Appendix

Sample Selection, Sample Weights and Household Characteristics



In Spring 1999, 35,912 surveys are mailed out to randomly selected Colorado households. The survey contained 117 questions pertaining to personal and household characteristics and the travel arrangements of the individuals. The addresses are compiled using a yariety of data sources, including motor vehicle registrations, voter registrations, telephone directories (white pages), county real estate deeds, direct marketing companies' customer files and from households that make purchases from catalogs. The random sample consisted of the entire state of Colorado. We asked that the survey be completed by the member of the household at least 16 years old and whose birthday is the closest to January 1. We received back 5,771 surveys, which implies a response rate of 16 percent.

## Sample Weights

Sixteen percent of the randomly selected households returned their surveys. To assess the representativeness of the returned surveys, we created frequency tables by race (white-nonHispanic, black-nonHispanic, Hispanic, Asian and other), age and gender. These frequencies were compared with similar frequencies created from data of the 1998 Colorado population provided by the Colorado State Demographers Office. From this comparison we created race/age/gender cell weights that convert the survey sample into one that is representative of the state population. The actual cell sizes used were the smallest cells that could be generated given the survey data and the data from the Colorado State Demographers Office. Specifically, respondents over the age of 50 were over represented in our sample compared to the actual proportion of state residents over the age of 50 . The weight for each observation in this group is less than one. In contrast, young respondents, between the ages of 16 and 24 were less likely to respond to the survey, and the weight for each observation in this group exceeds one. In the remainder of this appendix,

## 0. HOUSEHOLD CHARACTERISTICS

Over three-quarters of households surveyed live in single family homes. Approximately 11 percent live in town houses or condominiums, and about 8 percent live in apartments. Mobile homes, college dormitories, boarding houses and other arrangements constitute four percent of all housing arrangements (see Figure 0.1).


The average size of the households surveyed is 2.45 persons. Figure 0.2 displays information about the distribution of the household size. Two-member households constitute 44 percent of all households in the survey. Single-member households comprise 21 percent of all households in the sample, while three-member households comprise 16 percent. Fourteen percent of the surveyed households have four members. Households with five or more members constitute around 7 percent of all households in the sample (see Figure 0.2).

Figure O. 2 Number of People Residing in Household


Figure 0.3 shows the frequency distribution of households with children ages 0-4. Ninety percent of the households in the sample have no children ages $0-4$, and 8 percent of the households have one child in that age group. Less than two-and-a-half percent of the households surveyed have two or more children ages 0 to 4 . By contrast, Figure 0.4 demonstrates that 16 percent of the households have a single member ages 31-40, and 10 percent of the households have two members in the same age interval.

Figure 0.3 Distribution of Households with Children Ages 0-4



As Figure 0.5 illustrates, 16 percent of the households surveyed have a household income of $\$ 60,001$ to $\$ 80,000$ per year. Annual household incomes of $\$ 30,001$ to $\$ 40,000, \$ 40,001$ to $\$ 50,000$ and $\$ 50,001$ to $\$ 60,000$ each comprise about 12 percent of surveyed households. Eleven percent of the sampled households have an annual household income of $\$ 20,000$ or less. Annual household incomes of $\$ 80,001$ to $\$ 100,000$ and $\$ 100,001$ to $\$ 150,000$ comprise 11 percent of the sample each. Six percent of the households surveyed have an annual household income over \$150,000.



Forty-nine percent of the individuals surveyed are female. The survey is designed such that the minimum age of the respondents is 16 . The average age in the sample is 49 years. Figure 0.6 illustrates the distribution of age within the sample. Respondents aged 22 to 30 years comprise 10 percent of the sample. Twenty percent of the sample are aged 31 to 40 , while another twenty percent are aged 51 to 60 . The largest category were persons aged 41 to 50 which represent 24 percent of the sample. Individuals aged 61 to 70 years make up 12 percent of the sample. Nine percent of the sample are aged 71 to 80 . Two percent of the sample is comprised of persons aged 81 or older. Older respondents were most likely to respond to our survey, and younger respondents were the least likely. To account for this, we construct sample weights to represent the race/age/gender composition of the state. (See appendix for details.)

Figure O.6 Age Distribution of Sample


The large majority of individuals ( 65 percent) in the sample are married or living with a significant other as can be seen in Figure 0.7. Single individuals comprise 19 percent of the sample with about 14 percent of these individuals living with parents. Divorced persons make up 10 percent of the sample, with about 4 percent of those who are divorced living with parents. Six percent of the sample are widows or widowers.

Figure O.7 Martial Status of Sample



A vast majority of the sample ( 91 percent) are Non-Hispanic Whites. White Hispanics make up about 4 percent of the sample. Around one percent of the sample consists of Native Americans with less than one percent of the sample being Hispanic African Americans. Non-Hispanic African Americans comprise one percent of the sample. Figure 0.8 provides the distribution of the sample by race/ethnicity.

Figure O.8 Race Distribution of Sample


Figure 0.9 illustrates the highest grade completed by respondents in the sample. Only one percent of respondents completed $9^{\text {th }}$ grade or less. Nineteen percent of the sample attended high school but did not graduate. In the sample, 79 percent have completed at least one year of college. Those who completed only one, two and three years of college are 8,12 and 6 percent of the sample respectively. Individuals having completed four years of college comprise 23 percent of the sample. Thirty-one percent of the sample have completed 5 or more years of college.

Figure O.9 Highest Grade Complete of the Sample Respondents


As might be expected from the previous figures, only 3 percent of individuals in the sample do not have a high school diploma as Figure 0.10 illustrates. Thirty-one percent of the sample have received a high school diploma as their highest degree. The highest degree received by 13 percent of the population is an associate degree. For thirty-one percent of the sample the highest degree is a bachelor's degree. The highest degree received is a master's degree and a doctorate for 17 and 6 percent of the sample, respectively.

Figure O.10 Highest Degree Received by Sample Respondents


Figure 0.11 displays that 44 percent of the households surveyed have 2 motor vehicles (cars, pickup trucks, motorcycles, etc.). Twenty-three percent have 1 motor vehicle, and 19 percent have three motor vehicles. Only two percent of all households in the sample do not own a motor vehicle, and a little over four percent of the households have five or more motor vehicles.

Figure O.11 Number of Motor Vehicles in Household



The information on the distance between home and the nearest public transportation (e.g. bus stop, light rail station) is presented in Figure 0.12. Over 15 percent of the households in the survey have no access to any public transportation. Thirty-one percent of the surveyed households live within two blocks to public transportation, and seventeen percent live within 3-4 blocks. Thus, it can be said that almost half ( 48 percent) of the sample are within walking distance of transportation. Nine percent of the households live within 5-8 blocks to public transportation; almost 12 percent are between $1 / 2$ and 2 miles away from public transportation, and 12 percent are at least two miles away.

Figure O.12 The Distance from Residence to the Nearest Public Transportation


