costs of the service or (2) having users of such services pay a fee. Figure 29 and Figure 30 illustrate the percentages of people who found these options acceptable. People at lower income levels found the idea of a fee-for-use more palatable, while older people did not favor this option. Interestingly, Internet users were more likely to find the idea of using advertising on state pages acceptable.
Figure 29 Acceptability of Users Paying for E-government

Figure 30 Acceptability of Advertising on E-government Web Pages to Support Service

The other two options we mentioned in the survey were having the state use general revenue to support e-government services or the state using the revenue from selling data generated by using e-government services as a means of support. Both were resoundingly deemed “unacceptable” by this sample (Figures 31 and 32). Older people particularly opposed using general revenue funds as a source of support. Selling data was especially unacceptable to the Anglo members of the sample and to people with more education.
Over 60% of the sample finds the option of the state selling data to obtain financing for e-government objectionable. An only slightly smaller percentage feels the same way about using the general fund for support. These results suggest at least two conclusions: that people are unaware that the state already sells data it gathers on residents, and that in any case people believe that such data should not be part of an economic equation for e-government; second, that there should be some quid pro quo when it comes to finding money for such services, making a fee-for-service or paid advertising basis of support more acceptable.

**Conclusions**

The results discussed above suggest that Texans are ready for e-government, but with some qualifications.

The majority of people believe that the Internet can make government more available, and there is evidence that people who already use certain government services would welcome them on the Internet, even at some small cost (generally under $10). The services people seem to be most interested in are, in fact, among those that other states (or the federal government) have already explored for e-government – voting, registering to vote, renewing drivers’ licenses, and paying taxes. Additionally, there is a wide base of home computer and Internet users around the state. Various programs - local, state and federal - are
broadening access to computers and the Internet at public spots such as libraries as well. These are important prerequisites to a well functioning e-government system.

However, some difficulties clearly exist. Parity issues with respect to access to computers and the Internet need to be addressed. For example, this study illustrates that although computer and Internet use among Texans is at high overall levels, income and education, race and ethnic origin, and age factors differentiate how or whether one uses these technologies. Older people, poorer people, and members of minority groups show lower use of computers and the Internet, and these populations are for numerous reasons possibly the least able to avail themselves of government-provided services even without the aid of technologies. Moving services to the Internet runs the risk of disadvantaging these groups, although it is the case that e-government will not entirely replace other methods the state currently uses to deliver information and services.

In this study rural residents report that they do not have easy Internet access and that it is too expensive, even though the actual reported use statistics do not show much difference between rural and nonrural people in simply using computers or the Internet. At the same time, they have the same interest in having a broadband connection to the Internet as nonrural residents. However, among rural residents perceptions regarding government services on the Internet are often more cautious with respect to trusting the government’s handling of personal information and with respect to preferring to interact with a person when using a government service. The interest in and use of the Internet auger well for e-government services since it suggests rural residents will not be any less interested generally than are people in metropolitan regions, although the distrust factor will be a barrier.

The issue for many individuals is access: an important reason for not using the Internet is not having a computer. The costs of computers and the Internet cannot be dismissed. However, beyond access is the issue of how individuals perceive computers’ or the Internet’s relevance to their lives, and particularly how they would respond to government services that were delivered on the Internet. For example, many older people, even at higher income levels, are not Internet users. A generational or cultural gap exists that makes using computers and the Internet seem too difficult or simply something that does not evoke interest or for which people do not have time. When people do not have to use computers through school or work, which is the case for most retired people and less well educated people, it is understandable that the Internet might be seen as irrelevant. Simple lack of interest in the Internet or perceived difficulty with it discourages the prospects for adopting e-government.

There is ample evidence in this study of some contradictory beliefs: while Internet users and nonusers alike agree the Internet may be a great way to broaden the availability of government information and services, concerns exist around potential service quality and the presence of a person with whom one could interact. Even though 60% of the sample uses the Internet, about 50% also agree that the Internet is insufficiently available across the state to rely on it for providing government services. In this study people appear to be concerned about children’s access to the Internet, although other studies amply document adults’ belief that children need to be computer literate and adept with the Internet.

The state will have to address these perceptions in order to convince people that e-government is a worthwhile investment and capable of improving government.

Findings around privacy and security are clear: people are worried about privacy on the Internet. Confidence in how the state will handle personal, confidential information is not overwhelmingly high. Older people and African Americans seem to have the least confidence in government handling of their personal, confidential information. Whether providing financial or nonfinancial information over the Internet to government agencies, people are concerned about security. To the extent that e-government might rely on personally identifiable information, these privacy and security concerns will have to be met.

This study underscores that people would prefer some level of control over how personal information is handled by the state. People prefer an opt-in strategy of safeguarding the use of data about themselves: they strongly prefer to give permission ahead of time before such information is released. This finding rejects the idea that the state can directly emulate the business practice of disclosing personally identifiable information to others for a fee. For both financial and nonfinancial information, people expect the government to safeguard the public’s interests and control over personal information.
With respect to supporting e-government, most respondents oppose both the use of general tax funds and the sale of government-collected data on individuals to pay for e-government services; they would rather see advertising on screen or pay directly for services. This suggests that people believe that the users and presumed beneficiaries of the service should pay – directly through fees or indirectly by having to view ads – for e-government. E-government does not seem to be in the category of something everyone should have and use, like public education. Rather, it seems as if people perceive it as a value-added service whose costs should be shouldered by its users.

These results highlight some possible directions for state efforts:

- Continue to monitor Internet use among the population in order to assess who does and does not use the Internet, and why;
- Consider ways to target the groups using the Internet the least and conduct pilot experiments with different settings, technologies, or interfaces that can address such individuals’ hesitations about the Internet and e-government services;
- Develop and publicize privacy and security standards that address people’s concerns;
- Implement a method of facilitating opt-in data sharing/disclosure strategies.

Plans to base government services on a web interface have the potential to extend more government services to more people, to achieve substantial cost savings and efficiency, and to open the door to new ways that government can be accountable to the people of Texas. However, designing new government systems runs the risk of losing sight of precisely what people want and how they currently think about and use government services and the Internet. This survey presents one vision of what people believe and how they act, and it should contribute ideas about the sorts of policies and considerations our government agencies might adopt as they move toward a fully realized e-government.
Appendix A: Survey Questionnaire

TIP Survey
Internet and Computer Use, E-Government Services
March-April, 2000

>Q001<
Do you currently use a computer? | Usa usted actualmente una computadora?
<2> Yes | 2 Si [goto Q03a]
<1> No | 1 No
<8> DK | 8 DK
<9> RF | 9 RF

==> [goto Q002]

>Q002<
Have you ever used a computer? | Ha usado alguna vez una computadora?
<2> Yes | 2 Si [goto Q004]
<1> No | 1 No
<8> DK | 8 DK
<9> RF | 9 RF

==> [goto Q13a]

>Q03a<
At which of the following places do you use a computer? | En cuales de los siguientes sitios utiliza una computadora?
Home? | En casa?
<2> Yes | 2 Si
<1> No | 1 No
<8> DK | 8 DK
<9> RF | 9 RF

==> 

>Q03b<
Work? | En el trabajo?
<2> Yes | 2 Si
<1> No | 1 No
<8> DK | 8 DK
<9> RF | 9 RF

==>
At school? | En la escuela?
---
Yes | 2 Si
No | 1 No
DK | 8 DK
RF | 9 RF

At a public library? | En la biblioteca?
---
Yes | 2 Si
No | 1 No
DK | 8 DK
RF | 9 RF

Do you use someone else's computer, like at a friend's house? | Utiliza usted la computadora de alguien más, como en casa de un amigo?
---
Yes | 2 Si
No | 1 No
DK | 8 DK
RF | 9 RF

The next few questions are about the Internet. | Las siguientes preguntas son sobre el Internet.
---
First, have you ever used the Internet? | Primero, ha utilizado usted alguna vez el Internet?
---
Yes | 2 Si
No | 1 No
DK | 8 DK
RF | 9 RF

[if Q004 eq <2>] [goto Q06a] [else] [goto Q07a] [endif]
>Q06a<
How often do you use the Internet at any of the following places?
 Home?

<1> Never  | 1 Nunca
<2> Rarely  | 2 Raramente
<3> Sometimes  | 3 A veces
<4> Frequently  | 4 Frecuentemente
<5> Very Frequently  | 5 Muy frecuentemente
<8> DK  | 8 DK
<9> RF  | 9 RF

===>

>Q06b<
Work?

<1> Never  | 1 Nunca
<2> Rarely  | 2 Raramente
<3> Sometimes  | 3 A veces
<4> Frequently  | 4 Frecuentemente
<5> Very Frequently  | 5 Muy frecuentemente
<8> DK  | 8 DK
<9> RF  | 9 RF

===>

>Q06c<
A library?

<1> Never  | 1 Nunca
<2> Rarely  | 2 Raramente
<3> Sometimes  | 3 A veces
<4> Frequently  | 4 Frecuentemente
<5> Very Frequently  | 5 Muy frecuentemente
<8> DK  | 8 DK
<9> RF  | 9 RF

===>

>Q06d<
Some other community site?

<1> Never  | 1 Nunca
<2> Rarely  | 2 Raramente
<3> Sometimes  | 3 A veces
<4> Frequently  | 4 Frecuentemente
<5> Very Frequently  | 5 Muy frecuentemente
What are the main reasons you do not use the Internet? Is it because you don't use computers? Don't use computers?

1 No
2 Yes

Are not interested in the Internet? No tiene interes en el Internet?

1 No
2 Yes

The monthly phone charge/toll charge is too high? El cargo mensual del telefono es demasiado alto?

1 No
2 Yes

The Internet charge is too high? El precio del Internet es demasiado alto?

1 No
2 Yes
What are the main reasons you do not use the Internet at home?

Is it because...

You don't have a home computer

<2> Yes  2 Si
<1> No  1 No
<8> DK  8 DK
<9> RF  9 RF

The monthly phone charge/toll charge is too high?

<2> Yes  2 Si
<1> No  1 No
<8> DK  8 DK
<9> RF  9 RF

The Internet charge is too high? (ISP charge is too high)

<2> Yes  2 Si
<1> No  1 No
<8> DK  8 DK
<9> RF  9 RF

Need special equipment because of a physical disability?

<2> Yes  2 Si
<1> No  1 No
<8> DK  8 DK
<9> RF  9 RF

Necesita equipo especial debido a una incapacidad física?
Don't need or use it very often?  | No lo necesita o no lo utiliza con mucha frecuencia?
---
<2> Yes  | 2 Si
<1> No  | 1 No
<8> DK  | 8 DK
<9> RF  | 9 RF

---
>Q08f<
You have concerns about children using it?  | Le preocupa que los niños lo usen?
---
<2> Yes  | 2 Si
<1> No  | 1 No
<8> DK  | 8 DK
<9> RF  | 9 RF

---
>Q08g<
Can use it elsewhere?  | Puede usarlo en otro sitio?
---
<2> Yes  | 2 Si
<1> No  | 1 No
<8> DK  | 8 DK
<9> RF  | 9 RF

---
>Q009<
What type of connection to the Internet do you have from the place you most commonly use the Internet?  | Que tipo de conexión al Internet tiene usted del sitio donde usted usa el Internet con más frecuencia?
---
<1> Dial-up modem  | 1 dialup modem (modem de marcar)
<4> Internal network (LAN, ethernet), with fast access  | 4 red interna con acceso rápido
<5> cable modem (very fast)  | 5 cable modem (muy rápido)
<6> DSL  | 6 DSL
<7> Other  | u OTRO [#specify]
<8> DK  | 8 DK
<9> RF  | 9 RF

===>[goto Q012]

>Q010<
What type of Internet connection...
<table>
<thead>
<tr>
<th>do you have?</th>
<th>usted?</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1&gt; Dial-up modem,</td>
<td>1 dialup modem</td>
</tr>
<tr>
<td>&lt;4&gt; cable modem</td>
<td>4 cable modem</td>
</tr>
<tr>
<td>&lt;6&gt; DSL</td>
<td>6 DSL</td>
</tr>
<tr>
<td>&lt;7&gt; Other</td>
<td>u OTRO [#specify]</td>
</tr>
<tr>
<td>&lt;8&gt; DK</td>
<td>8 DK</td>
</tr>
<tr>
<td>&lt;9&gt; RF</td>
<td>9 RF</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Q012&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>How satisfied are you with the speed of your service?</td>
</tr>
<tr>
<td>Que tan satisfecho(a) esta la velocidad de su servicio?</td>
</tr>
<tr>
<td>Would you say you are...</td>
</tr>
<tr>
<td>Diria que usted...</td>
</tr>
<tr>
<td>&lt;1&gt; not at all satisfied</td>
</tr>
<tr>
<td>&lt;2&gt; satisfied</td>
</tr>
<tr>
<td>&lt;3&gt; very satisfied</td>
</tr>
<tr>
<td>&lt;8&gt; DK</td>
</tr>
<tr>
<td>&lt;9&gt; RF</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Q13a&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suppose there were more public Internet connectivity available at various public places, such as in malls or government offices or grocery stores. How likely is it that you would use Internet access from any of the following places? Please tell me if it is Very likely, Likely, Somewhat likely, or Not at all likely.</td>
</tr>
<tr>
<td>Supongamos que hubiera mas publica al Internet disponible en varios sitios publicos, tales como centros comerciales u oficinas del gobierno o tiendas de comestibles. Que tan posible es que usted usaría el acceso al Internet estando en cualquiera de los siguientes lugares.</td>
</tr>
<tr>
<td>Likely, Not very likely, or Not at all likely.</td>
</tr>
<tr>
<td>Por favor diganos si es muy probable, algo probable, no muy probable o no probable en lo absoluto.</td>
</tr>
<tr>
<td>At a Mall</td>
</tr>
<tr>
<td>&lt;5&gt; VERY LIKELY</td>
</tr>
<tr>
<td>&lt;4&gt; LIKELY</td>
</tr>
<tr>
<td>&lt;3&gt; SOMewhat LIKELY</td>
</tr>
<tr>
<td>&lt;2&gt; NOT VERY LIKELY</td>
</tr>
<tr>
<td>&lt;1&gt; NOT AT ALL LIKELY</td>
</tr>
</tbody>
</table>
At a community service site (social service site, like a senior center) para la comunidad (sitio de servicio social, como un centro de recreo para personas mayores?)

5 very likely 5 muy probable
4 likely 4 probable
3 somewhat likely 3 algo probable
2 not very likely 2 no muy probable
1 not at all likely 1 no probable en lo absoluto

At a public library? En la biblioteca publica?

5 very likely 5 muy probable
4 likely 4 probable
3 somewhat likely 3 algo probable
2 not very likely 2 no muy probable
1 not at all likely 1 no probable en lo absoluto

At a K-12 school? En una escuela?

5 very likely 5 muy probable
4 likely 4 probable
3 somewhat likely 3 algo probable
2 not very likely 2 no muy probable
1 not at all likely 1 no probable en lo absoluto

[if Q004 eq <2>][goto Q014]
[else][goto Q017]
About how many hours per week do you spend using the Internet?  

1-87  

<88> DK  
<99> RF  

Now I would like to ask you how you use the Internet. On a scale of 1 to 5, where 1 is never and 5 is very frequently, how often do you use the Internet for E mail?  

<5> Very frequently  
<4> frequently  
<3> sometimes  
<2> infrequently  
<1> never  

8-9  

For shopping or paying bills or to do other consumer activities?  

<5> Very frequently  
<4> frequently  
<3> sometimes  
<2> infrequently  
<1> never  

8-9
>Q15d<
Doing research or homework for school?

<5> Very frequently
<4> frequently
<3> sometimes
<2> infrequently
<1> never

<8> DK
<9> RF

===>

>Q15g<
For getting information related to your business?

<5> Very frequently
<4> frequently
<3> sometimes
<2> infrequently
<1> never

<8> DK
<9> RF

===>

>Q15h<
Getting information on local or public issues?

<5> Very frequently
<4> frequently
<3> sometimes
<2> infrequently
<1> never

<8> DK
<9> RF

===>

>Q15i<
For searching for jobs?

<5> Very frequently
<4> frequently
<3> sometimes
<2> infrequently
<1> never

<8> DK
<9> RF
>Q017<
How interested are you in having a high speed connection to the Internet? Would you say you are...

<1> Not at all interested  
<2> Interested  
<3> Very interested  
<8> DK  
<9> RF  

===>

>sk07<
[if Q017 lt <8>][goto sk08]
[else][goto Q20a]
[endif]

>sk08<
[if Q017 ge <2>][goto Q018]
[else][goto Q20a]
[endif]

>Q018< [equiv Q18R]  
If you did have high speed access from home, what would you use it for?

<1> SURFING THE WEB  
<2> TELECOMMUTING  
<3> DOWNLOADING VIDEO AND OR MUSIC  
<4> COMMERCIAL TRANSACTIONS  
<5> PERSONAL FINANCE  
<6> COMMUNICATION/EMAIL  
<7> SHOPPING/SHOPPING RELATED  
<8> NEWS/RESEARCH  
<9> SCHOOL RELATED  
<10> ENTERTAINMENT  
<11> EVERYTHING  
<77> Other  

<88> DK  
<99> RF  

===>

>Q019<
How much would you be willing to pay per month for high speed access?

<0> NOTHING  | 0 NADA
<1-87> ENTER NUMBER OF DOLLARS

<88> DK  | 8 NO SABE
<99> RF  | 9 REHUSA

---

* ATTITUDES TOWARD THE INTERNET GENERALLY *

---

>Q20a<
The following statements are some things people have said about the Internet. On a scale of 1 to 5, where 1 means strongly disagree and 5 means strongly agree, please tell me how strongly you agree or disagree with each one.

I am worried about privacy on the Internet.

<5> Strongly agree  | 5 Muy de acuerdo
<4> Agree  | 4 de acuerdo
<3> Neither agree nor disagree  | 3 Ni de acuerdo ni en desacuerdo
<2> Disagree  | 2 En desacuerdo
<1> Strongly disagree  | 1 Muy en desacuerdo

<8> DON'T KNOW  | 8 NO SE
<9> REFUSED  | 9 REHUSA

---

>Q20d<
I would use the Internet more if it had more things in Spanish.

<5> Strongly agree  | 5 Muy de acuerdo
<4> Agree  | 4 de acuerdo
<3> Neither agree nor disagree  | 3 Ni de acuerdo ni en desacuerdo
<2> Disagree  | 2 En desacuerdo
<1> Strongly disagree  | 1 Muy en desacuerdo

<8> DON'T KNOW  | 8 NO SE
<9> REFUSED  | 9 REHUSA
I have easy access to the Internet.

- Strongly agree: Tengo acceso facil al Internet.
- Agree: 4 de acuerdo
- Neither agree nor disagree: 3 Ni de acuerdo ni en desacuerdo
- Disagree: 2 En desacuerdo
- Strongly disagree: 1 Muy en desacuerdo

The Internet is too expensive for people like me.

- Strongly agree: El Internet esta demasiado caro para la gente como yo.
- Agree: 4 de acuerdo
- Neither agree nor disagree: 3 Ni de acuerdo ni en desacuerdo
- Disagree: 2 En desacuerdo
- Strongly disagree: 1 Muy en desacuerdo

From what you have heard about the Internet, how useful do you think it would be for obtaining... Communicating with family and friends.

- Extremely useful: 5 Sumamente util
- Very useful: 4 Muy util
- Useful: 3 Util
- Not very useful: 2 No muy util
- Not at all useful: 1 No util en lo absoluto

DON'T KNOW: 8 NO SE
REFUSED: 9 REHUSA
<table>
<thead>
<tr>
<th>Q21d&lt;</th>
<th>research for school, homework</th>
<th>Obtener investigación/información para los deberes/las tareas de la escuela</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5&gt; Extremely useful</td>
<td>5 Sumamente util</td>
<td></td>
</tr>
<tr>
<td>&lt;4&gt; Very useful</td>
<td>4 Muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;3&gt; Useful</td>
<td>3 Util</td>
<td></td>
</tr>
<tr>
<td>&lt;2&gt; Not very useful</td>
<td>2 No muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;1&gt; Not at all useful</td>
<td>1 No util en lo absoluto</td>
<td></td>
</tr>
<tr>
<td>&lt;8&gt; DON'T KNOW</td>
<td>8 NO SE</td>
<td></td>
</tr>
<tr>
<td>&lt;9&gt; REFUSED</td>
<td>9 REHUSA</td>
<td></td>
</tr>
</tbody>
</table>

===>

<table>
<thead>
<tr>
<th>Q21g&lt;</th>
<th>information related to business</th>
<th>obtener información relacionada con los negocios</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5&gt; Extremely useful</td>
<td>5 Sumamente util</td>
<td></td>
</tr>
<tr>
<td>&lt;4&gt; Very useful</td>
<td>4 Muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;3&gt; Useful</td>
<td>3 Util</td>
<td></td>
</tr>
<tr>
<td>&lt;2&gt; Not very useful</td>
<td>2 No muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;1&gt; Not at all useful</td>
<td>1 No util en lo absoluto</td>
<td></td>
</tr>
<tr>
<td>&lt;8&gt; DON'T KNOW</td>
<td>8 NO SE</td>
<td></td>
</tr>
<tr>
<td>&lt;9&gt; REFUSED</td>
<td>9 REHUSA</td>
<td></td>
</tr>
</tbody>
</table>

===>

<table>
<thead>
<tr>
<th>Q21h&lt;</th>
<th>information related to government</th>
<th>información relacionada al gobierno</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5&gt; Extremely useful</td>
<td>5 Sumamente util</td>
<td></td>
</tr>
<tr>
<td>&lt;4&gt; Very useful</td>
<td>4 Muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;3&gt; Useful</td>
<td>3 Util</td>
<td></td>
</tr>
<tr>
<td>&lt;2&gt; Not very useful</td>
<td>2 No muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;1&gt; Not at all useful</td>
<td>1 No util en lo absoluto</td>
<td></td>
</tr>
<tr>
<td>&lt;8&gt; DON'T KNOW</td>
<td>8 NO SE</td>
<td></td>
</tr>
<tr>
<td>&lt;9&gt; REFUSED</td>
<td>9 REHUSA</td>
<td></td>
</tr>
</tbody>
</table>

===>

<table>
<thead>
<tr>
<th>Q21j&lt;</th>
<th>information about jobs</th>
<th>información sobre empleo</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5&gt; Extremely useful</td>
<td>5 Sumamente util</td>
<td></td>
</tr>
<tr>
<td>&lt;4&gt; Very useful</td>
<td>4 Muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;3&gt; Useful</td>
<td>3 Util</td>
<td></td>
</tr>
<tr>
<td>&lt;2&gt; Not very useful</td>
<td>2 No muy util</td>
<td></td>
</tr>
<tr>
<td>&lt;1&gt; Not at all useful</td>
<td>1 No util en lo absoluto</td>
<td></td>
</tr>
</tbody>
</table>
<8> DON'T KNOW     | 8 NO SE
<9> REFUSED        | 9 REHUSA

===>

>Q21l<
shopping or paying bills or doing other consumer activities | Hacer compras o pagar las cuentas o participar en otras actividades de consumo

<5> Extremely useful | 5 Sumamente util
<4> Very useful     | 4 Muy util
<3> Useful          | 3 Util
<2> Not very useful | 2 No muy util
<1> Not at all useful | 1 No util en lo absoluto

<8> DON'T KNOW     | 8 NO SE
<9> REFUSED        | 9 REHUSA

===>

**********************
* GOVERNMENT SERVICES *
**********************

>Q22a<
Following is a list of government services we often use. First, please tell me whether or not any of the following services are things you use or do. Have you ever requested personal information, such as your birth certificate, social security card or immunization records from a government office?

<2> Yes    | 2 Si
<1> No     | 1 No
<8> DK     | 8 DK
<9> RF     | 9 RF

===>
Would you use this service if it were available on the Internet? [Q22a]

- [2] Yes
- [1] No
- [8] DK
- [9] RF

How much would you be willing to pay for the convenience of getting such information from government online? [Q22b]

- [1] Under three dollars
- [2] Up to ten dollars
- [3] Over ten dollars
- [4] Nothing at all
- [8] DON'T KNOW
- [9] REFUSED

Have you ever participated in community or state meetings? [Q23a]

- [2] Yes
- [1] No
- [8] DK
- [9] RF
Would you participate if you could do so on the Internet?  

<table>
<thead>
<tr>
<th>Option</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2&gt; Yes</td>
<td>2 Si</td>
</tr>
<tr>
<td>&lt;1&gt; No</td>
<td>1 No</td>
</tr>
<tr>
<td>&lt;8&gt; DK</td>
<td>8 DK</td>
</tr>
<tr>
<td>&lt;9&gt; RF</td>
<td>9 RF</td>
</tr>
</tbody>
</table>

How much would you be willing to pay for the convenience of participating in community or state meetings online?  

<table>
<thead>
<tr>
<th>Option</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1&gt; Under three dollars</td>
<td>1 menos de tres dolares</td>
</tr>
<tr>
<td>&lt;2&gt; Up to ten dollars</td>
<td>2 hasta 10 dolares</td>
</tr>
<tr>
<td>&lt;3&gt; Over ten dollars</td>
<td>3 mas de 10 dolares</td>
</tr>
<tr>
<td>&lt;4&gt; Nothing at all</td>
<td>4 nade en lo absoluto</td>
</tr>
<tr>
<td>&lt;8&gt; DON'T KNOW</td>
<td>8 NO SE</td>
</tr>
<tr>
<td>&lt;9&gt; REFUSED</td>
<td>9 REHUSA</td>
</tr>
</tbody>
</table>

Have you ever renewed a license for driving?  

<table>
<thead>
<tr>
<th>Option</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2&gt; Yes</td>
<td>2 Si</td>
</tr>
<tr>
<td>&lt;1&gt; No</td>
<td>1 No</td>
</tr>
<tr>
<td>&lt;8&gt; DK</td>
<td>8 DK</td>
</tr>
<tr>
<td>&lt;9&gt; RF</td>
<td>9 RF</td>
</tr>
</tbody>
</table>
Would you renew your license if you could do so on the Internet?

- Yes (2)
- No (1)
- DK (8)
- RF (9)

---

How much would you be willing to pay for the convenience of renewing a license for driving online?

- Under three dollars (1)
- Up to ten dollars (2)
- Over ten dollars (3)
- Nothing at all (4)
- DON'T KNOW (8)
- REFUSED (9)

---

Have you ever obtained licenses for fishing or hunting?

- Yes (2)
- No (1)
- DK (8)
- RF (9)

---

Would you obtain a license if you were able to do so online?

Si pudiera, lo renovaría a través del Internet?

- Yes (2)
- No (1)
- DK (8)
- RF (9)
could do so on the Internet? | de ese tipo a través del Internet?

<2> Yes | 2 Si
<1> No | 1 No

<8> DK | 8 DK
<9> RF | 9 RF

===>

>sk19<
[if Q25b eq <2>][goto Q25c]
[else][goto Q26a]
[endif]

>Q25c<
How much would you be willing to pay | Quánto estarías dispuesto a pagar por
for the convenience of renewing a | la comodidad de renovar una
license for fishing or hunting online? | licencia de pesca o caza?

<1> Under three dollars | 1 menos de tres dólares
<2> Up to ten dollars | 2 hasta 10 dólares
<3> Over ten dollars | 3 más de 10 dólares
<4> Nothing at all | 4 nada en lo absoluto

<8> DON'T KNOW | 8 NO SE
<9> REFUSED | 9 REHUSA

===>

>Q26a<
Have you ever filed and payed taxes? | Ha sumitido alguna vez impuestos?

<2> Yes | 2 Sí
<1> No | 1 No

<8> DK | 8 DK
<9> RF | 9 RF

===>

>sk21<
[if Q26a eq <2>][goto Q26b]
[else][goto Q27a]
[endif]

>Q26b<
Would you use the Internet to pay | Usaría el Internet para pagar
taxes if that service were available? | impuestos si este servicio
| disponible?

<2> Yes | 2 Sí
Q26c
How much would you be willing to pay for the convenience of filing taxes online?

<1> Under three dollars                  | 1 menos de tres dolares
<2> Up to ten dollars                   | 2 hasta 10 dolares
<3> Over ten dollars                    | 3 mas de 10 dolares
<4> Nothing at all                      | 4 nada en lo absoluto

<8> DON'T KNOW                          | 8 NO SE
<9> REFUSED                             | 9 REHUSA

Q27a
Have you ever paid traffic or vehicle tickets or fees?

<2> Yes                                 | 2 Si
<1> No                                  | 1 No
<8> DK                                  | 8 DK
<9> RF                                  | 9 RF

Q27b
Would you use the Internet to pay tickets if that service were available?

<2> Yes                                 | 2 Si
<1> No                                  | 1 No
<8> DK                                  | 8 DK
<9> RF                                  | 9 RF
How much would you be willing to pay for the convenience of paying traffic or vehicle tickets or fees online?  

1. Under three dollars  
2. Up to ten dollars  
3. Over ten dollars  
4. Nothing at all  
8. DON'T KNOW  
9. REFUSED

Have you ever received professional licenses from state agencies, such as real estate broker licenses or other occupational certifications?

2. Yes  
1. No  
8. DK  
9. RF

Would you use this service if it were available on the Internet?
How much would you be willing to pay for the convenience of getting professional certifications from state agencies, such as real estate broker licenses or other occupational certifications?

- Under three dollars
- Up to ten dollars
- Over ten dollars
- Nothing at all
- Don't know
- Refused

Have you ever enrolled in educational programs, such as job training, community college or university courses?

- Yes
- No
- Don't know
- Refused

Would you enroll in these programs?
if you could do so on the Internet?  | podria hacerlo atravéz del Internet?

<2>  Yes  | 2 Si
<1>  No   | 1 No
<8>  DK   | 8 DK
<9>  RF   | 9 RF

===>

>sk31<
[if Q29b eq <2>][goto Q29c]
[else][goto Q30a]
[endif]

>Q29c<
How much would you be willing to pay | Cuanto estaria dispuesto a pagar por
for the convenience of enrolling in | la comodidad de inscribirse en
educational programs, such as Job | programas de educacion, tales como
training, community college or | cursos de trabajo, colegio o
university courses online?           | universidarios
| a través de la computadora?

<1> Under three dollars | 1 menos de tres dolares
<2> Up to ten dollars  | 2 hasta 10 dolares
<3> Over ten dollars   | 3 mas de 10 dolares
<4> Nothing at all     | 4 nada en lo absoluto
<8> DON'T KNOW         | 8 NO SE
<9> REFUSED            | 9 REHUSA

===>

>Q30a<
Have you ever had to obtain paperwork | Alguna vez ha tenido que obtener
for building or other sorts of | autorizacion para construccion
permits?                        | tipos de permisos?

<2>  Yes   | 2 Si
<1>  No    | 1 No
<8>  DK    | 8 DK
<9>  RF    | 9 RF

===>

>sk33<
[if Q30a eq <2>][goto Q30b]
[else][goto Q31a]
[endif]
Would you use this service if it were available on the Internet?  

<2> Yes  
<1> No  
<8> DK  
<9> RF  

How much would you be willing to pay for the convenience of obtaining paperwork for building or other sorts of permits online?  

<1> Under three dollars  
<2> Up to ten dollars  
<3> Over ten dollars  
<4> Nothing at all  
<8> DON'T KNOW  
<9> REFUSED  

Have you ever registered to vote?  

<2> Yes  
<1> No  
<8> DK  
<9> RF  

If you answered yes to Q31a, please continue to Q31b. If no, go to Q33a.
Would you register to vote if you could do so on the Internet? | Se registraria para votar si pudiera hacerlo atravez del Internet?

| <2> Yes | 2 Si |
| <1> No | 1 No |
| <8> DK | 8 DK |
| <9> RF | 9 RF |

Have you ever voted in state or local elections? | Ha votado alguna vez en las elecciones del estados o locales?

| <2> Yes | 2 Si |
| <1> No | 1 No |
| <8> DK | 8 DK |
| <9> RF | 9 RF |

Have you ever applied for health or social or welfare services? | Ha submitido usted alguna vez una solicitud para servicios de salud, o servicios de asistencia social?

| <2> Yes | 2 Si |
| <1> No | 1 No |
| <8> DK | 8 DK |
| <9> RF | 9 RF |
Would you use this service if it were available on the Internet?

- Yes
- No
- DK
- RF

How much would you be willing to pay for the convenience of applying for health or social or welfare services online?

- Under three dollars
- Up to ten dollars
- Over ten dollars
- Nothing at all
- DON'T KNOW
- REFUSED

Have you ever tried to get information on public safety or environmental safety matters?

- Yes
- No
- DK
- RF
Would you get this information if it were available on the Internet?

1. No
2. Yes
3. Over ten dollars
4. Nothing at all
5. Under three dollars
6. Up to ten dollars
7. More than ten dollars
8. Don't know
9. Refused

Some people say that having government information or services available in new ways would be helpful. To what extent do you agree or disagree with the following statements about providing government information or services?

1. Don't know
2. Refused
3. Over ten dollars
4. Nothing at all
5. Under three dollars
6. Up to ten dollars
7. More than ten dollars
information or services through the gubernamentales Internet. Do you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree?

I prefer to see someone in person if I need something from a government office. I prefer to see someone in person if

Having government information on the gubernamental Internet would make government more available to the people. Having government information on the gubernamental Internet would make government more available to the people.

The Internet is not sufficiently available to everyone to use it providing government information and services. The Internet is not sufficiently available to everyone to use it providing government information and services.

| <5> Strongly agree | 5 Muy de acuerdo |
| <4> Agree | 4 de acuerdo |
| <3> Neither agree nor disagree | 3 Ni de acuerdo ni en desacuerdo |
| <2> Disagree | 2 En desacuerdo |
| <1> Strongly disagree | 1 Muy en desacuerdo |
| <8> DON'T KNOW | 8 NO SE |
| <9> REFUSED | 9 REHUSA |

| <5> Strongly agree | 5 Muy de acuerdo |
| <4> Agree | 4 de acuerdo |
| <3> Neither agree nor disagree | 3 Ni de acuerdo ni en desacuerdo |
| <2> Disagree | 2 En desacuerdo |
| <1> Strongly disagree | 1 Muy en desacuerdo |
| <8> DON'T KNOW | 8 NO SE |
| <9> REFUSED | 9 REHUSA |

| <5> Strongly agree | 5 Muy de acuerdo |
| <4> Agree | 4 de acuerdo |
| <3> Neither agree nor disagree | 3 Ni de acuerdo ni en desacuerdo |
| <2> Disagree | 2 En desacuerdo |
| <1> Strongly disagree | 1 Muy en desacuerdo |
| <8> DON'T KNOW | 8 NO SE |
| <9> REFUSED | 9 REHUSA |
===>

>Q35d<
I am concerned about the quality of services the government would provide through the Internet. | Me preocupa la calidad de servicios que el gobierno daría atravez Internet.

<5> Strongly agree | 5 Muy de acuerdo
<4> Agree | 4 de acuerdo
<3> Neither agree nor disagree | 3 Ni de acuerdo ni en desacuerdo
<2> Disagree | 2 En desacuerdo
<1> Strongly disagree | 1 Muy en desacuerdo

<8> DON'T KNOW | 8 NO SE
<9> REFUSED | 9 REHUSA

===>

>sk44<
[if Q004 eq <2>][goto Q036]
[else][goto Q37a]
[endif]

>Q036<
During the past year, about how many times did you use the Internet to complete a business transaction, such as to order something like travel tickets or flowers or books? | Durante el ano pasado, como cuantos veces uso el Internet para completar una transaccion de negocios, tal como ordenar algo como billetes de viaje o flores o libros?

<0-87>

<88> DON'T KNOW | 88 NO SE
<99> REFUSED | 99 REHUSA

===>

**********************
* SECURITY CONCERNS *
**********************

>Q37a<
How concerned are you about giving out credit card numbers or financial information about yourself on the Internet to government agencies? | Que tan preocupada esta usted sobre el dar numeros de cartas de credito o informacion financiera sobre usted a travez del Internet a agencias del estado?
Would you say you're...    | Diria que usted esta...
<5> extremely concerned | 5 muy preocupada
<4> concerned        | 4 preocupada
<3> somewhat concerned | 3 algo preocupada
<2> not very concerned | 2 no muy preocupada
<1> not at all concerned | 1 no preocupada en lo absoluto

<8> DONT'T KNOW       | 8 NO SE
<9> REFUSED          | 9 REHUSA

===>

>Q37c<
How concerned are you about    | Que tan preocupado esta usted
providing other nonfinancial,  | de proveer de informacion
personal                         | no financiero suya
personal information about yourself | atravéz del Internet a agencias
don the Internet to government | del
del agencies?                   | estado?

Would you say you're...    | Diria que usted esta...
<5> extremely concerned | 5 muy preocupada
<4> concerned        | 4 preocupada
<3> somewhat concerned | 3 algo preocupada
<2> not very concerned | 2 no muy preocupada
<1> not at all concerned | 1 no preocupada en lo absoluto

<8> DONT'T KNOW       | 8 NO SE
<9> REFUSED          | 9 REHUSA

===>

>Q38x<
Currently, under existing open    | Actualmente, segun las leyes
vigentes                          | de archivos abiertos, alguna
records laws, some information    | informacion recolectada del
collected by the state is publicly | estado esta
available and may be bought and sold | disponible publicamente y puede
ser                                | comprada y vendida a varios
various businesses.               | negocios.

Information you give the state in | Informacion que usted le da al
online interactions could similarly | estado en conversaciones
recipricas                         | puede ser disponible en la misma
be available to be bought and sold. | manera siendo comprada y vendida.

Press g to continue

<g>
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q038</td>
<td>3 APROPIADO</td>
</tr>
<tr>
<td>Q039</td>
<td>1 NOTIFICAR AL ESTADO</td>
</tr>
<tr>
<td>Q40a</td>
<td>8 NO SABE</td>
</tr>
</tbody>
</table>
confident are you that each of the following is using your personal, confidential information properly? 

Are you confident, somewhat confident, not very confident, or not at all confident?

State government

Federal government

Some people say that certain government services would be more convenient if they were provided online, but disagree over how to support these services. There are four ways of paying for online government services. How acceptable is each to you?

Having people pay specifically for using the service

| <4> VERY CONFIDENT          | 4 MUY SEGURO |
| <3> SOMewhat CONFIDENT      | 3 ALGO SEGURO |
| <2> NOT VERY CONFIDENT      | 2 NO MUY SEGURO |
| <1> NOT AT ALL CONFIDENT    | 1 NO SEGURO EN LO ABSOLUTO |
| <8> DK                     | 8 NO SABE |
| <9> RF                     | 9 REHUSA |

| <1> Entirely acceptable     | 1 Sumamente aceptable |
<2> Somewhat Acceptable                  2 Algo aceptable
<3> Unacceptable                       3 No esta aceptable

<8> DK                                  8 NO SABE
<9> RF                                  9 REHUSA

===>

>Q41b<
The state selling data generated by users in order to fund the service for the service | Que el estado venda listas de datos producidos de los que lo usan para pagar por el servicio

<1> Entirely acceptable                 1 Sumamente aceptable
<2> Somewhat Acceptable                 2 Algo aceptable
<3> Unacceptable                       3 No esta aceptable

<8> DK                                  8 NO SABE
<9> RF                                  9 REHUSA

===>

>Q41c<
Advertising on the computer screen for the service | Publicidad en la pantalla de la computador por el servicio

<1> Entirely acceptable                 1 Sumamente aceptable
<2> Somewhat Acceptable                 2 Algo aceptable
<3> Unacceptable                       3 No esta aceptable

<8> DK                                  8 NO SABE
<9> RF                                  9 REHUSA

===>

>Q41d<
Using general tax revenue | usando el ingreso de impuestos generales

<1> Entirely acceptable                 1 Sumamente aceptable
<2> Somewhat Acceptable                 2 Algo aceptable
<3> Unacceptable                       3 No esta aceptable

<8> DK                                  8 NO SABE
<9> RF                                  9 REHUSA

===>

*****************
* DEMOGRAPHICS  *
*****************

>D001<
Now I would like to ask you questions about yourself | Ahora quisiera hacerle unas preguntas acerca de si mismo.
Are you currently married, widowed, divorced, or have you never been married?

- MARRIED (INCLUDE COMMON LAW MARRIAGES)
- WIDOWED
- DIVORCED
- SEPARATED
- NEVER MARRIED (INCLUDING ANNULMENTS)
- DON'T KNOW
- REFUSED

What was the last grade in school you completed?

- 0-4 GRADES
- 5-8 GRADES
- GRADES 9-11 (SOME HIGH SCHOOL)
- GRADE 12 HIGH SCHOOL
- GRADE 13-15 SOME COLLEGE
- GRADE 16; COLLEGE
- GRADUATE WORK
- DON'T KNOW
- REFUSED

What was the last grade in school your father completed?

- 0-4 GRADES
- 5-8 GRADES
- GRADES 9-11 (SOME HIGH SCHOOL)
- GRADE 12 HIGH SCHOOL
- GRADE 13-15 SOME COLLEGE
- GRADE 16; COLLEGE
- GRADUATE WORK
- DON'T KNOW
- REFUSED
Last week, were you working full-time, working part-time, going to school, keeping house, or something else?

1. Working full-time
2. Working part-time
3. Going to school
4. Keeping house
5. Disabled
6. Retired
7. Unemployed, laid off
8. Don't know
9. Refused

What is your current age?

18-94: Number of yrs
95: 95 years or older
98: Don't know
99: Refused

Are you of Spanish or Hispanic origin?

1. Yes
2. No
8. Don't know
9. Refused

What is your race?

1. White
2. Black
3. Asian
4. American Indian
7. Other [#specify]
8. Don't know
9. Refused

Last year was your total family income before taxes:

El ano pasado, cuanto fue el ingreso total de toda su
<table>
<thead>
<tr>
<th></th>
<th>su familia antes de pagar impuestos:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1&gt;</td>
<td>Less than $10,000</td>
</tr>
<tr>
<td>&lt;2&gt;</td>
<td>$10,001 - $20,000</td>
</tr>
<tr>
<td>&lt;3&gt;</td>
<td>$20,001 - $30,000</td>
</tr>
<tr>
<td>&lt;4&gt;</td>
<td>$30,001 - $40,000</td>
</tr>
<tr>
<td>&lt;5&gt;</td>
<td>$40,001 - $50,000</td>
</tr>
<tr>
<td>&lt;6&gt;</td>
<td>$50,001 - $60,000</td>
</tr>
<tr>
<td>&lt;7&gt;</td>
<td>$60,001 and above</td>
</tr>
<tr>
<td>&lt;8&gt;</td>
<td>DON'T KNOW</td>
</tr>
<tr>
<td>&lt;9&gt;</td>
<td>REFUSED</td>
</tr>
</tbody>
</table>

=>>

>LAST<
Press <g> to quit

====>

[goto EXIT]
Appendix B: Survey and Analysis Procedure Details

The Weighted Sample

In our unadjusted sample, 20.1 percent of the sample was Hispanic, eight percent was African American, and about 64.8 percent were Anglo, with the remainder of the sample falling into the categories of Asian (1.9%), American Indiana, Aleut and Pacific Islanders. (The latter groups are too few for any meaningful statistical analyses and they have been removed from most procedures.). Our rural sample was somewhat more Anglo (72.3%) with fewer Hispanics (15.3%) and African Americans (8.9%).

State statistics according to the Texas Workforce Commission as of July, 1999 show a state population of 19,925,577, and 75.2% are White (including Hispanics), 11.9% are Black, with American Indians, Eskimos, Aleuts, Asian and Pacific Islanders and “other races” comprising an additional 12.9%. About 25.5% of the people in Texas are Hispanic (an ethnic rather than a racial designation). To compensate for underrepresenting the Black and Hispanic populations in this sample, throughout our analyses we have used a weighted sample. The weighted sample approximates these groups’ representation in the state: in the weighted sample, 24.4 % of the people are Hispanic, 11.4% Black and 57.8% Anglo.

Defining Rural

Survey Sampling Inc. supplied codes for counties using designations of rural and nonrural. (Survey Sampling Inc. provided the random digit dial sample for survey to the University of Texas’ Office of Survey Research, which gathered the data.) Rural is defined as a county that lacks a Metropolitan Statistical Area or MSA. MSA Central Cities for Texas are listed below.

<table>
<thead>
<tr>
<th>MSA</th>
<th>Population (1999 Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abilene</td>
<td>127,952</td>
</tr>
<tr>
<td>Amarillo</td>
<td>212,549</td>
</tr>
<tr>
<td>Austin-San Marcos</td>
<td>1,121,092</td>
</tr>
<tr>
<td>Beaumont-Port Arthur</td>
<td>379,677</td>
</tr>
<tr>
<td>Brazoria</td>
<td>228,166</td>
</tr>
<tr>
<td>Brownsville-Harlingen-SanBenito</td>
<td>317,781</td>
</tr>
<tr>
<td>Bryan-College Station</td>
<td>143,436</td>
</tr>
<tr>
<td>Corpus Christi</td>
<td>382,540</td>
</tr>
<tr>
<td>Dallas</td>
<td>3,264,588</td>
</tr>
<tr>
<td>El Paso</td>
<td>694,666</td>
</tr>
<tr>
<td>Fort Worth-Arlington</td>
<td>1,604,741</td>
</tr>
<tr>
<td>Galveston-Texas City</td>
<td>245,185</td>
</tr>
<tr>
<td>Houston</td>
<td>3,967,587</td>
</tr>
<tr>
<td>Killeen-Temple</td>
<td>307,610</td>
</tr>
<tr>
<td>Laredo</td>
<td>198,287</td>
</tr>
<tr>
<td>Longview-Marshall</td>
<td>210,285</td>
</tr>
<tr>
<td>Lubbock</td>
<td>234,689</td>
</tr>
<tr>
<td>McAllen-Edinburg-Mission</td>
<td>527,726</td>
</tr>
<tr>
<td>Odessa-Midland</td>
<td>245,938</td>
</tr>
<tr>
<td>San Angelo</td>
<td>105,648</td>
</tr>
<tr>
<td>San Antonio</td>
<td>1,543,383</td>
</tr>
<tr>
<td>Sherman-Denison</td>
<td>103,676</td>
</tr>
<tr>
<td>Texarkana</td>
<td>82,727</td>
</tr>
<tr>
<td>Tyler</td>
<td>168,888</td>
</tr>
<tr>
<td>Victoria</td>
<td>84,019</td>
</tr>
<tr>
<td>Waco</td>
<td>204,589</td>
</tr>
</tbody>
</table>

14 The Texas Workforce Commission site at [http://www.twc.state.tx.us](http://www.twc.state.tx.us) is the source for July 1999 population estimates.
MSA Central Cities are defined by the Office of Management and Budget. Most MSAs have Central Cities, although a few do not. Many MSAs have more than one Central City. The geographic extent of each Central City relies on the Census definition of “place” since “city” is a nontechnical term that means different things in different contexts. Places, as defined by the Census Bureau, include legally incorporated cities, towns, villages and boroughs, as well as Census Designated Places which are densely settled concentrations of population identifiable by a name but not legally incorporated.

**Demographics of the sample**

The following sections add additional detail about the demographic characteristics of the sample. All results are based on the weighted random sample except those pertaining to rural v. nonrural differences. Those results compare all rural households with all nonrural households using the entire weighted sample.

Ethnicity and Race

In our unadjusted sample, 20.1 percent of the sample was Hispanic, eight percent was African American, and about 64.8 percent were Anglo, with the remainder of the sample falling into the categories of Asian (1.9%), American Indiana, Aleut and Pacific Islanders. (The latter groups are too few for any meaningful statistical analyses and they have been removed from most procedures.). Our rural sample was somewhat more Anglo (72.3%) with fewer Hispanics (15.3%) and African Americans (8.9%)

State statistics according to the Texas Workforce Commission as of July, 1999 show a state population of 19,925,577, and 75.2% are White (including Hispanics), 11.9% are Black, with American Indians, Eskimos, Aleuts, Asian and Pacific Islanders and “other races” comprising an additional 12.9%. About 25.5% of the people in Texas are Hispanic (an ethnic rather than a racial designation). To compensate for underrepresenting the Black and Hispanic populations in this sample, throughout our analyses we have used a weighted sample. The weighted sample approximates these groups’ representation in the state: in the weighted sample, 24.4 % of the people are Hispanic, 11.4% Black and 57.8% Anglo. As the Figure below illustrates, the rural population is disproportionately Anglo.

Because the size of the "other" category (American Indian, Aleuts, Asian and Pacific Islanders) was too low for most statistical analyses, it was generally dropped from our procedures.

---

15 The Texas Workforce Commission site at [http://www.twc.state.tx.us](http://www.twc.state.tx.us) is the source for July 1999 population estimates.
Race & Ethnic

**Figure 33 Ethnicity and Race Percentages by Location**

**Education**

There are educational and income differences among the ethnic subgroups. Hispanics are less likely to have completed high school than other subgroups. About 37% of the Anglo members of the sample completed college or have some graduate work, followed by 29% of the African American group, trailed by Hispanics at about 19%. Education was highly correlated with income, with a Pearson correlation of .59.

In the sample as a whole, about 11.5% did not complete high school, 27.9% did complete high school, 25.2% had some college preparation and 21.5% completed college. Roughly 10% did some work beyond their college degree.

**Table 9 Race and Ethnic by Education**

<table>
<thead>
<tr>
<th>Race &amp; Ethnic</th>
<th>Anglo</th>
<th>Hispanic</th>
<th>African American</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; HS</td>
<td>35</td>
<td>58</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.9%</td>
<td>27.2%</td>
<td>8.1%</td>
<td></td>
</tr>
<tr>
<td>HS Grad</td>
<td>141</td>
<td>64</td>
<td>38</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>27.8%</td>
<td>30.0%</td>
<td>38.4%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Some college</td>
<td>143</td>
<td>50</td>
<td>24</td>
<td>23.8%</td>
</tr>
<tr>
<td></td>
<td>28.2%</td>
<td>23.5%</td>
<td>24.2%</td>
<td></td>
</tr>
<tr>
<td>College grad</td>
<td>125</td>
<td>34</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>24.7%</td>
<td>16.0%</td>
<td>18.2%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Some grad work</td>
<td>63</td>
<td>7</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12.4%</td>
<td>3.3%</td>
<td>11.1%</td>
<td>28.6%</td>
</tr>
<tr>
<td></td>
<td>507</td>
<td>213</td>
<td>99</td>
<td>21</td>
</tr>
</tbody>
</table>

100.0% 100.0% 100.0% 100.0%
Income

Predictably, educational differences within ethnic groups parallel income differences. These differences can be seen in the income levels across different ethnic groups, with the most extreme differences in the composition of those making less than $10,000 and those making over $60,000. About 18.4% of the Hispanics fall into the lower income category, while about 35% of the Anglo group falls into the high-income category. People living in rural areas are generally poorer.

### Table 10 Household Income by Location

<table>
<thead>
<tr>
<th>County</th>
<th>Family income</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>= &quot;Rural&quot;</td>
<td>Valid</td>
<td>&lt;$10,000</td>
<td>30</td>
<td>9.1</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$10,001-$20,000</td>
<td>33</td>
<td>10.1</td>
<td>10.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$20,001-$30,000</td>
<td>47</td>
<td>14.3</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$30,001-$40,000</td>
<td>44</td>
<td>13.4</td>
<td>13.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$40,001-$50,000</td>
<td>22</td>
<td>6.7</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$50,001-$60,000</td>
<td>27</td>
<td>8.2</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; $60,000</td>
<td>44</td>
<td>13.4</td>
<td>13.4</td>
</tr>
<tr>
<td></td>
<td>DK</td>
<td>26</td>
<td>7.9</td>
<td>7.9</td>
<td>7.9</td>
</tr>
<tr>
<td></td>
<td>Refused</td>
<td>55</td>
<td>16.8</td>
<td>16.8</td>
<td>16.8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>328</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County</th>
<th>Family income</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>=&quot;Non-rural&quot;</td>
<td>Valid</td>
<td>&lt;$10,000</td>
<td>31</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$10,001-$20,000</td>
<td>39</td>
<td>5.8</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$20,001-$30,000</td>
<td>69</td>
<td>10.2</td>
<td>10.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$30,001-$40,000</td>
<td>71</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$40,001-$50,000</td>
<td>44</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$50,001-$60,000</td>
<td>40</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; $60,000</td>
<td>140</td>
<td>20.8</td>
<td>20.8</td>
</tr>
<tr>
<td></td>
<td>DK</td>
<td>62</td>
<td>9.2</td>
<td>9.2</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td>Refused</td>
<td>178</td>
<td>26.4</td>
<td>26.4</td>
<td>26.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>674</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The correlation between income and education is .598 in this sample. For certain analyses, the mean income level for a given education level was inserted to replace missing data.

Age

Finally, it may be worth noting that the Hispanic members of the sample are predominantly younger (57% in the 18-35 age group) while greater percentages of Anglos and African Americans are 36-to 55 (43.9% and 44.3% respectively).
Figure 34 Age by Ethnicity