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Exploratory Analysis of the Differences in American Community Survey Respondent Characteristics Between Mandatory and Voluntary Response Methods

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A. Background

In 2002 and 2003, the Census Bureau, at the request of Congress, conducted research to determine whether the American Community Survey (ACS) could be implemented as a voluntary, rather than a mandatory, survey. A test was designed to provide answers to key questions about the impact, if any, that a change to voluntary methods would have on mail response, survey quality, and costs. This test was conducted between March and June of 2003 and only housing units were included, since there was no group quarters sample in that year. While the test was not a randomized experiment, the Census Bureau (U.S. Census Bureau, 2003) did conclude that:

- A dramatic decrease occurred in mail response when the survey was voluntary. The mail cooperation rate fell by over 20 percentage points, and the final response rate after all three modes was about 5 percentage points lower. The reliability of estimates was adversely impacted by the reduction in the total number of completed interviews.
- The estimated annual cost of implementing the ACS would increase by at least 38 percent if the survey was voluntary and the current number of respondent cases was maintained.
- Perhaps of greatest concern, the use of voluntary methods had a negative impact on traditionally low response areas that will compromise our ability to produce reliable data for these areas and for small population groups such as Blacks, Hispanics, Asians, American Indians, and Alaska Natives.

Recently there have been several analyses that expanded on the earlier research to answer additional questions about the implications of a voluntary ACS, including studying potential differences in published survey estimates from the voluntary and mandatory data collection methods, using new methods to study the quality of the estimates, and updating the expected cost implications.

The 2003 test found about a 5 percentage point drop in total survey response. Two questions of interest that have not been directly addressed are how the distribution of respondent characteristics differs between the two methods and whether any difference is reflected in the final estimates. An exploratory analysis using logit modeling with sampling weights only was performed to determine which person and housing unit characteristics had the most important distributional differences. Then differences between final estimates from the mandatory and voluntary methods, calculated as a part of other voluntary test research, related to each of these respondent characteristics were examined to see if they are statistically significant. If so, then this difference in response characteristics is carried through to the related final estimates so that a voluntary ACS could be expected to produce different estimates than a mandatory ACS for them.

B. Research Questions

The following research questions will be investigated to determine the characteristics most highly related to differences in response between the mandatory and voluntary methods.

1. Nationally across all response modes -- mail, computer-assisted telephone interviewing (CATI), computer-assisted personal interviewing (CAPI) -- which housing unit and person characteristics are most highly related to differential response between the two methods?

2. How do the national model results relate to the differences in national percent and mean income estimates between the mandatory and voluntary methods observed in other studies?
3. For the eight mailback propensity clusters used in the 2010 Census Integrated Communication Program, how do the housing unit and person characteristics highly related to differential response between the two methods differ?
4. How do the cluster model results relate to the differences in cluster percent and mean income estimates between the mandatory and voluntary methods observed in other studies?

C. Design of the 2003 Voluntary Test

The 2003 Voluntary test was carried out on the March and April panels, which contained approximately 140,000 sample addresses. Its sample design divided the universe of addresses into two strata, high and low response tracts, which were created using tract-level long form mail return rates from Census 2000. Seventy-five percent of the sample addresses in each of these strata were evenly distributed between two voluntary mail data collection methods and the remaining 25 percent were evenly distributed between two mandatory data collection methods.

Based on data from the 2001 ACS, people in the low response stratum are younger, more likely to be Hispanic and non-White, and have more other relative and non-relative household members compared to the high response stratum. In addition, the low response stratum has comparatively fewer people with a college education, more renters, more households whose members speak a language other than English at home, and more households with lower incomes.

Voluntary methods were used in the CATI and CAPI follow-up operations for these two panels. Data was collected for the remaining sample panels in 2003 by the usual mandatory methods. For this analysis, the addresses in the March and April panels receiving the two mandatory methods were omitted, and the addresses receiving the two voluntary methods were analyzed as a single group.

D. Methodology

Two sets of exploratory analyses using logit models with mandatory/voluntary method as the dependent variable were carried out to answer questions (1) and (3). One set looked at occupied housing units as the response unit and the other looked at each person in these occupied housing units as a response unit**.** All the characteristics from the ACS profiles were potential sources of explanatory variables for the models. A subset of these characteristics was identified for use in each of these exploratory analyses. The variables defined for the characteristics in this subset are presented in Appendix A. As noted there, each variable is classified as one of three types -- (a) two-level categorical, (b) multiple level categorical, or (c) continuous -- and the parameterization for each type is described later in this section. When these variable names are used in the text, they will be *italicized*.

Although the sample cases were pre-selected to receive one of the two methods, this analysis looks at the differences in characteristics between the respondents from the two methods. A logit

model was used for this by comparing the natural log of the ratio of the odds of having received the mandatory or voluntary method given being a respondent for each combination of level of a categorical characteristic and value of a continuous characteristic. That is, the logit is the natural logarithm of the odds ratio

(1) P(mandatory respondent | characteristic set) / P(voluntary respondent | characteristic set).

Stepwise selection in the SAS Logistic procedure was used to determine the order in which the explanatory variables enter a model, with the most highly related to differential response between methods entering earlier. Note the following points about the use of this procedure. (1) Due to the large number of observations used in model fitting, virtually all explanatory variables are significant and will be included in the final models from each stepwise selection run. (2) The correlations among sample housing units and among persons in the same housing unit arising from the sample design are not taken into account, so the stepwise tests for entry and deletion, the model fit statistics, and the estimates of the standard deviations of the parameters are not correct. Thus, for the models in this exploratory analysis, order of entry rather than presence or absence of variables is used as a criterion of importance and relative sizes of coefficient estimates are used in describing their differential effects on response for the mandatory and voluntary methods. There are no references to tests between coefficients or their statistical significance. The relative differential effect of each level of a categorical variable was determined by the size of its estimated coefficient, with larger (less negative or more positive) coefficients indicating more reduction in response under the voluntary method. For a continuous characteristic, such as income, a larger coefficient indicates a larger reduction in response for the voluntary method as the value of the characteristic increases.

The effects of the levels of a categorical variable were parameterized as follows. For a binary variable indicating presence or absence of a characteristic, an effect for presence was estimated and the effect for absence is the negative of that for presence, so that the mean of the two is 0.0. For a multiple category variable, the effect of its highest level was set at minus the sum of the effects of the other levels, so that again the mean of all the level effects is 0.0.[1]

The first time a model was fitted, the basic demographic characteristics -- age, sex, Hispanic origin, and race -- were not included as potential explanatory variables. Expectations were that some of these would be strongly related to differential response under the two methods, so omitting them from consideration would better allow a determination of what other variables are most highly related. Then the basic demographics were included in the modeling to see how the models change and which non-demographic characteristics were still important.

Measuring model fit

Comparing the fitted results from two logit models is not as simple as for linear models. There are several statistics that can be used to judge how well a logit model fits the data, and some of

[1] The estimated intercept is equal to the estimated logit when all categorical variable effects are at their mean level, 0.0, and all continuous variables are 0.0, a situation that never actually occurs. So a different parameterization of the categorical variables would lead to a different estimate of the intercept, but the sum of the estimated intercept and the estimated effects for a given combination of characteristic levels would always be the same.

these are given as output in SAS Logistic in a table of "Association of Predicted Probabilities and Observed Responses." One that can be explained somewhat simply is the percent of concordant and discordant pairs, which is presented with the results for some of the models below. These measures are defined as follows.

Consider two observations (persons or housing units) A and B collected with different methods, mandatory (coded as 1) and voluntary (coded as 0) in our case. A fitted model gives the estimated probability of each observation being from the two methods and for this pair look at the estimated probabilities of having received the mandatory method, P(A=mandatory) and P(B=mandatory). If the observation with the lower estimated probability has the voluntary method, then the pair is concordant -- i.e., the probabilities are ordered in the same way as the coded method values. If the observation with the lower estimated probability has the mandatory method, then the pair is discordant. If neither condition applies (i.e. the two observations have the same estimated probability), then the pair is tied. The higher the percent of concordant pairs, the better the model fits the data. (Note that since there are so many pairs, SAS does not calculate the numbers of concordant/discordant pairs exactly, but estimates them.)[2]

Weighting the data

Although this is only an exploratory analysis, there is a question of how the cases should be weighted. Final weights are not appropriate because they include adjustments which correct for differences in characteristics between respondents and the total population. The sampling weights -- base weight times the CAPI subsampling factor -- are more appropriate to allow us to focus on respondent characteristics. However, the weights from the two methods were adjusted so that their total weights represent the same number of housing units or persons. This was done because the voluntary method was applied in only two months and the mandatory method in ten months of 2003. If this adjustment was not made, the much greater total weight of mandatory respondents would cause the estimate of the intercept parameter to differ from what it should be and possibly cause similar distortion of other coefficients.

Data subsets analyzed

In the first set of models fitted, characteristics for the national data were examined. For the second set, the national data was partitioned into these eight clusters used in the 2010 Census Communication Campaign. (See Bates and Mulry, 2008 and U.S. Census Bureau, 2008a and 2008b for details.)

[2] Although only results for complete main effects models are presented in this paper, several national housing unit and person models with various numbers of main effects and their 2-factor interactions were also fitted. The increase in the percent of concordant pairs between any given main effects model and its corresponding model with 2-factor interactions was at most 2.0 percent for housing units and 0.2 percent for persons. At the same time, the number of parameters fitted an interaction model ranged from approximately 130 to 570 more than for its corresponding main effects models, depending on the number of main effects allowed in a model. Due to the small increase in the percent of concordant pairs compared to the large number of additional parameters for the interaction models and the simplicity of interpreting the parameters of the main effects models, only results for the latter are presented.

1. All around average I (homeowner skewed)
2. All around average II (renter skewed)
3. Economically Disadvantaged I (homeowner skewed)
4. Economically Disadvantaged II (renter skewed)
5. Ethnic Enclave I (homeowner skewed)
6. Ethnic Enclave II (renter skewed)
7. Young/mobile/single
8. Advantaged Homeowners

These clusters were defined by cluster analysis on the following tract level measures from the 2000 Census:

- % vacant units,
- % non-single family attached/detached units,
- % renter occupied units,
- % units with >1.5 persons per room,
- % non-spousal units,
- % units without phone,
- % people below poverty level,
- % units receiving public assistance,
- % people unemployed,
- % linguistically isolated households,
- % moved within last year, and
- % adults without high school education.

Table B1 in Appendix B summarizes some of the characteristics of these clusters and gives their mail return rates (proportion of occupied housing units with forms returned by mail) in the 2000 Census. For more information, see U.S. Census Bureau (2008a) and Bates and Mulry (2008). National analysis has the advantage of using the largest sample size and therefore is best able to detect differences. On the other hand, geographic differences may be averaged out by combining all the geographies into a single analysis.

Method for comparing model effects to differences between mandatory and voluntary method estimates

In answering research questions (2) and (4), final mandatory and voluntary percent and mean income estimates from the 2003 Data Profiles were compared. Thus a determination of which data profile lines were in scope for each geographic comparison was required. First, many of the types of characteristics represented are not related to any of the explanatory variables used in this study, so they are out-of-scope for all comparisons. (These include fertility, grandparent, school enrollment, veteran status, disability, place of birth, year of entry, world region of birth, ancestry, occupation, industry, class of worker, year structure built, heating fuel, selected housing unit characteristics, value, rooms, and health insurance coverage.) The estimates remaining in scope for comparison at this point are presented for the U.S. and the eight clusters in Table C7.

Second, when the final mandatory and voluntary estimates were calculated as a part of another voluntary test study, each profile line for a geography was classified by a code which identified

whether the estimate was "of interest." This ten case comparison code[3] was determined by the patterns of the results of statistical tests, all with 0.10 significance levels, for differences between the March-April panels and the remaining panels for each of the 3 years 2002, 2003, and 2004, where the weight used was the sampling weight. (Note that, given the design of the Voluntary Test, weighting of the data to produce a combined set of voluntary estimates for the March and April panels and a combined set of mandatory estimates for the remaining monthly panels of a year must be based on sample panels, not calendar months as in production ACS.) Any profile line which showed one of the four cases that strongly suggests significant differences in the same direction across these three years was considered to be out-of-scope for the comparison of final estimates in (2) and (4) because this comparison could also be expected to be significantly different in that same direction based only on the months in which the test was conducted and without any consideration of respondent characteristics.[4]

A 'Yes' in the 'Significant difference?' columns of Tables C8 and C9 indicates that, for the geography represented, the difference between the final voluntary and mandatory estimates for that line is statistically significant at level 0.10, a 'No' indicates the difference is not significant, and a blank indicates that the line is out-of-scope. (No adjustments were made to the significance levels to account for multiple comparisons (i) across the rows within a group of estimates or (ii) across different groups of estimates, since this is an exploratory analysis.)

The variables listed in the fourth and fifth columns of each row of Table C8 with a non-blank *tblid* (Data Profile table identifier) were identified as being related to that row's characteristic from among, respectively, the first twenty variables selected in the housing unit model without demographics and all the variables selected in the person model without demographics. Asterisks denote the variables that were among the first ten selected in their models. The relationship of these variables, especially the first ten selected, in each row to the difference between its mandatory and voluntary final estimates is analyzed. This is accomplished by the answers to two questions. (1) For the significant differences in estimates within a group of common characteristics, is a given model variable related to a number of them? (2) If so, do the directions of difference make sense for the various values of the variable? A yes answer to both of these suggests that the differences in respondent characteristics between the mandatory and voluntary methods are carried though to the differences in these estimates. The same variables are listed in the fourth and fifth columns of Table C9, but no asterisks are included because there can be a different set of first ten selected variables in the models for each cluster; in addition, the first twenty selected variables in the housing unit model for each cluster can differ.

[3] The full definition of these ten codes follows, using the format ABC, where A is for 2002, B is for 2003, and C is for 2004, and the three letters can be either Y=significant difference between the sample weighted March-April and remainder of the year estimates or N=no significant difference. Y1=NYN, Y2=YYY, 2003 different direction from 2002 &2004, Y3=YNY, 2002 & 2004 same direction, Y4=YYN , 2002 & 2003 different directions, Y5=NYY, 2003 & 2004 different directions, N6=NNN, YNN, and NNY, N7=YYY, all same direction, N8=YNY, 2002 & 2004 different direction, N9=YYN, 2002 & 2003 same direction, N10=NYY, 2003 & 2004 same direction.

[4] However, explanatory variables corresponding to these out-of-scope lines were not excluded from the logit modeling. This is likely to result in a confounding of their temporal differences with differences due to the mandatory vs. voluntary collection methods for them and other explanatory variables. Such confounding can alter the order of entry of these 'other' explanatory variables and their parameter estimates in the stepwise selection from what they would have been if the confounding characteristics had been excluded.

E. Results

To simplify explanation of the results, the following shorthand descriptions are used. For a binary variable *b*, a phrase similar to "*b* shows a larger (smaller) drop" means "housing units/persons with the characteristic *b* show a larger (smaller) drop in response under the voluntary method than housing units/persons without *b*." Similarly, for level *x* of a multiple category variable, a phrase like "level *x* shows a larger (smaller) drop" means "housing units/persons with level *x* show a larger (smaller) drop in response under the voluntary method than housing units/persons with the level *x* is being compared to." For a continuous variable *c*, a phrase similar to "*c* shows an increasing (decreasing) drop" means "there is increasing (decreasing) drop in response under the voluntary method as the value of *c* increases." Recall from the Methodology section that (i) the more positive of the coefficients for two levels of a categorical variable indicates a larger drop in response for the voluntary versus the mandatory method for that level and (ii) the more positive the coefficient for a continuous variable, the larger the drop in response for the voluntary versus the mandatory method as the value of the variable value increases.

To clarify this, here is an example using two age groups. Since there is an overall reduction in response under the voluntary method, the odds for many effects will be > 1 and their corresponding natural logarithms of the odds, as defined in equation (1), > 0. As can be seen in Appendix A, there are ten age groups used in this study.

In general, let the estimated effect for age 25-34 be $b_{25\text{-}34}$ and for age 55-64 be $b_{55\text{-}64}$.

Then the natural logarithm of the odds ratio of age 55-64 to age 25-34 is
$\ln(O_{55\text{-}64} / O_{25\text{-}34}) = \ln(O_{55\text{-}64}) - \ln(O_{25\text{-}34}) = (b_{55\text{-}64} - b_{25\text{-}34})$.

If $b_{55\text{-}64} - b_{25\text{-}34} > 0$, then $(O_{55\text{-}64} / O_{25\text{-}34}) = \exp[b_{55\text{-}64} - b_{25\text{-}34}] > 1$ and $O_{55\text{-}64} > O_{25\text{-}34}$, or there is a greater reduction in the denominator compared to the numerator of $O_{55\text{-}64}$ than of $O_{25\text{-}34}$.

Using the actual estimated coefficients from the housing unit model with demographics in the right half of Table C1 in Appendix C, $b_{55\text{-}64} = 0.0067$ and $b_{25\text{-}34} = -0.0256$.

Then $b_{55\text{-}64} - b_{25\text{-}34} = 0.0323$ and $\exp[b_{55\text{-}64} - b_{25\text{-}34}] = 1.033$ is the ratio of reduction in response for age 55-64 to age 25-34, or

$$(2) \qquad \frac{P(\text{mandatory respondent} \mid \text{age 55-64}) / P(\text{voluntary respondent} \mid \text{age 55-64})}{P(\text{mandatory respondent} \mid \text{age 25-34}) / P(\text{voluntary respondent} \mid \text{age 25-34})} = 1.033$$

Tables of results from the modeling are presented in Appendix C. In Table C1 the estimated coefficients for the first 20 explanatory variables that enter the national housing unit model are given; Table C2 gives corresponding results for the national person models. For multiple level categorical variables, the coefficients for the various levels are sorted from smallest to largest, i.e., by increasing drop in response under the voluntary method. National results for housing unit and person models are shown for main effects models (no interactions of explanatory variables)

with and without demographics included. Tables C3 and C4 show the corresponding results for main effects models without demographics for the eight population clusters, while Tables C5 and C6 show whether or not variables were selected in the first ten for four or more clusters.

Research Question 1. Nationally across all response modes -- mail, computer-assisted telephone interviewing (CATI), computer-assisted personal interviewing (CAPI) -- which housing unit and person characteristics are most highly related to differential response between the mandatory and voluntary methods?

National housing unit models

For the model without demographics in Table C1, the estimated effects of the explanatory variables are generally quite small with only five of them having magnitude larger than 0.06. The variable *own* (owner-occupied) does have a reasonably large estimated coefficient of 0.16, showing a larger drop, but it is 18th to enter the model and is countered by the decreasing effect of the variable *lsmoc* (selected monthly owner costs) which enters just before it. Although *bds* (number of bedrooms) is the first variable to enter the model, the ordering of its estimated effects for its levels does not seem to make any particular sense. The model does not do particularly well from a predictive standpoint with 49.4% concordant pairs and 46.3% discordant pairs.

For the modeling that includes demographics, important things to note are (1) the non-demographic explanatory variables enter the model in much the same order as for the model without demographics, and (2) their estimated effects change little. Looking at the demographic variables in their order of appearance, housing units with male householders have a larger estimated drop than those with female householders. Most of the householder race groups show a modest effect but Native Hawaiian/Other Pacific Islander (-0.1961) has the smallest and Some other race (0.2730) the largest estimated drop. Hispanic households (-0.1534) show a smaller estimated drop than non-Hispanic households (0.1534). Finally, householders of age 85+ show the smallest and householders 15-17 show the largest estimated drop in response between the mandatory and voluntary methods. This model again does not do particularly well from a predictive standpoint with 50.9% concordant and 46.4% discordant pairs, and it does only slightly better than a model containing only the demographic variables with 47.9% concordant and 44.8% discordant pairs.

National person models

The first variable to enter the model without demographics in Table C2 is *nonmover* (same residence 1 year ago), which also has an estimated coefficient (-0.1347) that is quite a bit larger in absolute value than any of the others. So there is a smaller drop in response for nonmovers than movers. The next largest estimated coefficient in absolute value is 0.0935 for citizens born in Puerto Rico, Guam, U.S. Virgin Islands, or Northern Marianas and the drop for these people is estimated to be quite a bit larger than the remaining *cit* (type of citizenship) effects. The variable *edu* (education completed) gives interesting results, as those who have not attended school have the smallest drop, and those who have attended college but did not receive a graduate or professional degree have the largest drop.

Note that *own* enters the person model much sooner than it did in the housing unit model (9th vs. 18th), but its estimated effect is much smaller. Because of the difference in the observational units used in the two models, housing units vs. persons, *own* has a different interpretation. The number of people in each housing unit is important in the person model but it isn't in the housing unit model. The two results seem to suggest that owned housing units with more people in them have less of a drop in response than do housing units with fewer people. Also, people who do speak a language other than English at home (*ot_lan)* show more of an estimated drop (0.0449) in voluntary response than those who do not.

When demographics are included in the modeling, there is again little change in the order of entry for the non-demographic variables, but there is a little more change in the estimated coefficients than for the housing unit models. Note particularly that *sex* was the first variable to enter the housing unit model but is next-to-last for persons, while *rcgp* (race group), *Hispanic*, and *age* enter in the same order as for housing units. Again, Some other race shows the largest estimated drop (0.2162), but this time Black shows the smallest (-0.1196). Also, age 85+ again shows the smallest drop but now age 15-17 shows much less of a drop than it did for the housing unit models where the age of only the householder was considered.

Due to the similarity of the order in which the non-demographic variables enter the two national housing unit models and the two national person models, only models without demographics will be addressed in the remainder of the discussion of results and in Tables C3 through C9.

Research Question 2. How do the national model results relate to the differences in national percent and mean income estimates between the mandatory and voluntary methods observed in other studies?

Each row of Table C8 with a non-blank tblid in the first column represents a single estimate, described in the third column, that is in scope for the comparison of the voluntary and mandatory methods. The next two columns present the housing and person model variables that were identified as being related to the estimate, and the final column shows whether or not the method estimates differed significantly. The relationship of these variables, especially the first ten selected, to the differences between the mandatory and voluntary final estimates is analyzed as previously described. Note that only 47 of the 166 percent and mean income estimates in scope for national comparison had significant mandatory versus voluntary differences, so the number of differences that can be related to the model variables is limited.

Five of the percent estimates for Households by Type have significantly different comparisons. The estimates for 'family', and 'family with own children under 18' are closely related and have larger estimates for the voluntary method group, while the estimates for the closely related categories 'nonfamily households' and 'nonfamily households with householder living alone' have larger estimates for the mandatory group. These characteristics are related to the model variable *family* (family householder), which for housing units and persons enter their respective models 10th and 12th. There is a larger drop in response for non-families versus families in both the housing unit and person models, so the direction of differences in the four estimates adheres to this pattern. The fifth estimate is 'households with one or more persons under 18', which along with 'family with own children under 18' has significantly different comparisons with

larger voluntary estimates and is related to *hupaoc* (household presence and age of own children) which enters the housing unit model fifth. There is less of a drop in response when at+

least one own child 6-17 is present and even more so when, in addition, at least one own child <6 is present, which conforms with the direction of the differences. These results show some indication of differences due to the *hupaoc* and the housing unit and person *family* characteristics of the responders for the two methods.

Percent estimates for three educational attainment categories have significant differences. The categories '9th to 12th grade, no diploma' and 'some college, no degree' have higher mandatory estimates while 'high school graduate' has a higher voluntary estimate. In addition, 'percent high school graduate or higher' has a significantly larger voluntary estimate, which makes sense due to the large difference in favor of the voluntary group for the estimate of 'high school graduate'. These characteristics are related to the person variable *edu* whose category 'some college to bachelor degree' has a larger drop than 'up to high school'; this agrees with the larger mandatory estimate for 'some college, no diploma'. Because the attainment categories '9th to 12th grade, no diploma' and 'high school graduate' are both included in the *edu* category 'up to high school', a relationship between response drop for the two methods and the differences in estimates cannot be determined.

All the percent estimates for the in-scope categories of residence one year ago, which includes all movers but not those living in the 'same house,' have significantly larger estimates for the mandatory group. These categories are related to *nonmove*r, which is the first variable to enter the person model. Movers have a considerably larger drop in response between the mandatory and voluntary groups, which is consistent with the comparison results for these estimates.

For Language Spoken at Home, the percent estimates for the categories of 'English only', 'other than English', and its subset 'speak English less than very well' have significantly different comparisons and are related to the housing unit variable *hhother* (household language other than English only or Spanish) which is enters the model fourth. Households where another language than English and Spanish is spoken (*hhother*=1) have a greater drop than other households, which is consistent with the first of the above three categories having a higher estimate for the voluntary method and the other two having a higher estimate for the mandatory method.

It is interesting that all of the in-scope employment categories for both total population 16 and older and females 16 and older have significantly different percent estimates, but the related model variables are not among the first ten to enter. Estimates of income and benefits for households show significant differences for comparisons of percent of households in the $100,000 and over categories, as well as for mean income, and mean retirement and SSI incomes. The overall incomes are related to *lhinc* (household income), retirement income to *lharet* (household retirement income), and SSI income to *lhassi* (household supplemental security income). The first two of these enter the model sixth and second but *lhassi* is not in the first 20 to enter. Similar results hold for family income amount categories. However, the estimate of the percent of households or families in the '$200,000 or more' category is larger for the mandatory group and for the categories between $100,000 and $199,999 the estimated numbers are larger for the voluntary results, so the results do not consistently follow from the

larger drop for the mandatory group as income increases. Thus there is no obvious effect of housing unit reporting by income and income type on the income results.

There are significant differences between the percent estimates for the lower percentage categories of Selected Monthly Owner Costs as a Percentage of Housing Costs for Housing Units with a Mortgage, but the related variable *lsmoc* enters the model 17th, so is not what was considered as of high importance.

Research Question 3. For the eight mailback propensity clusters used in the 2010 Census Integrated Communication Program, how do the housing unit and person characteristics highly related to differential response between the two methods differ?

Cluster housing unit models

Comparison of Tables C1 and C3 shows that eight of the first ten variables selected in the national housing unit model are also selected in the first ten in at least four cluster housing unit models, the exceptions being *lgmult* (building type apartment with 10 or more units) and *family*. The three variables that are in the first ten in at least four clusters but are not in the national first ten are *noc* (number of own children), *lhapa* (household public assistance income), and *highcost* (high cost of housing). Three variables selected in the first seven in the housing unit models – *bds*, *veh* (number of vehicles), and *hupaoc* -- are also in the first ten selected in at least six clusters. So there is quite a bit of consistency between the variables selected in the national and cluster models for housing units. But the order of entry can be quite different across the clusters for some variables, e.g., *noc* and *mobileoth* (building type "mobile home" or "other)", as well as quite different from the national model.

Here the interest is more in variables that appear in the first ten in only a few clusters, since this indicates some difference in the importance of such a variable for these clusters versus the remaining clusters. So the differences in final estimates for profile lines related to these variables in the clusters where they appear in the first ten are examined to see if they are statistically significant. If they are, this shows that differences in respondent characteristics for these sub-national areas are carried through to the estimates. The bottom part of Table C5 lists the housing unit variables that are among the first ten selected in the models for four or fewer clusters and their order of selection for each these clusters. It shows that *lgmult*, *outside_msa* (housing unit outside MSA), and *mortgage* (housing unit has mortgage) are in the first ten of a single cluster, *family* and *lhapern* (household personal earnings) of two, and *mobileoth*, *lhassi*, *nonrel* (one or more nonrelatives in household), *poverty* (household in poverty), and *smallmult* (building type apartment with 2-9 units) of three. However, there does not seem to be any pattern as to which specific clusters any variable or particular combination of variables is important for.

Cluster person models

Comparison of Tables C2 and C4 shows that all of the first ten variables selected in the national person model are in the group that is in the first ten in at least four clusters, as summarized in the top half of Table C6. The variables *mar* (marital status) and *edu* are in the first ten in all clusters;

unemp (unemployed) and *outside_msa* are in the first ten of at least four clusters but not the national model. So there is even more consistency between the variables selected for the national and cluster models for persons than for housing units. The bottom half of Table C6 lists the person variables that are among the first ten selected in the models for three or fewer clusters and their order of selection for each these clusters: *full_time* (full time worker), *central_city* (housing unit in central city of MSA), *work_home* (worked at home), and *employ* (employed) are in three, and *looking_work* (looking for work) in two. Again there does not seem to be any pattern to the clusters for which these variables are selected in the first ten.

Research Question 4. How do the cluster model results relate to the differences in cluster estimates between the mandatory and voluntary methods observed in other studies?

Table C9 contains information about the comparison of final mandatory and voluntary estimates for the eight clusters that is similar to the information in Table C8 for the nation, as previously noted. The eight 'Significant difference?' columns on the right indicate whether or not the differences between the final mandatory and voluntary estimates are significant for each of the clusters.

The variable *nonmover* is the most consistently important as it is selected first in 6 of the 8 clusters, and second in one. (For the Economically Disadvantaged I cluster it enters the model 15th.) In these seven clusters, 19 of the 45 eligible comparisons for categories of Residence 1 Year Ago are significant and consistent with the direction of national results (Table C7), so that in general the differences in respondent *nonmover* distributions seem to be carried through to the final estimates. The variables *lhassi, lgmult, lhapern, mortgage,* and *nonrel* show little or no evidence of respondent characteristic difference being carried through to related final percent estimates.

The variable *mobileoth* is selected among the first ten variables in models for three clusters, two of which have significant differences in the percent estimates of the 'Boat, RV, van, etc.' category of Units in Structure. In the Economically Disadvantaged II cluster, the *mobileoth* coefficient shows a smaller drop and the voluntary method has a higher estimate, in the Advantaged Homeowner cluster both of those results are reversed, and in the All around average II cluster the difference is not significant. In the All around average I cluster, for which the difference is significant, *mobileoth* is not in the first ten and it does not have significant differences for 'Mobile homes' in any cluster. So there is some but not strong evidence for *mobileoth* respondent differences carrying through.

For the housing unit and person *family* variables, the Ethnic Enclave II cluster has both in the first ten and shows four of the Households by Type categories as having significant differences. However, neither is in the first ten for the Economically Disadvantaged I cluster which has the most categories with significant differences. Thus again there is some, but not consistent, evidence for respondent differences being carried through.

The three clusters with the largest number of significant comparisons in Percentage of Families and People Below the Poverty Level are All around average I, Economically Disadvantaged II, and Ethnic Enclave II. Each of these has *poverty* in the first ten in the housing unit and person

models, except for Economically Disadvantaged II where person poverty enters just below the first ten at 11th, so the *poverty* variables seem to be related to the differences. In the first two of these clusters there is a larger drop in response for those in poverty, and the percent estimates for the mandatory method are higher in all but one case, and in the third of these clusters there is a smaller drop in response and the voluntary method has higher percent estimates. These results indicate that differences in response rates by method for those in and not in poverty are carried through to some of the final poverty estimates. On the other hand, there is no consistent evidence of significant differences for the remaining variables -- *hupaoc* and *family* -- that are in the first ten in some housing unit models.

The variable *central_city* has been included as related to Units in Structure, but there is no specific pattern of significant comparisons of estimates for the Economically Disadvantaged II, Ethnic Enclave I, and Young/mobile/single clusters that varies from those of the remaining clusters.

The variables *full_time*, *looking_work*, *work_home*, and *employ* are all related to Employment Status and are in the first ten in two or three clusters. The All around average I and Economically Disadvantaged I clusters show the most significant differences, followed by All around average II. No single variable in the bottom half of Table C6 is in the first ten selected for all three of these clusters or for even the All around average I and Economically Disadvantaged I. These results do not suggest that any differences in these respondent characteristics are carried through to the final cluster estimates of Employment Status.

F. Limitations to the Analysis

There are four technical limitations to the analysis that have been mentioned in this report.

-Although there were two voluntary data collection methods used with the March and April panels, they have been combined into one for this analysis. As a result, some larger differences between one of these methods and the mandatory method may have been missed.

- Stepwise modeling is generally used to limit the number of explanatory variables in the final model to those that have the strongest statistical significance. Because of the large number of observations in the data sets being analyzed, virtually all variables are significant and the analysis considers the order of entry of a variable rather than whether or not it is in the final model.

- The correlation among sample housing units and persons is not taken account of in SAS' PROC Logistic, so the stepwise tests for entry and deletion, the model fit statistics, and the estimates of the standard deviations are not calculated correctly. Thus tests are not performed and the terminology of 'statistical differences' are not used in this exploratory analysis.

- Explanatory variables which show differences in a consistent direction between their March-April and remainder of the year estimates for each of 2002, 2003, and 2004 were not excluded from the logit modeling as they were from comparisons of estimates. This is likely to result in a

confounding of their temporal differences with differences due to the mandatory vs. voluntary collection methods for them and other explanatory variables. Any similar future analyses should avoid this confounding.

G. Conclusions

Because of the relatively small number of national estimates that have significant differences between the mandatory and voluntary methods, it is not easy to detect differences in the respondent characteristics that are carried through to the final estimates. This is even more true for the clusters when looking for patterns of differences and non-differences appearing for a characteristic or categories of a characteristic across clusters is required. As a result, there is more indication of respondent characteristic differences being carried through for the nation than for the clusters.

The national results for Households by Type suggest that the *family* (family household) variables for housing units and persons are related to differences in the distributions of categories of family types and that *hupaoc* (household presence and age of own children) is related to differences in families and households with their own children. A number of significant differences for educational attainment categories indicates that *edu* (education completed) has an effect on these characteristics. The variable *nonmover* (same residence 1 year ago) seems to be related to Residence 1 Year Ago as all its in-scope categories show significant differences. Also, differences between the estimates for Language Spoken at Home may be related to *hhother* (household language other than English only or Spanish).

Detecting whether a given explanatory variable is related to significant differences in final estimates within the clusters is more difficult, since doing so depends on patterns of differences for the clusters where the variable is not, as well as where it is, among the first ten selected. And since there are so few significant differences in each cluster, pattern detection becomes even harder. There is enough evidence for only three variables to suggest that their differences in distributions between the mandatory and voluntary respondents may be related to significant differences in final estimates. They are *nonmover* for significant differences in categories of Residence 1 Year Ago, *mobileoth* (building type ‘mobile home’ or ‘other’) for significant differences in ‘Boat, RV, van, etc.’ estimates and housing unit and person *poverty* (in poverty) for differences in several categories of Percentage of Families and People Below the Poverty Level in the All around average I, Economically Disadvantaged II, and Ethnic Enclave II clusters.

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Appendix A

Variables used in the housing unit and person models

Housing Unit Indicator Variables: 1= housing unit has characteristic, 0 = housing unit does not have characteristic

poverty: Household in poverty
own: Owner-occupied
family: Family household
central_city: Housing unit in central city of MSA
outside_msa: Housing unit outside MSA
hhspanish: Household language Spanish
hhother: Household language other (not English only and not Spanish).
nonrel: One or more nonrelatives in household
mobileoth: Building type "mobile home" or "other" (not single-family and not apartments)
smallmult: Building type apartment with 2-9 units
lgmult: Building type apartment with 10+ units
mortgage: Housing unit has mortgage
highcost: High cost of housing. Either gross rent or selected monthly owner costs are 31% or more of household income.

Housing Unit Multiple Category Variables

hupaoc: Household presence and age of own children. 1=own children <6 only, 2=own children 6-17 only, 3=both own children <6 and 6-17, 4=no own children
veh: Number of vehicles. 0-6, 6=6+
bds: Number of bedrooms. 0-5, 5=5+

Housing Unit Continuous Variables

noc: Number of own children
pprtop: Persons per room, top-coded at 3
lhinc: Recoded household income. Household income of zero or less recoded to 0, otherwise lhinc is the natural logarithm of household income
lhapa[1]: Recoded household public assistance
lhapern[1]: Recoded household personal earnings
lharet[1]: Recoded household retirement income
lhass[1]: Recoded household social security or railroad retirement income.
lhassi[1]: Recoded household supplemental security income
lgrnt: Recoded gross rent. Gross rent of zero or less is recoded to zero, otherwise recoded to the natural logarithm of gross rent. Note that owners will have a lgrnt of zero
lsmoc: Recoded selected monthly owner costs. Selected monthly owner costs of zero or less is recoded to zero, otherwise recoded to the natural logarithm of selected monthly owner costs. (Note that renters will have an lsmoc of zero.)

[1] Recoded following the same principle as lhinc. Zero or less of the given income variable was recoded to zero, otherwise the variable is the natural logarithm of the given income variable.

Basic Demographic Variables: householder for housing unit modeling; person for person modeling
hispanic: Indicator variable for householder/person of Hispanic origin
age: Age group of householder/person. 1= 0-14 (for person only), 2=15-17, 3=18-24, 4=25-34, 5=35-44, 6=45-54, 7=55-64, 8=65-74, 9=75-84, 10=85+
sex: Sex of householder/person: 1=male, 2=female
rcgp: Race group of householder/person: 1=White, 2=Black, 3=American Indian/Alaska Native, 4=Asian, 5=Native Hawaiian/Other Pacific Islander, 6=Some other race

Person Indicator Variables: 1=person has characteristic, 0= person does not have characteristic
own: Owner-occupied housing unit
family: Family household
central_city: Housing unit in central city of MSA
outside_msa: Housing unit outside MSA
employ: Employed
unemploy: Unemployed
layoff: On layoff
looking_work: Looking for work
full_time: Full time worker (>35 hours/week)
car_to_work: Took car/truck/van to work
work_home: Worked at home
nonmover: Person lived in same house/apartment one year ago
poverty: Person's household in poverty
ot_lan: Language other than English spoken at home

Person Multiple Category Variables
edu: Education completed 0=no school, 1=up to high school, 2=some college to bachelor degree, 3=received graduate or professional degree
mar: Marital status 1=married, 2=widowed, 3=divorced, 4=separated, 5=single
cit: Type of citizenship 1=born in U.S, 2=born in Puerto Rico, Guam, U.S. Virgin Islands, or Northern Marianas, 3=born abroad of U.S. parents, 4=naturalized, 5=not a citizen

Appendix B

Table B1. Summary of Cluster Characteristics

Cluster Name	Percent Occupied Housing Units	Census 2000 Mail Return Rate	Characteristics
1. All around average I (homeowner skewed)	35%	77.3%	- 75% owners - 80% non-Hispanic white - largest % of rural tracts - unemployment, poverty, education and mobility levels are all close to national averages -skews older
2. All around average II (renter skewed)	16%	74.2%	- more urban and densely populated than segment 1 - above average % of renters and multi-units - skews younger
3. Economically Disadvantaged I (homeowner skewed)	6%	66.5%	- 92% of tracts urban - 49% black - above average % of children - skews older, homeowner - higher percentage unemployment, poverty, receiving public assistance, without high school education.
4. Economically Disadvantaged II (renter skewed)	3%	58.0%	- 99.9% of tracts urban - 54% black and 21% Hispanic - 81% rent - 1/3 of households speak a language other than English - highest poverty, public assistance, unemployment of any cluster
5. Ethnic Enclave I (homeowner skewed)	3%	69.8%	- 61% Hispanic - above-average percentage of children - like Cluster 6 except less linguistic isolation, lower mobility, higher homeownership, fewer Asians, less urban, less densely populated - 43% foreign born, 58% of households speak Spanish at home
6. Ethnic Enclave II (renter skewed)	2%	63.6%	- 59% Hispanic, 11% Asian - above average % of children - 75% renters - 34% linguistically isolated - exclusively urban, most densely populated cluster, crowded housing - 1/2 without high school degree

7. Young/mobile/singles	8%	67.1%	- densely populated and almost exclusively urban - overwhelming majority of households are non-spousal renters in multi-units - skews to more education - racial and ethnic diversity
8. Advantaged Homeowners	26%	83.2%	- least racially diverse with 85% non-Hispanic white - least densely populated - very high percentage of owners, few multi-unit structures, high education, very low levels of poverty and unemployment, low mobility, few non-spousal households

See Bates and Mulry (2008) and U.S. Census Bureau (2008a) and (2008b) for details of the clustering procedure and additional description of cluster characteristics.

Appendix C [2]

Table C1. Housing unit models with and without demographics

Without Demographics			
Step	Parameter		Estimate
0	Intercept		-0.1427
1	bds 2 rooms	2	-0.0517
1	bds 3 rooms	3	-0.0512
1	bds 4 rooms	4	-0.0089
1	bds 1 room	1	0.0152
1	bds 5 or more	5	0.0156
1	bds none	0	0.0810
2	lharet		0.0079
3	lhass		-0.0076
4	hhother		0.0635
5	hupaoc (children<6 and 6-17)	3	-0.0438
5	hupaoc (children 6-17)	2	-0.0004
5	hupaoc (children<6)	1	0.0202
5	hupaoc (no children)	4	0.0240
6	lhinc		0.0157
7	veh 5	5	-0.0836
7	veh 4	4	-0.0006
7	veh none	0	0.0062
7	veh 3	3	0.0072
7	veh 2	2	0.0111
7	veh 1	1	0.0200
7	veh 6 or more	6	0.0397
8	pprtop		0.0728
9	lgmult		-0.0522
10	family		-0.0332
11	smallmult		-0.0264
12	lhapern		-0.0027
13	highcost		-0.0169
14	poverty		0.0261
15	nonrel		-0.0266
16	mortgage		0.0554
17	lsmoc		-0.0285
18	own		0.1637
19	outside_msa		-0.0186
20	lgrnt		0.0038

With Demographics			
Step	Parameter		Estimate
0	Intercept		-0.1107
1	sex (female)	2	-0.0504
1	sex (male)	1	0.0504
2	rcgp (hi/pci)	5	-0.1961
2	rcgp (asian)	4	-0.0547
2	rcgp (black)	2	-0.0407
2	rcgp (white)	1	-0.0043
2	rcgp (ami/ak)	3	0.0228
2	rcgp (other race)	6	0.2730
3	bds 2 rooms	2	-0.0468
3	bds 3 rooms	3	-0.0448
3	bds 4 rooms	4	-0.0065
3	bds 1 room	1	0.0116
3	bds 5 or more	5	0.0181
3	bds none	0	0.0684
4	hispanic		-0.1534
5	age 85+	10	-0.0433
5	age 65-74	8	-0.0267
5	age 25-34	4	-0.0256
5	age 35-44	5	-0.0256
5	age 75-84	9	0.0013
5	age 45-54	6	0.0014
5	age 55-64	7	0.0067
5	age 18-24	3	0.0259
5	age 15-17	2	0.0859
6	lharet		0.0071
7	veh 5	5	-0.0963
7	veh 4	4	-0.0113
7	veh 3	3	0.0002
7	veh 2	2	0.0091
7	veh 6 or more	6	0.0285
7	veh none	0	0.0328
7	veh 1	1	0.0370
8	hhother		0.0660
9	lhass		-0.0061
10	pprtop		0.0700
11	hupaoc (children<6 and 6-17)	3	-0.0338
11	hupaoc (children 6-17)	2	0.0045
11	hupaoc (no children)	4	0.0089
11	hupaoc (children<6)	1	0.0204
12	family		-0.0367
13	lhinc		0.0140
14	lgmult		-0.0493
15	hhspanish		0.0416
16	lhapern		-0.0025
17	outside_msa		-0.0256
18	poverty		0.0305
19	smallmult		-0.0236
20	nonrel		-0.0239

[2] All tables in Appendix C use data from the 2003 ACS Voluntary Test. For a description of the test see http://www.census.gov/acs/www/library/by_series/implementing_the_acs/.

Table C2. Person models with and without demographics

Without Demographics			
Step	Parameter		Estimate
0	Intercept		0.1377
1	nonmover		-0.1347
2	edu (no school)	0	-0.0447
2	edu (up to high_school)	1	-0.0024
2	edu (above college)	3	0.0064
2	edu (some college to bachelor)	2	0.0407
3	car_to_work		-0.0447
4	poverty		-0.0352
5	ot_lan (another language)		0.0449
6	cit (not a citizen)	5	-0.0527
6	cit (naturalized)	4	-0.0355
6	cit (born in USA)	1	-0.0161
6	cit (born abroad)	3	0.0108
6	cit (born in P.R. etc.)	2	0.0935
7	mar (widowed)	2	-0.0446
7	mar (single)	5	-0.0006
7	mar (divorced)	3	0.0030
7	mar (married)	1	0.0098
7	mar (separated)	4	0.0324
8	layoff		0.0753
9	own		0.0231
10	family		-0.0245
11	work_home		-0.0582
12	outside_msa		-0.0109
13	full_time		0.0076
14	looking_work		0.0672
15	unemploy		-0.0714
16	central_city		-0.0019
17	employ		0.0008

With Demographics			
Step	Parameter		Estimate
0	Intercept		0.2111
1	nonmover		-0.1381
2	rcgp (black)	2	-0.1196
2	rcgp (white)	1	-0.0647
2	rcgp (ami/ak)	3	-0.0565
2	rcgp (asian)	4	-0.0510
2	rcgp (hi/pci)	5	0.0756
2	rcgp (other race)	6	0.2162
3	hispanic		-0.1542
4	edu (no school)	0	-0.0414
4	edu (up to high_school)	1	-0.0005
4	edu (above college)	3	0.0029
4	edu (some college to bachelor)	2	0.0390
5	age 85+	10	-0.0380
5	age 25-34	4	-0.0216
5	age 15-17	2	-0.0173
5	age 65-74	8	-0.0109
5	age 0-14	1	-0.0105
5	age 18-24	3	0.0018
5	age 35-44	5	0.0059
5	age 75-84	9	0.0214
5	age 45-54	6	0.0297
5	age 55-64	7	0.0395
6	car_to_work		-0.0424
7	ot_lan(another language)		0.0612
8	cit (not a citizen)	5	-0.0485
8	cit (naturalized)	4	-0.0461
8	cit (born in USA)	1	-0.0189
8	cit (born abroad)	3	0.0066
8	cit (born in P.R. etc.)	2	0.1069
9	mar (widowed)	2	-0.0423
9	mar (divorced)	3	-0.0035
9	mar (married)	1	-0.0011
9	mar (single)	5	0.0115
9	mar (separated)	4	0.0354
10	poverty		-0.0272
11	work_home		-0.0604
12	layoff		0.0711
13	outside_msa		-0.0159
14	own		0.0121
15	family		-0.0101
16	full_time		0.0083
17	unemploy		-0.0705
18	looking_work		0.0634
19	central_city		0.0032
20	sex (female)		-0.0011

Table C3. Housing unit models for clusters without demographics

Cluster 1			
Step	Parameter		Estimate
0	Intercept		-0.2044
1	bds 4 rooms	4	-0.1132
1	bds 5 or more	5	-0.0997
1	bds 3 rooms	3	-0.0867
1	bds 2 rooms	2	-0.0686
1	bds 1 room	1	-0.0158
1	bds none	0	0.3840
2	veh 4	4	-0.0685
2	veh 5	5	-0.0537
2	veh 1	1	-0.0174
2	veh 2	2	-0.0104
2	veh 3	3	0.0314
2	veh 6 or more	6	0.0576
2	veh none	0	0.0610
3	lgmult		-0.1220
4	hupaoc (children<6 and 6-17)	3	-0.0488
4	hupaoc (children 6-17)	2	-0.0400
4	hupaoc (no children)	4	0.0443
4	hupaoc (children<6)	1	0.0445
5	NOC		0.0430
6	lhassi		0.0082
7	lhinc		0.0267
8	family		-0.0376
9	lharet		0.0041
10	poverty		0.0432
11	lhass		-0.0045
12	lhapern		-0.0047
13	hhother		0.0340
14	hhspanish		0.0261
15	highcost		0.0204
16	mortgage		0.0615
17	lsmoc		-0.0436
18	own		0.2481
19	pct_urban		0.0001
20	nonrel		-0.0212

Cluster 2			
Step	Parameter		Estimate
0	Intercept		0.2801
1	pprtop		0.1503
2	veh none	0	-0.0824
2	veh 3	3	-0.0334
2	veh 4	4	-0.0185
2	veh 5	5	-0.0125
2	veh 2	2	-0.0102
2	veh 1	1	0.0534
2	veh 6 or more	6	0.1036
3	lhapa		0.0345
4	bds 2 rooms	2	-0.0535
4	bds 3 rooms	3	-0.0345
4	bds 4 rooms	4	-0.0038
4	bds 1 room	1	0.0137
4	bds 5 or more	5	0.0142
4	bds none	0	0.0639
5	lharet		0.0141
6	mobileoth		-0.1631
7	lhass		-0.0017
8	highcost		-0.0618
9	hhother		0.0792
10	lhinc		-0.0170
11	mortgage		0.0966
12	hupaoc (children<6 and 6-17)	3	-0.0675
12	hupaoc (children 6-17)	2	-0.0018
12	hupaoc (no children)	4	0.0319
12	hupaoc (children<6)	1	0.0374
13	lhapern		0.0062
14	lgmult		-0.0849
15	lsmoc		-0.0183
16	smallmult		-0.0617
17	hhspanish		0.0474
18	poverty		0.0555
19	lgrnt		-0.0087
20	outside_msa		-0.0422

Cluster 3			
Step	Parameter		Estimate
0	Intercept		0.1862
1	bds 2 rooms	2	-0.1566
1	bds 3 rooms	3	-0.0565
1	bds 1 room	1	-0.0406
1	bds 4 rooms	4	0.0059
1	bds 5 or more	5	0.0259
1	bds none	0	0.2219
2	veh 3	3	-0.2165
2	veh 5	5	-0.2115
2	veh 4	4	-0.1140
2	veh 1	1	-0.0811
2	veh 2	2	-0.0682
2	veh none	0	-0.0434
2	veh 6 or more	6	0.7347
3	lhapa		-0.0251
4	smallmult		-0.1137
5	highcost		0.0911
6	hupaoc (children<6)	1	-0.1011
6	hupaoc (children 6-17)	2	-0.0046
6	hupaoc (children<6 and 6-17)	3	0.0256
6	hupaoc (no children)	4	0.0801
7	lhass		-0.0161
8	lhapern		-0.0101
9	pprtop		0.1331
10	nonrel		-0.0904
11	mobileoth		0.1112
12	lgrnt		0.0149
13	mortgage		0.2285
14	hhother		0.1118
15	lhassi		-0.0065
16	poverty		-0.0762
17	lhinc		-0.0128
18	lsmoc		-0.1473
19	own		0.8127
20	lharet		0.0055

Table C3. Housing unit models for clusters without demographics

Cluster 4				Cluster 5				Cluster 6			
Step	Parameter		Estimate	Step	Parameter		Estimate	Step	Parameter		Estimate
0	Intercept		-4.9408	0	Intercept		0.2924	0	Intercept		0.4712
1	lhinc		0.1035	1	nonrel		0.3850	1	hupaoc (children<6 and 6-17)	3	-0.3896
2	bds 5 or more	5	-0.1344	2	highcost		-0.1325	1	hupaoc (children 6-17)	2	-0.0798
2	bds 3 rooms	3	-0.0651	3	veh 6 or more	6	-0.0857	1	hupaoc (children<6)	1	0.1056
2	bds none	0	-0.0590	3	veh 3	3	-0.0768	1	hupaoc (no children)	4	0.3638
2	bds 1 room	1	0.0412	3	veh none	0	-0.0586	2	NOC		0.1466
2	bds 4 rooms	4	0.1020	3	veh 2	2	0.0002	3	poverty		-0.4770
2	bds 2 rooms	2	0.1153	3	veh 4	4	0.0042	4	veh 5	5	-0.3331
3	hupaoc (children<6)	1	-0.1727	3	veh 1	1	0.0650	4	veh 2	2	-0.1109
3	hupaoc (no children)	4	-0.0387	3	veh 5	5	0.1517	4	veh 3	3	-0.1058
3	hupaoc (children 6-17)	2	0.0093	4	bds 2 rooms	2	-0.1172	4	veh 1	1	-0.0791
3	hupaoc (children<6 and 6-17)	3	0.2021	4	bds none	0	-0.0594	4	veh 4	4	0.0449
4	poverty		0.1750	4	bds 1 room	1	0.0097	4	veh none	0	0.1277
5	hhother		0.2369	4	bds 3 rooms	3	0.0243	4	veh 6 or more	6	0.4563
6	veh 6 or more	6	-0.3222	4	bds 4 rooms	4	0.0553	5	bds none	0	-0.4509
6	veh none	0	-0.1179	4	bds 5 or more	5	0.0873	5	bds 2 rooms	2	-0.1474
6	veh 4	4	-0.1029	5	lhass		-0.0213	5	bds 1 room	1	-0.1144
6	veh 1	1	-0.0837	6	NOC		-0.0847	5	bds 4 rooms	4	-0.0391
6	veh 2	2	0.0567	7	mortgage		-0.1620	5	bds 3 rooms	3	0.0514
6	veh 3	3	0.1356	8	hhother		-0.1056	5	bds 5 or more	5	0.7004
6	veh 5	5	0.4344	9	hupaoc (children<6)	1	-0.0750	6	lhapa		0.0500
7	nonrel		-0.1939	9	hupaoc (no children)	4	-0.0604	7	lhinc		-0.0624
8	mobileoth		-0.5768	9	hupaoc (children 6-17)	2	0.0382	8	pprtop		0.2779
9	lhass		-0.0216	9	hupaoc (children<6 and 6-17)	3	0.0972	9	family		-0.1600
10	lhapern		-0.0186	10	lhassi		-0.0137	10	smallmult		-0.1049
11	lhapa		-0.0181	11	lhapa		0.0205	11	lhassi		0.0164
12	pct_urban		0.0416	12	lharet		0.0096	12	hhother		0.0776
13	NOC		-0.0718	13	central_city		0.0621	13	mortgage		0.1565
14	lgmult		-0.1771	14	lgmult		-0.0788	14	own		-0.6232
15	smallmult		-0.1436	15	pct_urban		-0.0016	15	nonrel		0.0716
16	lgrnt		0.0165	16	smallmult		0.0819	16	mobileoth		-0.1460
17	own		1.4619	17	outside_msa		-0.0670	17	central_city		-0.0532
18	lsmoc		-0.2321	18	family		-0.0473	18	lsmoc		0.0591
19	mortgage		0.2067	19	lsmoc		0.0521	19	hhspanish		-0.0385
20	highcost		0.0593	20	own		-0.2501	20	lgrnt		-0.0155

Table C3. Housing unit models for clusters without demographics

Cluster 7			
Step	Parameter		Estimate
0	Intercept		-0.1012
1	veh 3	3	-0.3098
1	veh none	0	-0.2066
1	veh 2	2	-0.1384
1	veh 1	1	-0.0665
1	veh 6 or more	6	0.1472
1	veh 4	4	0.2323
1	veh 5	5	0.3418
2	bds 3 rooms	3	-0.1637
2	bds 1 room	1	-0.0873
2	bds 2 rooms	2	-0.0733
2	bds 4 rooms	4	0.0052
2	bds none	0	0.0851
2	bds 5 or more	5	0.2340
3	hupaoc (no children)	4	-0.0635
3	hupaoc (children<6 and 6-17)	3	-0.0299
3	hupaoc (children 6-17)	2	-0.0125
3	hupaoc (children<6)	1	0.1059
4	lhassi		-0.0231
5	lhapa		-0.0288
6	outside_msa		0.1541
7	hhother		0.0674
8	NOC		-0.0729
9	smallmult		0.0590
10	lharet		0.0049
11	lhinc		0.0221
12	poverty		0.1121
13	nonrel		-0.0524
14	mortgage		-0.1479
15	lsmoc		0.0174
16	central_city		0.0346
17	hhspanish		0.0459
18	mobileoth		-0.0773
19	lhass		0.0034
20	lgrnt		-0.0080

Cluster 8			
Step	Parameter		Estimate
0	Intercept		-0.2271
1	bds none	0	-0.0889
1	bds 2 rooms	2	-0.0619
1	bds 3 rooms	3	-0.0593
1	bds 4 rooms	4	0.0197
1	bds 5 or more	5	0.0523
1	bds 1 room	1	0.1381
2	highcost		-0.0629
3	veh 5	5	-0.1780
3	veh 6 or more	6	-0.0974
3	veh 3	3	0.0384
3	veh 1	1	0.0514
3	veh none	0	0.0558
3	veh 2	2	0.0564
3	veh 4	4	0.0734
4	hupaoc (children<6 and 6-17)	3	-0.0528
4	hupaoc (no children)	4	-0.0137
4	hupaoc (children<6)	1	0.0174
4	hupaoc (children 6-17)	2	0.0491
5	lharet		0.0123
6	lhass		-0.0109
7	pprtop		0.1843
8	NOC		-0.0480
9	hhother		0.0718
10	mobileoth		0.1003
11	mortgage		0.0539
12	lhapa		0.0181
13	outside_msa		-0.0338
14	smallmult		-0.0572
15	lhinc		0.0129
16	nonrel		-0.0477
17	family		-0.0300
18	central_city		-0.0165
19	lgrnt		0.0125
20	own		0.2131

Table C4. Person models for clusters without demographics

Cluster 1			
Step	Parameter		Estimate
0	intercept		0.0938
1	nonmover		-0.1037
2	car_to_work		-0.0880
3	edu (up to high_school)	1	-0.0187
3	edu (above college)	3	-0.0122
3	edu (no school)	0	-0.0052
3	edu (some college to bachelor)	2	0.0361
4	poverty		0.0501
5	family		-0.0598
6	mar (widowed)	2	-0.0401
6	mar (divorced)	3	-0.0167
6	mar (single)	5	0.0031
6	mar (married)	1	0.0265
6	mar (separated)	4	0.0272
7	work_home		-0.1048
8	own		0.0234
9	looking_work		0.0568
10	ot_lan (another language)		0.0489
11	cit (not a citizen)	5	-0.0424
11	cit (naturalized)	4	-0.0145
11	cit (born in P.R)	2	0.0065
11	cit (born in USA)	1	0.0251
11	cit (born abroad)	3	0.0253
12	full_time		0.0133
13	employ		0.0197
14	central_city		-0.0060
15	unemploy		-0.0261
16	layoff		0.0077
17	outside_msa		0.0015

Cluster 2			
Step	Parameter		Estimate
0	intercept		0.0921
1	nonmover		-0.1887
2	looking_work		0.0965
3	edu (no school)	0	-0.1121
3	edu (up to high_school)	1	0.0131
3	edu (some college to bachelor)	2	0.0335
3	edu (above college)	3	0.0655
4	mar (widowed)	2	-0.0642
4	mar (married)	1	-0.0072
4	mar (separated)	4	-0.0026
4	mar (single)	5	0.0171
4	mar (divorced)	3	0.0569
5	outside_msa		-0.0682
6	employ		-0.0500
7	cit (naturalized)	4	-0.0721
7	cit (born abroad)	3	-0.0004
7	cit (born in USA)	1	0.0101
7	cit (born in P.R)	2	0.0310
7	cit (not a citizen)	5	0.0314
8	own		0.0387
9	ot_lan (another language)		0.0605
10	family		0.0345
11	work_home		-0.0403
12	full_time		0.0074
13	central_city		0.0059
14	unemploy		0.0260
15	poverty		-0.0073
16	car_to_work		0.0064
17	layoff		-0.0083

Cluster 3			
Step	Parameter		Estimate
0	intercept		0.0287
1	cit (not a citizen)	5	-0.2499
1	cit (born abroad)	3	-0.1581
1	cit (born in USA)	1	-0.0289
1	cit (naturalized)	4	0.0500
1	cit (born in P.R)	2	0.3869
2	edu (no school)	0	-0.0936
2	edu (above college)	3	-0.0521
2	edu (up to high_school)	1	0.0241
2	edu (some college to bachelor)	2	0.1216
3	ot_lan (another language)		0.1438
4	employ		-0.1120
5	poverty		-0.0743
6	own		-0.0505
7	unemploy		-0.2507
8	layoff		0.1480
9	mar (widowed)	2	-0.0366
9	mar (divorced)	3	-0.0223
9	mar (married)	1	0.0049
9	mar (separated)	4	0.0229
9	mar (single)	5	0.0311
10	outside_msa		0.0437
11	full_time		0.0456
12	looking_work		0.1208
13	work_home		0.1306
14	family		-0.0374
15	nonmover		0.0159
16	car_to_work		-0.0159
17	central_city		0.0079

Table C4. Person models for clusters without demographics

Cluster 4			
Step	Parameter		Estimate
0	intercept		0.1211
1	nonmover		-0.2332
2	edu (above college)	3	-0.0529
2	edu (no school)	0	-0.0441
2	edu (up to high_school)	1	-0.0053
2	edu (some college to bachelor)	2	0.1023
3	cit (naturalized)	4	-0.0928
3	cit (not a citizen)	5	-0.0450
3	cit (born abroad)	3	0.0071
3	cit (born in USA)	1	0.0074
3	cit (born in P.R)	2	0.1233
4	unemploy		-0.1704
5	ot_lan (another language)		0.0969
6	layoff		0.2633
7	central_city		-0.0710
8	mar (separated)	4	-0.0986
8	mar (married)	1	-0.0041
8	mar (single)	5	0.0161
8	mar (divorced)	3	0.0172
8	mar (widowed)	2	0.0694
9	car_to_work		0.0984
10	full_time		-0.0850
11	poverty		0.0626
12	own		0.0544
13	outside_msa		0.1637
14	employ		0.0437
15	family		0.0161
16	work_home		-0.0415
17	looking_work		0.0096

Cluster 5			
Step	Parameter		Estimate
0	intercept		0.4364
1	nonmover		-0.2685
2	unemploy		0.0989
3	mar (married)	1	-0.1156
3	mar (single)	5	-0.0366
3	mar (widowed)	2	-0.0057
3	mar (divorced)	3	0.0701
3	mar (separated)	4	0.0877
4	poverty		-0.1087
5	full_time		0.1016
6	cit (born in USA)	1	-0.1257
6	cit (not a citizen)	5	-0.1152
6	cit (born abroad)	3	-0.0617
6	cit (naturalized)	4	0.0056
6	cit (born in P.R)	2	0.2970
7	edu (no school)	0	-0.0689
7	edu (above college)	3	-0.0472
7	edu (some college to bachelor)	2	0.0562
7	edu (up to high_school)	1	0.0599
8	ot_lan (another language)		-0.0870
9	family		-0.1006
10	central_city		0.0483
11	layoff		0.2257
12	looking_work		0.1776
13	car_to_work		-0.0528
14	own		-0.0143
15	employ		0.0281
16	outside_msa		0.0086
17	work_home		0.0080

Cluster 6			
Step	Parameter		Estimate
0	Intercept		0.3011
1	poverty		-0.3461
2	nonmover		-0.2040
3	family		-0.2208
4	mar (divorced)	3	-0.1108
4	mar (widowed)	2	-0.0318
4	mar (married)	1	0.0280
4	mar (single)	5	0.0563
4	mar (separated)	4	0.0583
5	layoff		0.3446
6	ot_lan (another language)		0.1902
7	cit (naturalized)	4	-0.0753
7	cit (not a citizen)	5	-0.0735
7	cit (born in P.R)	2	0.0060
7	cit (born abroad)	3	0.0466
7	cit (born in USA)	1	0.0962
8	work_home		-0.3772
9	edu (above college)	3	-0.0413
9	edu (up to high_school)	1	-0.0344
9	edu (no school)	0	0.0368
9	edu (some college to bachelor)	2	0.0389
10	car_to_work		-0.0891
11	central_city		0.0489
12	own		0.0456
13	looking_work		0.0804
14	employ		0.0278
15	unemploy		-0.0491
16	full_time		-0.0081

Table C4. Person models for clusters without demographics

Cluster 7			
Step	Parameter		Estimate
0	Intercept		0.2357
1	nonmover		-0.1683
2	cit (not a citizen)	5	-0.1156
2	cit (born in USA)	1	-0.0934
2	cit (naturalized)	4	-0.0599
2	cit (born abroad)	3	-0.0097
2	cit (born in P.R)	2	0.2786
3	mar (single)	5	-0.0504
3	mar (widowed)	2	-0.0130
3	mar (separated)	4	-0.0012
3	mar (divorced)	3	0.0289
3	mar (married)	1	0.0357
4	unemploy		-0.2388
5	outside_msa		0.1952
6	central_city		0.0484
7	edu (up to high_school)	1	-0.0378
7	edu (above college)	3	-0.0223
7	edu (some college to bachelor)	2	-0.0078
7	edu (no school)	0	0.0679
8	layoff		0.1711
9	own		-0.0302
10	full_time		-0.0460
11	ot_lan (another language)		0.0397
12	employ		0.0247
13	looking_work		0.0700
14	poverty		0.0155
15	work_home		0.0220
16	car_to_work		0.0059
17	family		-0.0051

Cluster 8			
Step	Parameter		Estimate
0	Intercept		0.1048
1	nonmover		-0.1491
2	poverty		-0.0967
3	edu (no school)	0	-0.0589
3	edu (above college)	3	0.0098
3	edu (up to high_school)	1	0.0119
3	edu (some college to bachelor)	2	0.0372
4	ot_lan (another language)		0.0558
5	mar (widowed)	2	-0.0642
5	mar (single)	5	-0.0297
5	mar (married)	1	-0.0198
5	mar (divorced)	3	-0.0094
5	mar (separated)	4	0.1231
6	own		0.0484
7	car_to_work		-0.0895
8	outside_msa		-0.0270
9	work_home		-0.1073
10	employ		0.0566
11	layoff		0.0886
12	cit (born in P.R)	2	-0.0232
12	cit (not a citizen)	5	-0.0166
12	cit (naturalized)	4	-0.0078
12	cit (born in USA)	1	-0.0053
12	cit (born abroad)	3	0.0528
13	unemploy		-0.1166
14	looking_work		0.0891
15	family		0.0189
16	full_time		0.0137
17	central_city		-0.0006

Table C5. Housing unit characteristics in first 10 selected by cluster

	First 10 of at least 4 clusters							
Cluster	1	2	3	4	5	6	7	8
bds	x	x	x	x	x	x	x	x
veh	x	x	x	x	x	x	x	x
hupaoc	x		x	x	x	x	x	x
noc	x				x	x	x	x
lhinc	x	x		x		x		
lharet	x	x					x	x
highcost		x	x		x			x
lhapa		x	x			x	x	
pprtop		x	x			x		x
hhother		x		x	x		x	x
lhass		x	x	x	x			x
	First 10 of 1, 2, or 3 clusters; order of selection							
mobileoth		6		8				10
lhassi	6				10		4	
poverty	10			4		3		
smallmult			4			10	9	
lgmult	3							
family	8					9		
mortgage					7			
lhapern			8	10				
nonrel			10	7	1			
outside_msa							6	

Table C6. Person characteristics in first 10 selected by cluster

	First 10 of at least 4 clusters							
Cluster	1	2	3	4	5	6	7	8
nonmover	x	x		x	x	x	x	x
unemploy			x	x	x		x	
mar	x	x	x	x	x	x	x	x
poverty	x		x		x	x		x
cit		x	x	x	x	x	x	
edu	x	x	x	x	x	x	x	x
ot_lan	x	x	x	x	x	x		x
family	x	x			x	x		
layoff			x	x		x	x	
car_to_work	x			x		x		x
own	x	x	x				x	x
outside_msa		x	x				x	x
	First 10 of 1, 2, or 3 clusters; order of selection							
full_time				10	5		10	
central_city				7	10		6	
looking_work	9	2						
work_home	7					8		9
employ		6	4					10

Table C7. Estimates of Percents and Mean Incomes for the U.S. and the Eight Clusters

tblid	line	Characteristic	U. S.				Cluster																									
							1				2				3				4				5				6				7			
			Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol	
			% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE
		HOUSEHOLDS BY TYPE																																
DP02	2	Family households (families)	67.0	0.10	67.5	0.28	68.9	0.14	69.7	0.48	58.4	0.22	58.5	0.69	63.3	0.43	65.2	1.01	54.4	0.64	53.9	1.68	78.9	0.46	80.2	1.25	69.3	0.68	73.0	1.95	42.4	0.35	42.6	1.02	77.5	0.14	77.2	0.42
DP02	3	With own children under 18 years	32.0	0.08	32.4	0.22	31.1	0.13	31.3	0.44	28.7	0.23	28.4	0.63	31.6	0.43	33.9	0.94	31.5	0.62	32.1	1.46	44.6	0.57	46.0	1.44	39.3	0.66	44.1	2.14	19.8	0.31	20.5	0.94	37.3	0.18	37.2	0.45
DP02	4	Married-couple family	50.1	0.09	50.4	0.30	53.1	0.16	53.6	0.43	40.7	0.22	41.4	0.64	32.1	0.34	32.4	1.19	19.9	0.47	20.6	1.39	53.2	0.57	57.5	1.47	41.7	0.66	44.0	1.74	27.1	0.30	28.0	1.07	65.7	0.15	65.1	0.53
DP02	5	With own children under 18 years	22.2	0.07	22.5	0.22	22.0	0.11	22.3	0.38	18.1	0.21	18.5	0.54	13.2	0.23	13.3	0.75	9.5	0.38	10.7	1.05	30.6	0.53	32.4	1.36	24.5	0.61	27.0	1.71	11.2	0.24	12.4	0.77	30.7	0.17	30.5	0.46
DP02	6	Male householder, no wife present, family	4.4	0.04	4.4	0.11	4.2	0.07	4.5	0.19	4.4	0.10	4.4	0.30	6.0	0.18	5.6	0.56	5.7	0.27	6.4	0.92	7.6	0.31	6.5	0.85	8.1	0.38	8.0	1.01	4.1	0.16	3.5	0.40	3.4	0.07	3.5	0.20
DP02	7	With own children under 18 years	2.1	0.03	2.1	0.09	2.1	0.05	2.1	0.12	2.2	0.07	2.1	0.23	2.9	0.15	3.1	0.47	2.3	0.17	3.4	0.72	3.1	0.24	3.5	0.57	3.0	0.24	3.7	0.80	1.7	0.12	1.0	0.23	1.7	0.05	1.8	0.15
DP02	8	Female householder, no husband present, family	12.6	0.06	12.7	0.17	11.6	0.10	11.7	0.29	13.2	0.18	12.6	0.45	25.2	0.39	27.2	1.14	28.9	0.64	26.9	1.48	18.1	0.45	16.2	1.03	19.5	0.57	20.9	1.78	11.1	0.23	11.2	0.60	8.4	0.10	8.6	0.33
DP02	9	With own children under 18 years	7.7	0.06	7.7	0.16	6.9	0.09	6.9	0.24	8.4	0.16	7.8	0.39	15.5	0.34	17.5	0.92	19.7	0.54	17.9	1.37	10.9	0.39	10.1	0.96	11.8	0.45	13.4	1.37	7.0	0.19	7.1	0.59	4.8	0.09	4.9	0.27
DP02	10	Nonfamily households	33.0	0.10	32.5	0.28	31.1	0.14	30.3	0.48	41.6	0.22	41.5	0.69	36.7	0.43	34.8	1.01	45.6	0.64	46.1	1.68	21.1	0.46	19.8	1.25	30.7	0.68	27.0	1.95	57.6	0.35	57.4	1.02	22.5	0.14	22.8	0.42
DP02	11	Householder living alone	27.0	0.08	26.6	0.25	26.2	0.13	25.5	0.43	33.2	0.23	33.0	0.57	31.1	0.38	28.9	0.94	38.5	0.62	39.3	1.46	17.5	0.48	17.8	1.20	23.1	0.60	21.3	1.76	44.9	0.39	43.6	0.99	18.5	0.13	18.8	0.37
DP02	13	Households with one or more people under 18 years	35.2	0.08	35.8	0.23	34.3	0.13	35.0	0.45	31.2	0.23	30.9	0.65	37.8	0.44	39.7	0.83	36.8	0.68	37.8	1.50	51.5	0.57	52.8	1.53	44.2	0.71	49.2	2.13	21.8	0.32	22.5	0.96	39.8	0.18	39.8	0.48
		RELATIONSHIP																																
DP02	22	Nonrelatives	4.9	0.04	4.9	0.09	4.2	0.05	4.2	0.14	6.7	0.13	6.8	0.28	5.6	0.15	6.2	0.45	7.0	0.32	7.4	0.63	4.5	0.14	3.3	0.41	7.2	0.34	7.0	0.87	10.2	0.19	10.8	0.53	3.1	0.05	3.1	0.13
DP02	23	Unmarried partner	2.1	0.02	2.0	0.05	2.0	0.03	2.0	0.08	2.8	0.06	2.6	0.16	2.4	0.09	2.5	0.24	2.6	0.13	2.6	0.39	1.6	0.07	1.2	0.17	2.2	0.13	2.4	0.33	3.3	0.10	2.9	0.21	1.5	0.03	1.4	0.07
		MARITAL STATUS **Males 15 years and over**																																
DP02	25	Never married	30.7	0.08	30.5	0.22	26.9	0.17	27.2	0.36	35.4	0.24	36.0	0.68	40.3	0.46	36.3	1.10	51.6	0.74	51.3	1.95	35.1	0.59	33.5	1.24	41.2	0.72	38.2	1.62	47.9	0.43	48.4	1.29	23.9	0.13	23.8	0.37
DP02	26	Now married, except separated	56.3	0.09	56.5	0.25	59.3	0.17	59.1	0.43	50.1	0.28	50.0	0.70	41.4	0.40	44.2	1.32	31.1	0.67	31.7	1.67	53.4	0.48	55.8	1.32	47.9	0.71	50.8	1.69	38.0	0.38	38.3	1.32	66.1	0.14	66.1	0.46
DP02	27	Separated	1.7	0.03	1.5	0.08	1.6	0.05	1.5	0.12	1.9	0.08	1.5	0.20	3.5	0.17	3.0	0.49	4.5	0.32	5.3	0.86	2.3	0.18	1.9	0.36	2.7	0.22	2.7	0.64	2.5	0.13	2.2	0.35	0.9	0.03	0.7	0.08
DP02	28	Widowed	2.4	0.03	2.5	0.07	2.7	0.05	2.7	0.11	2.3	0.06	2.3	0.19	3.2	0.13	3.5	0.41	3.1	0.22	2.4	0.47	2.3	0.14	2.4	0.42	2.0	0.19	2.0	0.58	1.9	0.10	1.9	0.24	2.1	0.04	2.3	0.16
DP02	29	Divorced	8.9	0.05	8.9	0.15	9.5	0.09	9.6	0.25	10.3	0.15	10.2	0.42	11.6	0.28	13.0	0.88	9.7	0.42	9.2	1.08	6.9	0.28	6.4	0.77	6.2	0.28	6.2	0.92	9.6	0.25	9.1	0.74	7.0	0.08	7.1	0.30
		Females 15 years and over																																
DP02	31	Never married	25.0	0.07	24.7	0.19	21.0	0.12	21.1	0.36	28.9	0.27	26.5	0.59	34.9	0.43	34.9	1.10	46.0	0.64	44.2	1.67	27.3	0.44	28.4	0.98	33.9	0.61	29.4	1.70	41.0	0.49	41.2	1.24	19.2	0.13	19.5	0.37
DP02	32	Now married, except separated	51.4	0.08	51.5	0.27	54.0	0.16	54.0	0.37	44.7	0.26	46.1	0.71	33.9	0.37	33.8	1.08	23.8	0.55	24.4	1.43	49.9	0.49	52.5	1.12	43.3	0.65	46.2	1.85	34.8	0.42	34.7	1.21	62.4	0.14	62.0	0.49
DP02	33	Separated	2.6	0.03	2.6	0.09	2.3	0.05	2.1	0.14	2.7	0.08	2.9	0.29	4.8	0.18	5.3	0.44	7.8	0.35	8.6	0.83	4.6	0.22	3.7	0.50	5.5	0.31	5.4	0.91	3.0	0.14	3.3	0.41	1.3	0.04	1.3	0.12
DP02	34	Widowed	9.7	0.04	10.0	0.12	11.0	0.09	11.0	0.25	9.8	0.13	11.0	0.33	12.6	0.20	12.2	0.58	10.3	0.32	10.7	1.06	9.0	0.27	8.4	0.67	8.1	0.34	8.2	0.97	8.1	0.17	7.8	0.51	7.8	0.08	8.2	0.25
DP02	35	Divorced	11.3	0.06	11.3	0.19	11.6	0.11	11.8	0.31	13.9	0.17	13.6	0.56	13.8	0.26	13.8	0.59	12.1	0.41	12.2	1.06	9.1	0.26	7.0	0.64	9.2	0.39	10.8	1.20	13.1	0.27	13.0	0.82	9.2	0.08	9.0	0.29
		EDUCATIONAL ATTAINMENT **Population 25 years and over**																																
DP02	59	Less than 9th grade	6.5	0.05	6.6	0.10	5.8	0.07	6.0	0.20	4.9	0.09	4.6	0.28	10.9	0.26	11.4	0.67	13.6	0.42	12.5	0.96	25.5	0.64	27.8	1.36	25.7	0.63	25.6	1.37	5.6	0.16	5.4	0.56	2.7	0.05	2.9	0.14
DP02	60	9th to 12th grade, no diploma	10.0	0.06	9.5	0.14	10.8	0.10	10.5	0.21	8.6	0.13	7.8	0.31	18.8	0.27	18.3	0.73	19.3	0.40	19.0	1.24	18.0	0.38	16.7	0.98	17.0	0.40	15.7	1.18	7.7	0.19	7.7	0.58	6.1	0.07	5.6	0.17
DP02	61	High school graduate (includes equivalency)	29.7	0.07	30.9	0.17	33.6	0.17	34.7	0.34	27.4	0.22	28.8	0.51	34.6	0.34	37.3	0.97	29.7	0.65	33.6	1.49	27.8	0.43	27.8	1.23	25.6	0.49	30.4	1.39	21.6	0.25	21.7	0.75	27.1	0.17	28.1	0.28
DP02	62	Some college, no degree	20.3	0.06	19.6	0.16	20.7	0.12	20.1	0.30	21.7	0.17	21.7	0.53	18.9	0.27	17.0	0.80	18.4	0.40	16.0	0.93	14.9	0.36	14.1	1.01	13.6	0.43	12.8	1.09	18.3	0.23	18.2	0.79	21.4	0.11	20.2	0.27
DP02	63	Associate's degree	7.0	0.05	7.0	0.12	7.1	0.07	7.0	0.19	7.4	0.11	7.7	0.31	5.2	0.16	5.2	0.39	5.2	0.24	6.5	0.85	4.6	0.16	4.1	0.47	4.1	0.21	3.3	0.50	6.2	0.16	5.6	0.36	8.0	0.08	8.1	0.21
DP02	64	Bachelor's degree	16.9	0.06	16.8	0.16	14.4	0.11	14.0	0.23	19.2	0.17	18.9	0.40	7.6	0.20	6.9	0.52	9.2	0.35	6.9	0.80	6.3	0.26	6.7	0.65	9.9	0.34	8.1	0.87	24.3	0.28	25.4	0.85	21.8	0.14	22.3	0.30
DP02	65	Graduate or professional degree	9.6	0.06	9.6	0.12	7.6	0.09	7.7	0.18	10.9	0.13	10.5	0.37	3.9	0.14	3.8	0.41	4.5	0.20	5.5	0.70	2.9	0.13	2.8	0.40	4.1	0.21	4.1	0.64	16.2	0.26	15.9	0.69	12.9	0.10	12.8	0.27
DP02	66	Percent high school graduate or higher	83.5	0.09	83.9	0.15	83.4	0.14	83.5	0.24	86.6	0.17	87.6	0.41	70.3	0.38	70.3	0.91	67.1	0.55	68.5	1.44	56.6	0.65	55.5	1.50	57.4	0.67	58.7	1.57	86.7	0.25	86.9	0.79	91.2	0.10	91.5	0.23
DP02	67	Percent bachelor's degree or higher	26.6	0.11	26.4	0.20	22.0	0.17	21.7	0.27	30.0	0.23	29.4	0.53	11.5	0.27	10.7	0.72	13.8	0.45	12.5	1.02	9.2	0.30	9.4	0.77	14.0	0.42	12.2	1.15	40.6	0.38	41.4	0.96	34.7	0.17	35.1	0.36

Table C7. Estimates of Percents and Mean Incomes for the U.S. and the Eight Clusters

tblid	line	Characteristic	U. S.				Cluster																									
							1				2				3				4				5				6				7			
			Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol	
			% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE
		RESIDENCE 1 YEAR AGO																																
		Population 1 year and over																																
DP02	79	Same house	84.5	0.09	86.2	0.24	85.8	0.13	87.1	0.33	78.8	0.23	81.9	0.64	81.8	0.37	81.4	1.13	80.7	0.59	83.2	1.37	86.2	0.45	89.2	1.03	84.6	0.60	86.1	1.56	72.4	0.42	76.1	0.99	89.0	0.12	90.2	0.35
DP02	80	Different house in the U.S.	14.9	0.09	13.4	0.23	13.9	0.13	12.6	0.32	20.3	0.21	17.4	0.62	17.8	0.36	18.1	1.11	18.4	0.57	16.3	1.38	13.0	0.44	9.9	1.01	14.1	0.57	12.9	1.52	26.1	0.42	23.0	0.96	10.7	0.12	9.5	0.35
DP02	81	Same county	9.7	0.07	8.5	0.19	8.8	0.11	7.6	0.28	13.1	0.20	11.0	0.47	13.4	0.33	13.9	1.07	14.2	0.46	12.8	1.19	10.3	0.39	7.8	0.93	11.7	0.53	10.0	1.24	16.9	0.39	15.5	0.72	6.2	0.09	5.4	0.24
DP02	82	Different county	5.3	0.05	4.9	0.13	5.1	0.08	5.0	0.19	7.2	0.15	6.4	0.35	4.4	0.20	4.2	0.45	4.2	0.29	3.5	0.53	2.7	0.22	2.2	0.47	2.4	0.25	2.9	0.72	9.2	0.20	7.5	0.56	4.5	0.09	4.1	0.25
DP02	83	Same state	3.0	0.04	2.8	0.09	3.1	0.08	2.8	0.14	3.7	0.12	3.6	0.27	2.5	0.15	2.3	0.30	2.6	0.24	1.7	0.34	1.9	0.18	1.4	0.45	1.5	0.21	2.1	0.65	4.8	0.17	3.6	0.35	2.5	0.07	2.6	0.20
DP02	84	Different state	2.3	0.04	2.1	0.08	2.0	0.06	2.1	0.15	3.5	0.09	2.8	0.22	1.9	0.11	1.9	0.30	1.6	0.15	1.8	0.44	0.8	0.10	0.7	0.22	0.9	0.12	0.8	0.40	4.4	0.16	3.9	0.41	1.9	0.05	1.5	0.14
DP02	85	Abroad	0.6	0.01	0.5	0.04	0.3	0.02	0.4	0.06	0.9	0.06	0.7	0.13	0.4	0.05	0.5	0.19	0.9	0.11	0.6	0.21	0.8	0.08	0.8	0.28	1.4	0.14	1.0	0.44	1.5	0.08	0.9	0.17	0.3	0.02	0.3	0.05
		PLACE OF BIRTH																																
DP02	87	Native	88.1	0.05	88.0	0.14	93.2	0.10	93.1	0.23	85.4	0.20	85.6	0.43	93.0	0.23	92.8	0.59	79.7	0.51	78.8	1.50	67.1	0.79	67.1	1.30	50.6	0.61	47.8	1.51	77.5	0.34	77.5	0.93	91.9	0.10	92.1	0.24
DP02	88	Born in United States	86.8	0.05	86.9	0.14	92.3	0.10	92.2	0.24	83.9	0.20	84.0	0.43	91.9	0.23	92.0	0.62	75.2	0.47	74.6	1.47	66.0	0.80	66.1	1.28	48.7	0.60	46.0	1.45	75.6	0.36	75.9	0.94	90.9	0.10	91.1	0.25
DP02	89	State of residence	59.5	0.15	59.8	0.24	64.8	0.32	65.2	0.44	53.0	0.21	53.0	0.64	70.8	0.41	70.7	0.94	57.8	0.49	58.1	1.59	54.4	0.69	54.7	1.22	39.5	0.53	37.0	1.41	44.5	0.36	44.5	0.91	60.6	0.20	61.0	0.47
DP02	90	Different state	27.3	0.14	27.1	0.22	27.6	0.28	27.0	0.42	30.8	0.25	31.0	0.58	21.1	0.33	21.3	0.77	17.4	0.36	16.5	0.94	11.6	0.31	11.5	0.58	9.1	0.30	9.0	0.77	31.1	0.31	31.4	0.97	30.3	0.17	30.1	0.45
DP02	91	Born in Puerto Rico, U.S. Island areas, or born abroad to American parent(s)	1.2	0.01	1.2	0.04	0.9	0.02	0.9	0.06	1.5	0.04	1.6	0.12	1.0	0.07	0.8	0.18	4.5	0.24	4.2	0.46	1.1	0.10	1.0	0.17	1.9	0.13	1.8	0.31	1.9	0.08	1.6	0.23	1.0	0.02	1.0	0.07
DP02	92	Foreign born	11.9	0.05	12.0	0.14	6.8	0.10	6.9	0.23	14.6	0.20	14.4	0.43	7.0	0.23	7.2	0.59	20.3	0.51	21.2	1.50	32.9	0.79	32.9	1.30	49.4	0.61	52.2	1.51	22.5	0.34	22.5	0.93	8.1	0.10	7.9	0.24
		U.S. CITIZENSHIP STATUS																																
DP02	94	Naturalized U.S. citizen	41.2	0.27	41.6	0.73	45.1	0.62	45.9	1.48	41.1	0.58	45.7	1.75	29.2	1.26	23.9	2.71	37.8	1.04	39.1	2.70	31.8	0.64	30.1	1.90	29.7	0.82	29.5	1.98	36.1	0.71	34.8	1.77	56.8	0.52	57.1	1.67
		LANGUAGE SPOKEN AT HOME																																
DP02	111	English only	81.4	0.07	81.9	0.14	89.0	0.12	89.3	0.32	79.4	0.27	80.0	0.56	86.9	0.40	87.6	0.83	67.3	0.68	67.9	1.85	34.6	0.96	33.3	1.28	23.9	0.55	24.4	1.89	71.1	0.42	71.5	1.08	88.0	0.13	88.4	0.30
DP02	112	Language other than English	18.6	0.07	18.1	0.14	11.0	0.12	10.7	0.32	20.6	0.27	20.0	0.56	13.1	0.40	12.4	0.83	32.7	0.68	32.1	1.85	65.4	0.96	66.7	1.28	76.1	0.55	75.6	1.89	28.9	0.42	28.5	1.08	12.0	0.13	11.6	0.30
DP02	113	Speak English less than "very well"	8.4	0.05	8.2	0.11	4.4	0.07	4.1	0.18	9.1	0.15	8.9	0.41	6.5	0.24	6.9	0.61	16.8	0.43	16.6	1.37	33.8	0.72	33.9	1.22	47.6	0.67	46.3	1.77	13.5	0.32	13.4	0.74	4.1	0.07	3.9	0.18
DP02	114	Spanish	11.3	0.04	11.2	0.10	6.1	0.12	5.9	0.26	10.9	0.18	10.4	0.47	9.5	0.36	9.5	0.76	24.4	0.62	25.5	1.70	57.7	1.32	58.6	1.38	57.6	0.75	60.4	2.17	14.0	0.32	13.6	0.93	5.3	0.10	5.2	0.25
DP02	115	Speak English less than "very well"	5.5	0.04	5.4	0.09	2.6	0.06	2.4	0.16	5.0	0.13	4.6	0.34	5.0	0.22	5.7	0.60	12.6	0.41	13.1	1.23	30.2	0.82	30.3	1.24	36.3	0.74	37.2	1.84	7.1	0.26	6.0	0.54	1.9	0.05	1.8	0.12
DP02	116	Other Indo-European languages	3.7	0.05	3.5	0.09	2.6	0.05	2.7	0.16	5.1	0.12	5.1	0.27	1.7	0.13	1.4	0.22	5.0	0.31	3.2	0.55	2.7	0.87	2.4	0.82	7.8	0.42	6.0	1.02	7.6	0.23	8.3	0.66	3.5	0.07	3.2	0.15
DP02	117	Speak English less than "very well"	1.3	0.02	1.2	0.05	0.8	0.03	0.7	0.07	1.9	0.07	2.0	0.16	0.6	0.07	0.4	0.08	2.3	0.19	1.9	0.50	1.0	0.31	1.0	0.31	4.4	0.28	3.5	0.62	3.1	0.14	4.0	0.46	0.9	0.03	0.8	0.06
DP02	118	Asian and Pacific Islander languages	2.8	0.02	2.8	0.05	1.8	0.04	1.8	0.13	3.6	0.12	3.5	0.24	1.4	0.11	1.1	0.22	2.0	0.19	2.3	0.56	3.8	0.24	4.3	0.59	9.4	0.42	8.3	1.14	5.6	0.15	5.4	0.45	2.7	0.07	2.7	0.15
DP02	119	Speak English less than "very well"	1.4	0.02	1.4	0.04	0.9	0.02	0.9	0.06	1.8	0.06	2.0	0.20	0.8	0.08	0.6	0.16	1.2	0.14	1.3	0.38	2.2	0.17	2.3	0.35	6.4	0.30	5.2	0.72	2.9	0.10	2.8	0.32	1.2	0.04	1.2	0.09
DP02	120	Other languages	0.7	0.02	0.6	0.05	0.4	0.03	0.3	0.05	1.0	0.06	1.0	0.19	0.5	0.06	0.5	0.17	1.4	0.16	1.2	0.43	1.2	0.24	1.4	0.33	1.2	0.19	0.9	0.33	1.6	0.09	1.1	0.21	0.5	0.02	0.4	0.07
DP02	121	Speak English less than "very well"	0.2	0.01	0.2	0.03	0.1	0.01	0.1	0.02	0.3	0.03	0.3	0.12	0.1	0.02	0.2	0.13	0.7	0.12	0.4	0.16	0.4	0.08	0.3	0.10	0.4	0.09	0.3	0.17	0.5	0.04	0.5	0.14	0.1	0.01	0.1	0.03
		EMPLOYMENT STATUS																																
		Population 16 years and over																																
DP03	2	In labor force	65.9	0.07	66.3	0.20	64.6	0.15	65.3	0.30	68.4	0.18	68.9	0.44	59.5	0.29	61.5	0.87	58.6	0.54	58.1	1.19	60.7	0.41	58.3	1.09	63.7	0.49	64.3	1.26	71.1	0.27	72.2	0.89	68.6	0.12	68.9	0.38
DP03	3	Civilian labor force	65.6	0.07	66.1	0.20	64.4	0.15	65.1	0.29	67.7	0.19	68.3	0.44	59.4	0.29	61.4	0.88	58.5	0.54	58.0	1.19	60.6	0.40	58.2	1.08	63.6	0.49	64.2	1.26	70.6	0.27	71.8	0.87	68.4	0.12	68.7	0.38
DP03	4	Employed	60.6	0.08	61.3	0.19	59.7	0.15	60.8	0.29	62.5	0.20	63.8	0.51	50.8	0.26	52.5	0.83	49.2	0.51	47.8	1.16	53.9	0.43	53.2	1.12	57.2	0.48	58.3	1.31	65.0	0.27	65.3	0.91	64.6	0.13	64.9	0.38
DP03	5	Unemployed	5.0	0.04	4.8	0.09	4.7	0.05	4.3	0.12	5.2	0.09	4.6	0.24	8.6	0.17	8.9	0.43	9.3	0.30	10.2	0.84	6.7	0.20	5.0	0.47	6.4	0.21	5.9	0.63	5.6	0.15	6.5	0.51	3.7	0.04	3.8	0.12
DP03	6	Armed Forces	0.3	0.02	0.3	0.02	0.2	0.01	0.2	0.02	0.7	0.07	0.5	0.07	0.1	0.01	0.2	0.08	0.1	0.04	0.0	0.01	0.1	0.04	0.1	0.08	0.0	0.01	0.0	0.03	0.5	0.06	0.4	0.12	0.2	0.01	0.2	0.03
		Civilian labor force																																
DP03	9	Percent Unemployed	7.7	0.05	7.3	0.13	7.3	0.08	6.6	0.18	7.7	0.14	6.7	0.35	14.5	0.27	14.4	0.66	15.9	0.48	17.6	1.34	11.1	0.34	8.6	0.80	10.1	0.32	9.2	0.97	7.9	0.20	9.0	0.69	5.5	0.07	5.5	0.18
		Females 16 years and over																																
DP03	11	In labor force	58.9	0.10	59.5	0.28	57.9	0.20	58.9	0.36	61.8	0.23	61.9	0.60	54.6	0.36	56.9	1.03	54.0	0.82	54.0	1.44	50.0	0.57	47.5	1.71	52.0	0.68	51.8	1.97	64.7	0.37	66.1	1.14	61.2	0.18	61.7	0.46
DP03	12	Civilian labor force	58.8	0.10	59.5	0.28	57.8	0.20	58.9	0.36	61.6	0.23	61.8	0.61	54.5	0.37	56.7	1.05	53.9	0.82	54.0	1.44	50.0	0.57	47.5	1.71	51.9	0.68	51.7	1.95	64.5	0.36	65.8	1.13	61.2	0.18	61.7	0.46
DP03	13	Employed	54.3	0.10	55.2	0.29	53.7	0.20	55.3	0.37	56.9	0.25	57.8	0.60	46.6	0.34	48.2	1.04	44.9	0.75	44.6	1.42	43.7	0.52	43.4	1.66	45.9	0.62	44.9	1.97	59.4	0.37	59.7	1.19	57.9	0.18	58.6	0.46
		Own children under 6 years																																
DP03	15	All parents in family in labor force	59.5	0.29	60.0	0.72	61.5	0.49	63.2	1.20	60.9	0.78	62.2	1.87	61.8	1.14	64.2	3.07	61.6	1.90	63.9	4.00	52.2	1.50	51.1	3.82	47.6	1.83	54.8	4.35	58.2	1.28	56.9	3.79	58.9	0.45	56.6	1.38
		Own children 6 to 17 years																																
DP03	17	All parents in family in labor force	68.4	0.22	69.7	0.57	70.2	0.41	71.8	0.93	70.3	0.55	72.4	1.50	66.5	0.83	71.8	2.22	66.4	1.37	67.5	2.97	57.5	1.14	55.9	3.30	56.4	1.46	56.8	3.38	69.8	1.09	72.3	2.60	69.3	0.34	69.6	0.97

Table C7. Estimates of Percents and Mean Incomes for the U.S. and the Eight Clusters

tblid	line	Characteristic	U. S.				Cluster																									
							1				2				3				4				5				6				7			
			Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol	
			% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE
		COMMUTING TO WORK																																
DP03	19	Car, truck, or van -- drove alone	77.6	0.09	77.8	0.22	81.4	0.14	81.5	0.33	77.6	0.22	76.8	0.58	73.3	0.54	73.9	1.05	46.9	0.77	45.8	1.97	70.3	0.88	73.2	1.51	52.5	0.76	53.8	2.35	61.9	0.43	61.2	1.11	82.9	0.14	83.2	0.35
DP03	20	Car, truck, or van -- carpooled	10.4	0.07	10.0	0.19	10.4	0.10	10.2	0.31	10.4	0.17	10.3	0.39	13.7	0.33	13.3	0.75	10.3	0.49	8.6	1.50	18.6	0.55	15.4	1.27	16.0	0.63	15.3	1.51	9.6	0.27	9.5	0.76	8.5	0.11	8.1	0.27
DP03	21	Public transportation (excluding taxicab)	4.7	0.04	4.7	0.11	1.9	0.05	1.8	0.14	5.0	0.13	4.9	0.30	5.8	0.27	5.1	0.59	30.4	0.69	31.5	1.69	4.0	0.27	4.4	0.64	20.9	0.62	19.5	1.98	15.8	0.31	16.6	0.81	2.1	0.05	2.3	0.15
DP03	22	Walked	2.3	0.03	2.5	0.09	1.8	0.05	1.8	0.13	2.4	0.08	2.9	0.24	2.7	0.17	3.5	0.42	8.1	0.45	8.6	1.35	2.1	0.19	1.7	0.38	6.0	0.38	5.5	1.10	6.7	0.21	6.2	0.57	1.0	0.03	1.2	0.10
DP03	23	Other means	1.4	0.03	1.5	0.06	1.1	0.03	1.1	0.09	1.5	0.07	1.8	0.18	2.0	0.14	2.2	0.35	2.2	0.21	3.2	0.70	2.4	0.37	2.9	0.63	2.0	0.21	2.6	0.82	2.7	0.13	3.3	0.37	0.9	0.03	0.8	0.07
DP03	24	Worked at home	3.6	0.04	3.7	0.10	3.5	0.08	3.6	0.16	3.1	0.08	3.3	0.26	2.4	0.15	2.1	0.32	2.0	0.25	2.3	0.44	2.5	0.22	2.3	0.39	2.5	0.23	3.4	0.82	3.4	0.15	3.2	0.40	4.5	0.08	4.5	0.19
		INCOME AND BENEFITS																																
DP03	53	Total household income Less than $10,000	9.1	0.07	9.0	0.17	8.2	0.11	8.1	0.24	9.0	0.15	8.4	0.37	20.5	0.34	19.5	0.92	27.3	0.55	29.4	1.55	13.5	0.36	13.5	1.02	14.0	0.51	15.6	1.49	12.4	0.26	12.0	0.76	3.7	0.07	3.8	0.20
DP03	54	$10,000 to $14,999	6.4	0.04	6.5	0.14	6.7	0.07	6.5	0.22	6.4	0.10	7.0	0.39	11.0	0.24	11.7	0.64	11.7	0.42	10.9	1.04	8.7	0.37	9.2	1.04	9.8	0.36	9.6	1.15	7.7	0.21	7.4	0.61	3.3	0.07	3.6	0.19
DP03	55	$15,000 to $24,999	12.6	0.07	12.7	0.19	13.5	0.11	13.1	0.29	13.3	0.16	13.5	0.45	18.8	0.30	18.3	0.85	17.1	0.49	17.2	1.33	17.8	0.44	17.8	1.17	17.6	0.60	18.6	1.90	13.6	0.23	13.6	0.71	7.7	0.11	8.2	0.26
DP03	56	$25,000 to $34,999	12.3	0.06	11.9	0.18	13.1	0.10	12.8	0.32	13.2	0.15	13.1	0.43	14.2	0.29	14.7	0.81	13.2	0.41	12.8	1.13	14.1	0.44	15.2	1.17	16.0	0.61	13.0	1.54	13.4	0.26	12.8	0.74	8.9	0.10	8.2	0.27
DP03	57	$35,000 to $49,999	15.7	0.07	15.6	0.22	17.0	0.12	17.0	0.34	16.8	0.17	15.6	0.54	14.6	0.32	14.1	0.85	12.3	0.38	12.8	1.29	16.4	0.40	17.1	1.16	16.7	0.56	14.1	1.54	15.4	0.27	15.9	0.74	13.8	0.13	14.1	0.38
DP03	58	$50,000 to $74,999	19.1	0.08	18.9	0.24	19.8	0.13	19.9	0.39	19.1	0.18	18.3	0.56	12.8	0.23	12.7	0.67	10.7	0.41	9.9	0.77	16.5	0.47	14.7	1.03	14.0	0.49	17.9	1.51	16.8	0.26	16.9	0.81	21.9	0.15	21.8	0.36
DP03	59	$75,000 to $99,999	10.8	0.05	11.3	0.17	10.4	0.09	11.2	0.30	10.0	0.14	11.2	0.42	4.8	0.16	5.4	0.51	4.4	0.27	3.4	0.53	7.1	0.27	6.6	0.65	6.1	0.31	5.7	1.01	8.6	0.20	8.9	0.57	15.5	0.12	15.6	0.44
DP03	60	$100,000 to $149,999	9.0	0.05	9.3	0.15	7.5	0.09	8.1	0.24	7.9	0.11	8.8	0.41	2.5	0.09	2.6	0.34	2.5	0.21	2.2	0.48	4.4	0.23	4.4	0.61	4.1	0.27	4.2	0.81	7.1	0.17	7.7	0.67	15.4	0.13	15.2	0.36
DP03	61	$150,000 to $199,999	2.7	0.03	2.8	0.08	2.0	0.04	2.1	0.12	2.3	0.06	2.4	0.19	0.5	0.06	0.7	0.20	0.6	0.09	0.7	0.29	0.8	0.11	0.8	0.28	1.0	0.12	1.1	0.45	2.4	0.10	2.5	0.31	5.0	0.07	5.3	0.23
DP03	62	$200,000 or more	2.4	0.02	2.1	0.07	1.6	0.04	1.2	0.09	1.9	0.06	1.8	0.16	0.4	0.05	0.2	0.09	0.3	0.07	0.6	0.22	0.6	0.10	0.6	0.18	0.7	0.10	0.1	0.06	2.6	0.11	2.3	0.24	4.8	0.07	4.2	0.18
DP03	64	Mean household income (dollars)	58,118	114	57,553	313	53,443	195	53,424	387	54,753	267	55,250	643	33,252	254	33,377	687	30,431	466	29,853	1031	40,984	553	40,211	1074	39,266	477	38,154	1337	54,077	532	54,731	1357	80,333	312	78,327	704
DP03	65	With earnings	80.1	0.07	80.2	0.16	78.2	0.15	78.9	0.32	81.3	0.18	80.8	0.43	73.2	0.33	74.5	0.91	70.3	0.54	68.9	1.34	80.5	0.45	79.7	1.11	81.5	0.50	84.3	1.35	83.4	0.22	83.1	0.74	84.1	0.13	83.9	0.28
DP03	66	Mean earnings (dollars)	59,429	120	59,534	303	54,633	202	54,714	433	55,406	269	57,131	705	35,408	279	35,215	791	35,076	634	35,337	1414	42,746	575	42,068	1227	41,764	542	39,624	1482	55,901	594	57,778	1464	79,659	319	79,163	698
DP03	67	With Social Security	26.5	0.07	26.7	0.15	30.3	0.17	30.0	0.35	23.9	0.19	24.3	0.46	30.1	0.28	30.7	0.87	23.2	0.44	24.4	1.47	25.5	0.47	27.7	1.13	19.3	0.52	17.8	1.30	17.4	0.24	16.3	0.60	25.1	0.14	25.6	0.38
DP03	68	Mean Social Security income (dollars)	12,670	26	12,570	65	12,675	39	12,569	92	12,580	57	12,519	168	10,402	78	10,389	221	9,338	134	9,295	394	10,607	103	11,011	265	10,366	207	10,638	551	11,957	104	11,608	240	14,132	43	13,931	124
DP03	69	With retirement income	17.0	0.06	16.4	0.15	19.1	0.11	18.6	0.29	15.5	0.14	14.7	0.46	15.7	0.23	14.9	0.69	9.4	0.30	9.4	0.85	12.0	0.35	11.9	0.90	8.0	0.28	7.4	0.88	9.9	0.16	9.3	0.43	19.2	0.13	18.3	0.37
DP03	70	Mean retirement income (dollars)	17,102	95	16,591	212	15,791	129	16,457	437	17,101	268	16,324	590	11,974	221	11,830	559	10,781	389	10,676	962	12,260	279	11,880	1041	12,124	460	10,926	1307	16,750	302	16,800	1055	20,325	163	18,389	339
DP03	71	With Supplemental Security Income	3.8	0.04	3.7	0.09	3.9	0.07	3.6	0.18	3.1	0.08	3.2	0.23	8.4	0.25	8.7	0.69	11.2	0.34	10.3	0.84	6.9	0.28	7.6	0.63	6.7	0.35	5.0	0.81	3.4	0.11	4.1	0.42	1.9	0.04	1.8	0.13
DP03	72	Mean Supplemental Security Income (dollars)	6,763	39	6,523	94	6,690	68	6,305	129	6,851	101	6,951	291	6,203	87	6,151	279	6,478	116	5,952	241	6,559	153	6,252	381	6,998	189	6,515	586	6,911	131	6,559	320	7,517	115	7,528	355
DP03	73	With cash public assistance income	2.5	0.03	2.5	0.09	2.0	0.04	1.9	0.13	2.5	0.08	1.9	0.15	6.2	0.22	7.7	0.76	8.9	0.34	10.2	1.14	5.4	0.25	4.7	0.66	5.6	0.33	4.4	0.71	2.1	0.11	2.7	0.33	1.1	0.03	1.0	0.10
DP03	74	Mean cash public assistance income (dollars)	3,108	40	3,133	121	2,588	63	2,763	146	3,136	109	3,299	302	2,752	91	2,830	230	3,565	181	3,599	475	3,694	160	3,432	362	4,030	223	3,253	642	3,339	174	3,253	339	3,524	145	3,773	503
		Families																																
DP03	77	Less than $10,000	5.5	0.06	5.4	0.17	4.7	0.09	4.5	0.23	5.4	0.15	5.0	0.38	15.1	0.36	15.4	1.19	21.2	0.83	18.2	1.64	10.1	0.41	9.9	1.03	10.7	0.52	14.4	1.66	7.5	0.29	8.0	0.99	2.1	0.07	1.9	0.17
DP03	78	$10,000 to $14,999	4.2	0.04	4.3	0.13	4.3	0.07	4.1	0.20	4.0	0.14	4.4	0.40	9.3	0.27	9.6	0.81	10.1	0.55	11.3	1.42	7.9	0.41	8.4	1.09	9.5	0.50	9.4	1.40	5.5	0.31	5.9	0.82	1.6	0.06	1.7	0.14
DP03	79	$15,000 to $24,999	10.3	0.08	10.5	0.22	11.0	0.12	10.7	0.31	10.7	0.21	10.6	0.58	18.5	0.37	18.7	1.22	17.9	0.67	19.9	1.85	18.1	0.54	18.7	1.21	19.2	0.73	19.6	2.20	11.8	0.35	11.7	1.03	5.3	0.10	6.0	0.25
DP03	80	$25,000 to $34,999	11.4	0.07	11.2	0.20	12.4	0.12	12.2	0.33	12.3	0.23	12.4	0.49	15.4	0.38	14.3	0.95	14.3	0.60	15.8	1.59	14.9	0.54	15.7	1.31	17.2	0.70	14.1	1.66	13.2	0.40	13.1	1.26	7.7	0.10	7.1	0.29
DP03	81	$35,000 to $49,999	16.0	0.09	15.9	0.24	17.8	0.14	18.1	0.40	16.7	0.23	15.3	0.71	15.9	0.32	16.0	1.00	14.1	0.59	14.2	1.68	17.4	0.45	18.4	1.20	17.4	0.62	12.0	1.58	15.5	0.39	15.9	1.16	13.3	0.16	13.3	0.41
DP03	82	$50,000 to $74,999	21.5	0.10	21.1	0.29	23.1	0.15	22.4	0.51	21.4	0.24	20.8	0.87	15.2	0.32	15.7	0.92	12.5	0.66	12.2	1.21	18.0	0.53	15.2	1.12	13.8	0.57	18.7	1.81	18.9	0.38	17.7	1.08	23.1	0.17	23.0	0.39
DP03	83	$75,000 to $99,999	13.3	0.07	13.7	0.22	12.9	0.11	13.7	0.38	13.0	0.21	14.9	0.65	6.2	0.23	5.6	0.53	5.7	0.39	3.6	0.61	7.7	0.31	7.0	0.74	6.3	0.38	5.0	1.06	10.9	0.32	11.0	0.97	17.5	0.15	17.7	0.52
DP03	84	$100,000 to $149,999	11.4	0.07	11.8	0.19	9.5	0.12	10.1	0.30	10.6	0.17	11.5	0.55	3.2	0.13	3.3	0.41	3.4	0.32	3.3	0.86	4.6	0.28	5.1	0.75	4.2	0.31	5.8	1.15	9.1	0.28	10.1	1.04	18.0	0.15	18.2	0.45
DP03	85	$150,000 to $199,999	3.4	0.04	3.5	0.11	2.5	0.06	2.6	0.16	3.1	0.10	2.9	0.28	0.8	0.08	1.0	0.31	0.6	0.10	1.1	0.56	0.8	0.12	1.0	0.34	1.0	0.15	1.0	0.51	3.4	0.17	2.9	0.47	5.8	0.08	6.1	0.26
DP03	86	$200,000 or more	3.1	0.04	2.6	0.09	2.0	0.05	1.6	0.12	2.8	0.10	2.3	0.24	0.4	0.07	0.3	0.14	0.3	0.07	0.4	0.19	0.6	0.09	0.7	0.27	0.7	0.12	0.1	0.08	4.1	0.19	3.8	0.53	5.6	0.09	5.0	0.22
DP03	88	Mean family income (dollars)	67,148	154	66,177	370	61,120	243	60,884	506	65,046	378	64,643	830	37,771	329	37,125	918	34,217	597	34,342	1503	42,684	574	42,834	1302	40,190	578	39,411	1596	66,004	824	65,877	2304	88,865	355	87,170	807
		Nonfamily households																																
DP03	92	Mean nonfamily income (dollars)	37,347	123	37,213	363	34,151	261	34,042	486	38,211	309	39,648	907	23,362	348	23,580	764	23,982	705	22,580	2055	27,884	1077	25,122	1538	32,558	823	29,226	2015	44,033	538	45,339	1549	47,416	388	45,044	842

Table C7. Estimates of Percents and Mean Incomes for the U.S. and the Eight Clusters

tblid	line	Characteristic	U. S.				Cluster																									
							1				2				3				4				5				6				7				8			
			Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol	
			% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE
		PERCENTAGE OF FAMILIES AND PEOPLE BELOW THE POVERTY LEVEL																																				
DP03	103	All families	9.8	0.08	9.9	0.23	8.7	0.12	8.0	0.28	9.6	0.19	9.2	0.53	25.3	0.49	25.7	1.32	32.5	0.90	30.5	2.22	21.8	0.56	22.1	1.54	23.1	0.67	30.8	2.10	12.7	0.40	13.9	1.28	3.6	0.09	3.7	0.24
DP03	104	With related children under 18 years	14.9	0.14	15.0	0.40	13.4	0.22	12.3	0.51	15.1	0.34	14.2	0.86	35.8	0.75	37.8	2.00	41.4	1.09	37.3	2.83	27.9	0.75	29.2	2.14	30.0	1.00	39.6	2.77	18.9	0.73	21.1	1.99	5.1	0.14	5.1	0.49
DP03	105	With related children under 5 years only	16.4	0.31	17.5	0.74	15.2	0.49	15.7	1.34	17.0	0.73	15.3	1.53	40.2	1.69	41.3	5.14	38.0	2.37	32.1	6.16	28.6	2.12	33.8	5.12	29.2	2.20	41.7	7.39	18.8	1.26	19.7	3.46	5.6	0.39	6.6	1.14
DP03	106	Married couple families	4.8	0.06	5.0	0.17	4.6	0.10	4.5	0.26	4.3	0.17	4.3	0.41	11.1	0.47	10.6	1.05	14.9	1.10	14.2	2.66	16.1	0.69	16.6	1.55	17.2	0.85	24.0	2.67	6.6	0.35	6.7	1.07	2.1	0.06	2.2	0.18
DP03	107	With related children under 18 years	6.5	0.11	6.8	0.35	6.2	0.19	5.9	0.45	6.4	0.31	5.6	0.72	15.6	0.87	17.4	2.15	18.3	1.46	15.4	3.35	19.6	0.89	21.8	2.28	21.0	1.14	30.0	3.72	8.6	0.69	9.0	1.85	2.5	0.09	2.5	0.34
DP03	108	With related children under 5 years only	6.3	0.24	6.5	0.75	6.0	0.44	5.9	1.05	6.8	0.58	4.1	1.24	15.1	1.88	18.2	5.45	13.3	2.86	5.2	3.44	17.9	2.03	20.9	4.86	17.4	2.38	34.2	9.41	9.1	1.33	9.8	2.84	2.4	0.22	2.4	0.80
DP03	109	Families with female householder, no husband present	28.5	0.29	28.0	0.79	26.0	0.49	23.5	1.27	25.2	0.59	25.0	1.83	43.9	0.91	44.5	2.36	46.4	1.24	43.9	2.74	40.4	1.26	36.7	3.96	38.8	1.65	47.8	5.11	26.7	1.06	32.4	3.45	14.1	0.46	13.9	1.24
DP03	110	With related children under 18 years	36.5	0.38	36.1	0.99	33.8	0.68	30.4	1.65	33.0	0.78	32.4	2.33	53.1	1.16	55.3	2.97	53.2	1.45	50.3	3.25	49.5	1.52	46.1	4.81	48.6	2.15	59.4	5.51	34.0	1.49	42.3	4.10	19.1	0.66	18.3	1.84
DP03	111	With related children under 5 years only	46.7	0.83	49.9	2.13	43.9	1.64	46.6	4.15	43.9	1.58	46.2	4.59	64.1	2.43	61.3	5.73	54.5	3.53	47.4	8.98	58.9	3.98	61.7	9.83	57.0	4.24	62.6	12.06	39.2	2.80	59.5	7.68	30.5	2.29	33.6	6.73
DP03	112	All people	12.8	0.09	12.8	0.23	11.3	0.13	10.7	0.30	12.9	0.19	12.1	0.49	29.3	0.46	29.2	1.24	35.8	0.74	34.7	1.91	24.3	0.56	25.6	1.69	25.5	0.69	31.4	2.09	17.3	0.35	17.3	1.00	4.9	0.09	5.3	0.28
DP03	113	Under 18 years	17.9	0.17	17.8	0.46	15.9	0.28	14.6	0.62	17.8	0.38	16.1	0.97	41.2	0.86	42.6	2.45	47.8	1.26	40.7	3.43	33.1	0.85	34.7	2.74	35.3	1.21	43.5	3.35	22.5	0.89	23.8	2.36	6.0	0.18	6.6	0.61
DP03	114	Related children under 18 years	17.5	0.17	17.4	0.47	15.5	0.28	14.0	0.64	17.4	0.38	16.0	0.97	40.9	0.86	42.5	2.49	47.6	1.26	40.6	3.43	32.8	0.85	34.3	2.78	35.1	1.20	43.8	3.36	22.1	0.89	23.4	2.32	5.7	0.18	6.2	0.60
DP03	115	Related children under 5 years	20.8	0.25	21.5	0.65	18.5	0.41	18.8	1.24	20.8	0.67	19.3	1.51	45.5	1.24	49.8	2.64	50.4	1.87	37.9	4.98	37.2	1.39	38.9	3.98	37.1	1.69	47.3	4.58	23.5	1.37	25.4	3.42	6.7	0.31	7.8	1.03
DP03	116	Related children 5 to 17 years	16.3	0.19	15.9	0.50	14.4	0.30	12.4	0.63	15.9	0.41	14.5	1.12	39.1	0.97	39.2	2.82	46.5	1.35	41.6	3.66	31.1	0.90	32.5	2.88	34.3	1.28	42.2	3.66	21.3	0.96	22.4	2.34	5.5	0.18	5.7	0.62
DP03	117	18 years and over	11.1	0.07	11.1	0.19	9.8	0.10	9.4	0.25	11.4	0.18	10.9	0.44	24.4	0.38	23.6	0.91	30.8	0.65	32.2	1.62	20.1	0.48	21.0	1.41	21.4	0.57	26.2	1.75	16.2	0.30	15.8	0.90	4.5	0.08	4.8	0.20
DP03	118	18 to 64 years	11.4	0.08	11.3	0.22	10.0	0.12	9.3	0.28	11.9	0.20	11.2	0.52	25.2	0.41	24.9	0.99	30.8	0.69	32.3	1.70	20.3	0.55	21.1	1.51	21.2	0.60	26.9	1.84	16.6	0.33	16.2	0.99	4.4	0.08	4.6	0.22
DP03	119	65 years and over	9.8	0.10	10.3	0.31	9.1	0.16	9.7	0.46	8.3	0.24	9.7	0.77	20.6	0.71	17.0	1.59	30.5	1.32	32.1	3.31	18.9	0.75	20.5	2.45	22.5	1.23	20.0	4.44	12.6	0.49	12.9	1.66	5.0	0.15	6.0	0.42
DP03	120	People in families	10.8	0.09	10.8	0.26	9.4	0.14	8.7	0.33	10.4	0.21	9.8	0.58	27.7	0.55	27.9	1.49	34.3	0.96	30.9	2.44	23.2	0.59	24.5	1.83	24.7	0.80	31.6	2.37	13.6	0.46	14.6	1.36	3.8	0.10	4.0	0.31
DP03	121	Unrelated individuals 15 years and over	22.5	0.14	22.3	0.42	21.1	0.26	21.2	0.64	20.8	0.35	19.5	0.97	36.0	0.63	34.3	1.73	40.3	0.98	45.5	2.33	34.0	0.84	36.5	3.61	29.1	0.99	30.4	2.98	23.2	0.43	21.5	1.34	14.3	0.27	15.1	0.62
		UNITS IN STRUCTURE																																				
DP04	9	2 units in structure	4.2	0.04	4.1	0.13	3.1	0.06	2.7	0.16	6.8	0.14	7.4	0.37	7.6	0.25	7.7	0.49	11.8	0.37	11.8	1.21	4.0	0.26	3.5	0.65	10.4	0.40	10.7	1.35	6.5	0.16	6.6	0.49	1.3	0.05	1.4	0.14
DP04	10	3 or 4 units	4.8	0.05	4.9	0.13	3.2	0.07	3.2	0.16	7.9	0.15	8.2	0.44	6.0	0.18	6.6	0.64	14.4	0.44	13.7	1.04	4.4	0.29	4.2	0.67	14.1	0.50	12.9	1.10	10.2	0.20	10.7	0.67	1.4	0.04	1.4	0.14
DP04	11	5 to 9 units	5.1	0.06	5.0	0.12	3.3	0.07	3.2	0.17	8.8	0.15	8.1	0.41	5.0	0.24	5.0	0.44	11.4	0.41	11.2	1.14	3.6	0.19	3.7	0.50	12.3	0.46	16.0	1.42	14.0	0.26	12.5	0.63	1.6	0.06	1.7	0.14
DP04	12	10 to 19 units	4.6	0.04	4.9	0.12	2.7	0.06	2.9	0.15	9.0	0.15	9.6	0.49	2.6	0.15	2.9	0.40	9.3	0.34	11.3	1.05	2.9	0.19	3.3	0.59	10.7	0.49	10.3	1.19	15.4	0.23	15.6	0.74	1.4	0.05	1.1	0.10
DP04	13	20 or more units	8.0	0.06	7.9	0.14	3.2	0.06	3.1	0.16	12.3	0.16	12.0	0.42	3.7	0.14	2.7	0.31	33.4	0.44	33.7	1.40	3.7	0.23	3.5	0.57	25.2	0.55	23.3	1.41	32.6	0.37	32.6	0.97	1.5	0.04	1.5	0.12
DP04	14	Mobile home	7.1	0.12	7.1	0.18	12.3	0.24	12.4	0.32	4.7	0.19	5.1	0.35	5.0	0.30	4.5	0.59	0.7	0.08	0.7	0.30	8.8	0.45	8.3	0.68	2.0	0.20	2.2	0.52	1.5	0.09	1.6	0.26	3.5	0.08	3.3	0.19
DP04	15	Boat, RV, van, etc.	0.1	0.01	0.1	0.01	0.1	0.01	0.0	0.02	0.1	0.01	0.1	0.04	0.0	0.01	0.0	0.00	0.0	0.01	0.6	0.30	0.1	0.03	0.1	0.10	0.1	0.05	0.2	0.16	0.1	0.02	0.0	0.05	0.0	0.01	0.0	0.01
		BEDROOMS																																				
DP04	38	No bedroom	2.0	0.03	1.9	0.07	0.9	0.03	0.8	0.07	2.4	0.08	2.1	0.17	1.5	0.08	1.0	0.16	6.6	0.30	8.0	0.92	2.2	0.15	2.2	0.43	7.7	0.36	8.0	1.07	7.9	0.22	7.4	0.48	0.4	0.02	0.5	0.09
DP04	39	1 bedroom	12.7	0.08	12.3	0.18	8.6	0.09	8.2	0.23	18.7	0.18	18.1	0.57	13.5	0.30	11.9	0.62	31.2	0.56	31.7	1.40	13.1	0.46	12.9	0.98	31.5	0.78	29.0	1.70	34.5	0.37	35.5	0.93	4.1	0.07	3.6	0.19
DP04	40	2 bedrooms	28.3	0.10	28.7	0.24	28.8	0.15	28.7	0.33	34.2	0.24	35.1	0.63	34.6	0.44	37.0	1.10	34.1	0.56	32.5	1.61	32.9	0.52	34.4	1.46	36.6	0.68	40.7	1.64	36.0	0.36	35.0	0.95	16.9	0.14	17.3	0.38
DP04	41	3 bedrooms	39.0	0.10	39.4	0.21	45.5	0.16	45.6	0.41	31.5	0.25	31.8	0.55	39.3	0.38	39.0	0.96	20.4	0.46	21.1	1.37	39.2	0.63	37.7	1.51	18.0	0.54	17.4	1.41	15.2	0.24	16.5	0.69	46.4	0.18	47.6	0.50
DP04	42	4 bedrooms	14.5	0.07	14.3	0.18	13.3	0.11	13.8	0.27	10.6	0.13	10.3	0.41	8.8	0.29	8.9	0.57	5.2	0.27	4.1	0.59	10.3	0.28	10.5	0.98	4.6	0.30	4.1	0.66	4.5	0.13	4.4	0.41	26.0	0.15	25.1	0.43
DP04	43	5 or more bedrooms	3.5	0.03	3.4	0.08	2.9	0.05	2.9	0.13	2.6	0.07	2.7	0.19	2.4	0.10	2.3	0.32	2.5	0.16	2.6	0.58	2.2	0.37	2.4	0.56	1.6	0.13	0.7	0.24	1.8	0.07	1.1	0.17	6.2	0.08	5.8	0.22
		HOUSING TENURE																																				
		Occupied units																																				
DP04	45	Owner-occupied	66.4	0.10	66.7	0.28	74.4	0.16	74.8	0.39	52.8	0.22	53.3	0.68	52.9	0.48	53.3	1.29	19.0	0.42	18.0	1.09	61.6	0.66	63.0	1.64	25.3	0.60	25.5	1.50	27.3	0.25	27.3	0.84	87.1	0.13	86.9	0.35
		YEAR HOUSEHOLDER MOVED INTO UNIT																																				
DP04	51	Moved in 2000 or later	38.3	0.10	36.0	0.27	34.3	0.17	32.2	0.45	48.2	0.24	45.0	0.74	39.6	0.40	38.7	1.35	47.3	0.63	45.3	1.46	35.5	0.57	34.5	1.40	45.1	0.72	42.3	1.90	58.7	0.37	55.9	1.11	30.5	0.17	28.7	0.50
DP04	52	Moved in 1990 to 1999	33.6	0.09	35.0	0.28	34.4	0.15	35.6	0.44	30.1	0.22	31.8	0.64	29.7	0.39	29.2	1.13	31.3	0.56	31.4	1.52	34.8	0.53	34.9	1.22	35.3	0.62	38.2	2.01	26.1	0.35	30.3	1.00	37.5	0.16	38.7	0.54
DP04	53	Moved in 1980 to 1989	12.5	0.06	12.8	0.16	13.4	0.11	14.0	0.28	10.0	0.12	10.8	0.31	11.0	0.25	11.4	0.67	10.0	0.36	10.3	0.88	12.6	0.35	13.2	0.99	9.7	0.38	9.5	1.10	7.4	0.17	7.2	0.48	14.9	0.12	14.8	0.36
DP04	54	Moved in 1970 to 1979	8.1	0.05	8.4	0.11	9.0	0.08	9.3	0.19	5.9	0.10	6.2	0.31	9.0	0.20	9.7	0.59	6.3	0.26	7.2	0.78	9.0	0.27	9.4	0.91	5.5	0.31	5.7	1.01	4.1	0.12	3.8	0.34	9.4	0.09	9.7	0.26
DP04	55	Moved in 1969 or earlier	7.6	0.05	7.7	0.11	9.0	0.11	9.0	0.23	5.9	0.08	6.2	0.24	10.7	0.18	10.9	0.60	5.2	0.25	5.8	0.59	8.2	0.32	8.1	0.72	4.3	0.25	4.2	0.76	3.7	0.13	2.9	0.23	7.8	0.11	8.1	0.23
		VEHICLES AVAILABLE																																				
DP04	57	No vehicles available	9.2	0.06	9.0	0.17	5.6	0.09	5.0	0.20	8.6	0.14	9.2	0.43	18.9	0.37	17.7	0.78	46.6	0.58	48.4	1.36	11.5	0.69	12.2	1.09	29.4	0.71	25.5	1.90	21.1	0.31	22.1	0.88	2.4	0.05	2.5	0.15
DP04	58	1 vehicle available	33.4	0.10	33.1	0.25	32.3	0.15	32.1	0.41	41.7	0.25	40.5	0.66	41.2	0.44	41.3	1.17	36.1	0.55	36.2	1.46	33.8	0.70	32.3	1.45	38.9	0.60	41.7	2.07	48.1	0.36	45.5	1.06	22.8	0.15	23.1	0.46
DP04	59	2 vehicles available	38.3	0.10	38.5	0.27	40.7	0.14	41.3	0.44	36.2	0.22	36.6	0.61	28.2	0.35	27.5	1.04	13.2	0.42	11.5	1.14	35.0	0.62	35.5	1.61	23.2	0.64	24.9	1.85	24.2	0.31	24.9	0.99	47.3	0.17	47.1	0.54
DP04	60	3 or more vehicles available	19.1	0.08	19.4	0.23	21.4	0.16	21.6	0.38	13.5	0.16	13.6	0.48	11.7	0.28	13.5	0.69	4.1	0.27	3.9	0.73	19.7	0.46	20.0	1.11	8.4	0.41	7.9	1.20	6.7	0.17	7.5	0.51	27.4	0.16	27.4	0.53
		OCCUPANTS PER ROOM																																				
DP04	76	1.00 or less	96.2	0.04	96.3	0.10	97.5	0.05	97.7	0.13	96.2	0.10	97.3	0.21	95.1	0.18	95.0	0.47	91.6	0.32	91.7	0.95	84.0	0.48	81.6	1.17	78.6	0.57	78.3	1.55	95.3	0.14	94.8	0.43	98.5	0.05	98.7	0.10
DP04	77	1.01 to 1.50	2.6	0.03	2.6	0.09	1.9	0.05	1.9	0.12	2.6	0.08	1.8	0.17	3.6	0.17	3.8	0.47	5.3	0.27	6.1	0.83	10.4	0.41	13.1	1.11	11.6	0.51	13.0	1.49	2.8	0.12	3.1	0.40	1.2	0.04	1.1	0.10
DP04	78	1.51 or more	1.2	0.02	1.0	0.05	0.6	0.02	0.4	0.05	1.2	0.05	0.9	0.11	1.3	0.08	1.2	0.17	3.1	0.22	2.3	0.43	5.6	0.27	5.3	0.67	9.8	0.38	8.7	1.11	1.9	0.08	2.2	0.28	0.3	0.02	0.2	0.04

Table C7. Estimates of Percents and Mean Incomes for the U.S. and the Eight Clusters

tblid	line	Characteristic	U. S.				Cluster																									
							1				2				3				4				5				6				7			
			Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol		Mand		Vol	
			% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE	% or mean incom	SE
		MORTGAGE STATUS																																
		Owner occupied units																																
DP04	90	Housing units with a mortgage	67.1	0.13	66.9	0.24	63.0	0.21	63.1	0.42	69.1	0.27	68.0	0.78	58.7	0.49	57.1	1.36	65.8	1.25	64.0	3.33	60.6	0.73	62.6	1.59	70.0	1.12	67.6	3.43	69.2	0.54	72.2	1.42	73.4	0.19	73.1	0.44
		SELECTED MONTHLY OWNER COSTS (SMOC)																																
		Housing units with a mortgage																																
DP04	93	Less than $300	0.6	0.02	0.6	0.06	0.8	0.04	0.8	0.12	0.5	0.05	0.3	0.10	1.2	0.14	0.8	0.28	1.3	0.42	0.4	0.38	1.0	0.17	1.8	0.57	0.4	0.17	0.8	0.57	0.6	0.11	1.0	0.59	0.4	0.03	0.3	0.06
DP04	94	$300 to $499	4.5	0.07	4.5	0.17	6.4	0.14	6.2	0.32	3.1	0.13	3.2	0.42	11.6	0.51	10.4	1.31	4.6	0.78	4.4	1.98	7.3	0.50	8.0	1.22	2.8	0.54	2.9	1.46	2.4	0.25	1.6	0.58	2.3	0.06	2.5	0.20
DP04	95	$500 to $699	10.7	0.11	10.6	0.27	14.7	0.19	14.0	0.41	8.4	0.19	8.6	0.57	26.5	0.64	27.1	2.01	11.8	0.93	13.1	2.57	15.4	0.69	17.2	1.93	5.4	0.60	6.6	2.26	6.7	0.35	7.4	1.21	5.6	0.11	5.6	0.31
DP04	96	$700 to $999	22.3	0.12	22.3	0.29	27.0	0.22	27.4	0.60	23.1	0.32	22.5	0.85	33.5	0.64	33.5	1.90	25.0	1.43	19.9	3.28	25.7	0.77	23.4	1.74	18.5	1.11	24.1	4.09	16.8	0.54	16.2	1.84	16.4	0.17	16.4	0.48
DP04	97	$1,000 to $1,499	30.2	0.15	31.1	0.39	29.3	0.24	30.6	0.63	31.9	0.34	33.6	1.05	19.4	0.61	21.5	1.60	26.6	1.37	34.9	4.04	30.6	0.93	28.3	1.93	29.3	1.50	32.9	4.31	30.4	0.70	32.7	1.87	31.9	0.21	32.1	0.53
DP04	98	$1,500 to $1,999	16.0	0.11	15.7	0.26	12.3	0.17	12.1	0.45	17.0	0.28	17.0	0.78	5.5	0.28	4.9	0.81	16.5	1.44	13.3	2.97	12.9	0.62	12.7	1.63	22.8	1.35	14.8	2.98	17.2	0.62	18.7	2.01	20.6	0.17	20.3	0.47
DP04	99	$2,000 or more	15.7	0.11	15.2	0.27	9.6	0.13	8.9	0.36	15.9	0.26	14.8	0.80	2.5	0.21	1.8	0.54	14.2	1.22	13.9	3.15	7.0	0.39	8.6	1.52	20.7	1.48	17.9	3.21	26.0	0.64	22.5	1.73	22.8	0.20	22.9	0.48
		Housing units without a mortgage																																
DP04	102	Less than $100	2.3	0.06	1.9	0.13	2.5	0.08	2.6	0.26	1.9	0.13	1.2	0.26	2.6	0.25	1.7	0.53	4.4	0.94	4.4	1.89	5.5	0.52	3.7	0.93	4.2	1.00	2.6	1.18	5.7	0.42	5.1	1.78	0.8	0.05	0.6	0.13
DP04	103	$100 to $199	15.4	0.21	14.0	0.31	19.1	0.33	17.0	0.56	10.7	0.35	11.0	0.99	25.7	0.87	21.6	1.55	12.3	1.52	8.9	3.20	26.7	1.06	28.7	2.37	13.3	1.30	11.9	4.37	8.1	0.58	10.0	1.91	8.5	0.20	7.2	0.50
DP04	104	$200 to $299	26.4	0.20	25.2	0.43	30.3	0.29	28.3	0.68	22.3	0.43	20.6	1.08	34.9	0.74	37.5	1.87	22.4	1.87	16.8	3.94	31.6	1.06	33.2	2.62	17.8	1.51	19.5	4.73	16.2	0.82	17.1	2.12	21.3	0.31	19.9	0.83
DP04	105	$300 to $399	21.7	0.14	21.8	0.39	21.9	0.24	22.3	0.59	23.1	0.40	21.8	1.10	20.1	0.60	21.8	1.44	18.2	1.77	22.4	5.03	18.9	0.95	20.5	2.13	16.2	1.56	14.6	4.10	18.1	0.76	16.7	2.31	22.3	0.30	22.1	0.78
DP04	106	$400 or more	34.3	0.27	37.0	0.49	26.1	0.35	29.7	0.84	42.0	0.54	45.4	1.39	16.7	0.74	17.4	1.49	42.7	2.10	47.5	6.45	17.4	0.88	13.9	1.60	48.5	1.91	51.4	6.79	52.0	1.01	51.1	3.26	47.1	0.43	50.1	0.89
		SMOC AS A PERCENTAGE OF HOUSING COSTS																																
		Housing units with a mortgage																																
DP04	109	Less than 20.0 percent	38.9	0.15	39.8	0.36	41.0	0.23	41.9	0.64	36.3	0.36	39.0	1.05	35.3	0.74	37.2	1.73	28.2	1.39	24.2	3.58	29.8	0.91	29.5	2.31	23.2	1.52	26.2	3.84	36.5	0.65	36.6	2.43	39.7	0.20	40.1	0.62
DP04	110	20.0 to 24.9 percent	17.0	0.10	16.5	0.29	16.8	0.14	16.1	0.42	17.1	0.32	17.2	0.86	14.1	0.47	11.5	1.08	12.9	1.08	11.6	2.55	15.5	0.75	16.9	2.09	11.6	0.90	13.9	3.20	15.5	0.45	15.4	1.68	18.1	0.16	17.5	0.46
DP04	111	25.0 to 29.9 percent	12.5	0.10	12.0	0.23	12.0	0.16	12.7	0.44	13.1	0.24	11.5	0.68	11.4	0.44	12.2	1.18	9.8	0.95	13.4	3.42	12.5	0.60	10.0	1.27	11.0	0.91	9.2	2.71	11.6	0.52	9.1	1.34	12.9	0.16	11.9	0.42
DP04	112	30.0 to 34.9 percent	8.2	0.08	8.1	0.19	8.0	0.12	7.7	0.32	8.7	0.18	8.1	0.61	7.8	0.36	8.7	1.00	8.5	1.02	5.0	1.76	8.9	0.45	9.3	1.47	9.6	0.99	10.4	3.02	8.1	0.37	8.6	1.10	8.3	0.11	8.5	0.34
DP04	113	35.0 percent or more	23.4	0.13	23.7	0.38	22.1	0.18	21.6	0.56	24.7	0.30	24.2	1.08	31.4	0.64	30.4	1.74	40.6	1.69	45.8	4.53	33.2	0.89	34.4	2.63	44.6	1.65	40.2	3.97	28.4	0.68	30.4	2.45	21.0	0.18	22.1	0.55
		Housing units without a mortgage																																
DP04	116	Less than 10.0 percent	42.9	0.21	41.2	0.54	44.0	0.35	42.8	0.88	40.2	0.47	34.8	1.53	37.4	0.74	36.4	2.25	34.6	1.94	28.4	5.89	41.9	0.92	42.4	3.54	35.5	2.11	40.1	4.89	38.0	0.92	41.1	3.24	44.9	0.32	43.2	0.98
DP04	117	10.0 to 14.9 percent	20.0	0.13	19.5	0.43	20.1	0.21	20.1	0.58	20.0	0.36	18.1	1.18	19.2	0.45	19.5	1.70	17.5	1.49	11.9	2.84	19.3	0.71	20.1	2.59	16.1	1.53	15.6	4.26	17.3	0.63	18.0	2.71	20.8	0.25	19.3	0.79
DP04	118	15.0 to 19.9 percent	11.9	0.11	11.6	0.29	12.0	0.19	11.2	0.49	11.8	0.28	12.0	0.78	13.0	0.56	13.7	1.47	11.8	1.27	11.2	3.84	12.9	0.65	11.7	2.07	13.2	1.49	8.8	2.90	12.5	0.76	10.2	1.82	11.4	0.19	11.6	0.55
DP04	119	20.0 to 24.9 percent	7.4	0.09	7.5	0.27	7.3	0.14	7.0	0.39	7.9	0.28	9.6	0.87	8.3	0.46	8.6	1.08	7.9	1.14	11.5	3.21	7.0	0.53	6.3	1.45	5.3	1.02	1.7	1.11	7.7	0.54	8.9	1.79	7.1	0.17	7.3	0.47
DP04	120	25.0 to 29.9 percent	4.4	0.07	5.1	0.21	4.4	0.09	5.5	0.40	5.0	0.23	5.4	0.64	5.0	0.28	6.2	1.02	5.8	1.10	4.2	1.55	4.1	0.33	3.7	1.08	6.3	1.10	5.2	2.25	4.8	0.47	4.6	1.47	4.0	0.12	4.7	0.37
DP04	121	30.0 to 34.9 percent	3.1	0.06	3.4	0.20	3.0	0.10	3.1	0.22	3.6	0.23	5.0	0.70	3.3	0.26	3.6	0.74	5.8	0.96	2.0	1.31	4.2	0.37	4.6	1.58	5.0	1.08	9.9	3.92	3.8	0.38	2.2	0.86	2.8	0.10	3.2	0.35
DP04	122	35.0 percent or more	10.3	0.11	11.7	0.30	9.3	0.18	10.4	0.46	11.5	0.38	15.0	0.86	13.7	0.44	12.0	1.53	16.7	1.77	30.8	6.03	10.5	0.58	11.3	1.58	18.5	1.63	18.8	4.65	15.8	0.80	15.0	2.28	9.2	0.20	10.7	0.59
		GROSS RENT																																
		Occupied units paying rent																																
DP04	125	Less than $200	4.0	0.07	4.1	0.19	4.0	0.12	4.0	0.39	2.6	0.11	2.4	0.32	8.4	0.36	9.1	1.03	12.0	0.41	12.9	1.39	4.4	0.43	4.4	0.89	2.6	0.24	1.5	0.48	2.2	0.13	2.5	0.40	1.6	0.14	1.8	0.35
DP04	126	$200 to $299	4.3	0.08	4.5	0.19	5.0	0.19	5.3	0.43	2.9	0.11	3.0	0.38	7.8	0.31	8.7	0.88	8.3	0.37	9.5	1.07	5.9	0.48	4.8	1.13	4.0	0.35	2.9	0.75	2.3	0.13	2.3	0.39	2.5	0.15	2.6	0.37
DP04	127	$300 to $499	17.3	0.16	17.0	0.38	22.6	0.32	20.2	0.86	14.0	0.34	12.6	0.69	29.0	0.58	31.2	1.50	19.4	0.55	19.1	1.56	21.3	0.88	26.8	2.45	12.1	0.53	13.8	1.62	10.2	0.32	10.3	0.89	12.1	0.35	13.3	1.07
DP04	128	$500 to $749	32.7	0.18	33.8	0.51	33.9	0.36	36.1	1.06	34.1	0.35	34.7	1.10	35.4	0.65	33.8	1.84	31.1	0.72	29.1	1.74	33.2	0.96	35.6	2.46	34.4	0.71	38.4	2.46	31.3	0.47	31.9	1.09	26.9	0.48	28.9	1.26
DP04	129	$750 to $999	22.5	0.15	21.5	0.36	19.3	0.30	19.8	0.81	25.5	0.36	25.3	0.91	13.4	0.49	11.8	1.12	19.4	0.56	19.9	1.50	20.5	0.90	15.0	2.16	29.7	0.74	25.2	2.00	26.6	0.38	24.5	1.06	24.4	0.47	23.3	1.27
DP04	130	$1,000 to $1,499	14.2	0.13	14.2	0.39	11.5	0.23	11.0	0.74	15.9	0.29	16.9	0.87	5.4	0.35	4.4	0.76	8.3	0.34	8.3	1.11	11.9	0.72	11.8	1.79	15.0	0.63	16.5	1.59	18.4	0.36	18.4	0.93	22.0	0.45	21.3	1.02
DP04	131	$1,500 or more	5.1	0.07	5.0	0.20	3.7	0.12	3.5	0.35	5.1	0.14	5.1	0.48	0.7	0.11	1.0	0.33	1.6	0.19	1.3	0.41	2.9	0.36	1.6	0.66	2.3	0.27	1.8	0.65	9.0	0.22	10.1	0.69	10.5	0.33	8.8	0.87
		GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME																																
		Occupied units paying rent																																
DP04	135	Less than 15.0 percent	14.4	0.14	15.0	0.40	16.5	0.29	17.4	0.79	13.2	0.30	14.0	0.70	13.6	0.38	14.6	1.32	12.8	0.55	11.6	1.17	13.4	0.91	8.5	1.77	11.6	0.64	13.3	1.63	13.9	0.30	15.1	0.98	16.2	0.43	16.8	1.17
DP04	136	15.0 to 19.9 percent	13.5	0.12	14.1	0.34	14.5	0.27	15.1	0.75	14.3	0.26	14.9	0.81	10.5	0.42	10.8	1.22	10.2	0.40	11.9	1.29	11.4	0.68	14.1	2.08	11.3	0.52	10.4	1.48	13.8	0.29	12.9	0.85	16.0	0.44	17.7	1.37
DP04	137	20.0 to 24.9 percent	13.5	0.13	13.4	0.36	14.1	0.25	14.7	0.72	14.6	0.26	14.1	0.83	10.9	0.42	11.1	1.16	11.0	0.49	10.8	1.22	11.5	0.63	11.3	1.88	11.9	0.54	10.1	1.38	13.7	0.29	14.5	0.83	14.5	0.39	13.5	0.99
DP04	138	25.0 to 29.9 percent	11.7	0.11	11.6	0.32	11.4	0.23	11.8	0.59	12.3	0.26	11.1	0.76	10.5	0.36	12.5	1.37	12.7	0.50	14.0	1.45	12.9	0.69	11.7	1.83	11.6	0.51	12.7	1.57	11.2	0.28	10.9	0.86	11.9	0.39	10.3	0.85
DP04	139	30.0 to 34.9 percent	8.7	0.10	8.5	0.30	8.8	0.19	8.2	0.62	8.9	0.22	8.9	0.70	8.3	0.37	9.3	1.08	8.8	0.41	8.8	1.12	9.3	0.63	9.4	1.68	8.8	0.46	7.5	1.06	8.7	0.28	8.5	0.70	8.4	0.27	7.5	0.89
DP04	140	35.0 percent or more	38.2	0.17	37.5	0.64	34.7	0.35	32.7	1.10	36.6	0.34	37.0	1.17	46.2	0.61	41.7	1.87	44.5	0.72	42.9	2.04	41.5	1.18	45.0	2.73	44.7	0.90	46.1	2.20	38.8	0.47	38.1	1.32	33.0	0.55	34.1	1.48

Table C8. Model variables and significant national differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference?
		HOUSEHOLDS BY TYPE			
DP02	2	Family households (families)	family*	family*	Yes
DP02	3	With own children under 18 years	family*, hupaoc*, NOC	family*	Yes
DP02	4	Married-couple family	family*	family*	No
DP02	5	With own children under 18 years	family*, hupaoc*, NOC	family*	No
DP02	6	Male householder, no wife present, family	family*	family*	No
DP02	7	With own children under 18 years	family*, hupaoc*, NOC	family*	No
DP02	8	Female householder, no husband present, family	family*	family*	No
DP02	9	With own children under 18 years	family*, hupaoc*, NOC	family*	No
DP02	10	Nonfamily households	family*	family*	Yes
DP02	11	Householder living alone	family*	family*	Yes
DP02	13	Households with one or more people under 18 years			Yes
		RELATIONSHIP			
DP02	22	Nonrelatives	nonrel		No
DP02	23	Unmarried partner	nonrel		No
		MARITAL STATUS **Males 15 years and over**			
DP02	25	Never married		mar*	No
DP02	26	Now married, except separated		mar*	No
DP02	27	Separated		mar*	Yes
DP02	28	Widowed		mar*	No
DP02	29	Divorced		mar*	No
		Females 15 years and over			
DP02	31	Never married		mar*	Yes
DP02	32	Now married, except separated		mar*	No
DP02	33	Separated		mar*	No
DP02	34	Widowed		mar*	Yes
DP02	35	Divorced		mar*	No
		EDUCATIONAL ATTAINMENT **Population 25 years and over**			
DP02	59	Less than 9th grade		edu*	No
DP02	60	9th to 12th grade, no diploma		edu*	Yes
DP02	61	High school graduate (includes equivalency)		edu*	Yes
DP02	62	Some college, no degree		edu*	Yes
DP02	63	Associate's degree		edu*	No
DP02	64	Bachelor's degree		edu*	No
DP02	65	Graduate or professional degree		edu*	No
DP02	66	Percent high school graduate or higher		edu*	Yes
DP02	67	Percent bachelor's degree or higher		edu*	

Table C8. Model variables and significant national differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference?
		RESIDENCE 1 YEAR AGO **Population 1 year and over**			
DP02	79	Same house		nonmover*	
DP02	80	Different house in the U.S.		nonmover*	Yes
DP02	81	Same county		nonmover*	Yes
DP02	82	Different county		nonmover*	Yes
DP02	83	Same state		nonmover*	Yes
DP02	84	Different state		nonmover*	Yes
DP02	85	Abroad		nonmover*	Yes
		PLACE OF BIRTH			
DP02	87	Native		cit*	No
DP02	88	Born in United States		cit*	No
DP02	89	State of residence		cit*	No
DP02	90	Different state		cit*	No
DP02	91	Born in Puerto Rico, U.S. Island areas, or born abroad to American parent(s)		cit*	
DP02	92	Foreign born		cit*	No
		U.S. CITIZENSHIP STATUS **Foreign-born population**			
DP02	94	Naturalized U.S. citizen		cit*	No
		LANGUAGE SPOKEN AT HOME **Population 5 years and over**			
DP02	111	English only	hhother*, hhspanish		Yes
DP02	112	Language other than English	hhother*, hhspanish	ot_lan*	Yes
DP02	113	Speak English less than "very well"	hhother*, hhspanish	ot_lan*	Yes
DP02	114	Spanish	hhspanish	ot_lan*	No
DP02	115	Speak English less than "very well"	hhspanish	ot_lan*	No
DP02	116	Other Indo-European languages	hhother*	ot_lan*	No
DP02	117	Speak English less than "very well"	hhother*	ot_lan*	No
DP02	118	Asian and Pacific Islander languages	hhother*	ot_lan*	No
DP02	119	Speak English less than "very well"	hhother*	ot_lan*	No
DP02	120	Other languages	hhother*	ot_lan*	No
DP02	121	Speak English less than "very well"	hhother*	ot_lan*	No
		EMPLOYMENT STATUS **Population 16 years and over**			
DP03	2	In labor force		employ	Yes
DP03	3	Civilian labor force		employ	Yes
DP03	4	Employed		employ	
DP03	5	Unemployed		unemploy, layoff*, looking_work	Yes
DP03	6	Armed Forces		employ	Yes
		Civilian labor force			
DP03	9	Percent Unemployed		unemploy	

Table C8. Model variables and significant national differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference?
		Females 16 years and over			
DP03	11	In labor force		employ	Yes
DP03	12	Civilian labor force		employ	Yes
DP03	13	Employed		employ	Yes
		Own children under 6 years			
DP03	15	All parents in family in labor force		employ,unemploy	No
		Own children 6 to 17 years			
DP03	17	All parents in family in labor force		employ,unemploy	
		COMMUTING TO WORK			
DP03	19	Car, truck, or van -- drove alone		car_to_work*	No
DP03	20	Car, truck, or van -- carpooled		car_to_work*	Yes
DP03	21	Public transportation (excluding taxicab)		car_to_work*	No
DP03	22	Walked		car_to_work*	No
DP03	23	Other means		car_to_work*	No
DP03	24	Worked at home		work_home	No
		INCOME AND BENEFITS **Household total**			
DP03	53	Total household income Less than $10,000	lhinc*		No
DP03	54	$10,000 to $14,999	lhinc*		No
DP03	55	$15,000 to $24,999	lhinc*		No
DP03	56	$25,000 to $34,999	lhinc*		Yes
DP03	57	$35,000 to $49,999	lhinc*		No
DP03	58	$50,000 to $74,999	lhinc*		No
DP03	59	$75,000 to $99,999	lhinc*		
DP03	60	$100,000 to $149,999	lhinc*		Yes
DP03	61	$150,000 to $199,999	lhinc*		Yes
DP03	62	$200,000 or more	lhinc*		Yes
DP03	64	Mean household income (dollars)	lhinc*		Yes
DP03	65	With earnings	lhinc*, lhapern		No
DP03	66	Mean earnings (dollars)	lhinc*, lhapern		No
DP03	67	With Social Security	lhass*		No
DP03	68	Mean Social Security income (dollars)	lhass*		No
DP03	69	With retirement income	lharet*		
DP03	70	Mean retirement income (dollars)	lharet*		Yes
DP03	71	With Supplemental Security Income	lhassi		No
DP03	72	Mean Supplemental Security Income (dollars)	lhassi		Yes
DP03	73	With cash public assistance income	lhapa		No
DP03	74	Mean cash public assistance income (dollars)	lhapa		No

Table C8. Model variables and significant national differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference?
		Families			
DP03	77	Less than $10,000	lhinc*		No
DP03	78	$10,000 to $14,999	lhinc*		No
DP03	79	$15,000 to $24,999	lhinc*		No
DP03	80	$25,000 to $34,999	lhinc*		No
DP03	81	$35,000 to $49,999	lhinc*		No
DP03	82	$50,000 to $74,999	lhinc*		No
DP03	83	$75,000 to $99,999	lhinc*		Yes
DP03	84	$100,000 to $149,999	lhinc*		Yes
DP03	85	$150,000 to $199,999	lhinc*		No
DP03	86	$200,000 or more	lhinc*		Yes
DP03	88	Mean family income (dollars)	lhinc*		Yes
		Nonfamily households			
DP03	92	Mean nonfamily income (dollars)	lhinc*		No
		PERCENTAGE OF FAMILIES AND PEOPLE BELOW THE POVERTY LEVEL			
DP03	103	All families	poverty	poverty*	No
DP03	104	With related children under 18 years	poverty, hupaoc*, NOC	poverty*	No
DP03	105	With related children under 5 years only	poverty, hupaoc*, NOC	poverty*	No
DP03	106	Married couple families	poverty	poverty*	No
DP03	107	With related children under 18 years	poverty, hupaoc*, NOC	poverty*	No
DP03	108	With related children under 5 years only	poverty, hupaoc*, NOC	poverty*	No
DP03	109	Families with female householder, no husband present	poverty	poverty*	No
DP03	110	With related children under 18 years	poverty, hupaoc*, NOC	poverty*	No
DP03	111	With related children under 5 years only	poverty, hupaoc*, NOC	poverty*	No
DP03	112	All people	poverty	poverty*	No
DP03	113	Under 18 years	poverty, hupaoc*, NOC	poverty*	No
DP03	114	Related children under 18 years	poverty, hupaoc*, NOC	poverty*	No
DP03	115	Related children under 5 years	poverty, hupaoc*, NOC	poverty*	No
DP03	116	Related children 5 to 17 years	poverty, hupaoc*, NOC	poverty*	No
DP03	117	18 years and over	poverty, hupaoc*, NOC	poverty*	No
DP03	118	18 to 64 years	poverty	poverty*,family*	
DP03	119	65 years and over	poverty	poverty*	No
DP03	120	People in families	poverty	poverty*, family*	No
DP03	121	Unrelated individuals 15 years and over	poverty	poverty*	
		UNITS IN STRUCTURE			
DP04	9	2 units in structure	smallmult, central_city		No
DP04	10	3 or 4 units	smallmult, central_city		No
DP04	11	5 to 9 units	smallmult, central_city		No
DP04	12	10 to 19 units	lgmult*, central_city		Yes
DP04	13	20 or more units	lgmult*, central_city		No
DP04	14	Mobile home	mobileoth, central_city		No
DP04	15	Boat, RV, van, etc.	mobileoth, central_city		No

Table C8. Model variables and significant national differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference?
		BEDROOMS			
DP04	38	No bedroom	bds*		No
DP04	39	1 bedroom	bds*		Yes
DP04	40	2 bedrooms	bds*		No
DP04	41	3 bedrooms	bds*		Yes
DP04	42	4 bedrooms	bds*		No
DP04	43	5 or more bedrooms	bds*		No
		HOUSING TENURE **Occupied units**			
DP04	45	Owner-occupied	own	own*	No
		YEAR HOUSEHOLDER MOVED INTO UNIT			
DP04	51	Moved in 2000 or later		nonmover*	
DP04	52	Moved in 1990 to 1999		nonmover*	
DP04	53	Moved in 1980 to 1989		nonmover*	
DP04	54	Moved in 1970 to 1979		nonmover*	
DP04	55	Moved in 1969 or earlier		nonmover*	No
		VEHICLES AVAILABLE			
DP04	57	No vehicles available	veh*		No
DP04	58	1 vehicle available	veh*		No
DP04	59	2 vehicles available	veh*		No
DP04	60	3 or more vehicles available	veh*		No
		OCCUPANTS PER ROOM			
DP04	76	1.00 or less	pprtop*		No
DP04	77	1.01 to 1.50	pprtop*		No
DP04	78	1.51 or more	pprtop*		Yes
		MORTGAGE STATUS **Owner occupied units**			
DP04	90	Housing units with a mortgage	mortgage		No
		SELECTED MONTHLY OWNER COSTS (SMOC) **Housing units with a mortgage**			
DP04	93	Less than $300	lsmoc		No
DP04	94	$300 to $499	lsmoc		
DP04	95	$500 to $699	lsmoc		No
DP04	96	$700 to $999	lsmoc		No
DP04	97	$1,000 to $1,499	lsmoc		
DP04	98	$1,500 to $1,999	lsmoc		No
DP04	99	$2,000 or more	lsmoc		Yes

Table C8. Model variables and significant national differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference?
		Housing units without a mortgage			
DP04	102	Less than $100	lsmoc		
DP04	103	$100 to $199	lsmoc		
DP04	104	$200 to $299	lsmoc		
DP04	105	$300 to $399	lsmoc		No
DP04	106	$400 or more	lsmoc		
		SMOC AS A PERCENTAGE OF HOUSING COSTS **Housing units with a mortgage**			
DP04	109	Less than 20.0 percent	lsmoc		Yes
DP04	110	20.0 to 24.9 percent	lsmoc		Yes
DP04	111	25.0 to 29.9 percent	lsmoc		Yes
DP04	112	30.0 to 34.9 percent	lsmoc, highcost		No
DP04	113	35.0 percent or more	lsmoc, highcost		No
		Housing units without a mortgage			
DP04	117	10.0 to 14.9 percent	lsmoc		No
DP04	118	15.0 to 19.9 percent	lsmoc		No
DP04	119	20.0 to 24.9 percent	lsmoc		No
DP04	120	25.0 to 29.9 percent	lsmoc		
DP04	121	30.0 to 34.9 percent	lsmoc,highcost		
DP04	122	35.0 percent or more	lsmoc,highcost		
		GROSS RENT **Occupied units paying rent**			
DP04	125	Less than $200	lgrnt		No
DP04	126	$200 to $299	lgrnt		No
DP04	127	$300 to $499	lgrnt		No
DP04	128	$500 to $749	lgrnt		Yes
DP04	129	$750 to $999	lgrnt		
DP04	130	$1,000 to $1,499	lgrnt		No
DP04	131	$1,500 or more	lgrnt		No
		GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME **Occupied units paying rent**			
DP04	135	Less than 15.0 percent	lgrnt		No
DP04	136	15.0 to 19.9 percent	lgrnt		No
DP04	137	20.0 to 24.9 percent	lgrnt		No
DP04	138	25.0 to 29.9 percent	lgrnt		No
DP04	139	30.0 to 34.9 percent	lgrnt, highcost		No
DP04	140	35.0 percent or more	lgrnt, highcost		No

Table C9. Model variables and significant cluster differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference? Cluster							
					1	2	3	4	5	6	7	8
		HOUSEHOLDS BY TYPE										
DP02	2	Family households (families)	family	family	Yes	No	Yes	No	No	Yes	No	No
DP02	3	With own children under 18 years	family, hupaoc, NOC	family	No	No		No	No	Yes	No	No
DP02	4	Married-couple family	family	family	No	No	No	No	Yes	No	No	No
DP02	5	With own children under 18 years	family, hupaoc, NOC	family	No	No	No	No	No	No	No	No
DP02	6	Male householder, no wife present, family	family	family	No	No	No	No	No	No	No	No
DP02	7	With own children under 18 years	family, hupaoc, NOC	family	No	No	No	No	No	No		No
DP02	8	Female householder, no husband present, family	family	family	No	No	Yes	No	Yes	No	No	No
DP02	9	With own children under 18 years	family, hupaoc, NOC	family	No	No	Yes	No	No	No	No	No
DP02	10	Nonfamily households	family	family	Yes	No	Yes	No	No	Yes	No	No
DP02	11	Householder living alone	family	family	No		Yes	No	No	No	No	No
DP02	13	Households with one or more people under 18 years	hupaoc		No	No	Yes	No	No	Yes	No	No
		RELATIONSHIP										
DP02	22	Nonrelatives	nonrel		No	No	No	No	Yes	No	No	No
DP02	23	Unmarried partner	nonrel		No	No	No	No	Yes	No	No	No
		MARITAL STATUS **Males 15 years and over**										
DP02	25	Never married		mar	No	No	Yes	No	No	Yes	No	No
DP02	26	Now married, except separated		mar	No	No	Yes	No	Yes	No	No	No
DP02	27	Separated		mar	No	Yes	No	No	No	No	No	Yes
DP02	28	Widowed		mar	No	No	No	No	No	No	No	No
DP02	29	Divorced		mar	No	No	No	No	No	No	No	No
		Females 15 years and over										
DP02	31	Never married		mar	No	Yes	No	No	No	Yes	No	No
DP02	32	Now married, except separated		mar	No	Yes	No	No		No	No	No
DP02	33	Separated		mar	No	No	No	No	No	No	No	No
DP02	34	Widowed		mar	No	Yes	No	No	No	No	No	No
DP02	35	Divorced		mar	No	No	No	No	Yes	No	No	No
		EDUCATIONAL ATTAINMENT **Population 25 years and over**										
DP02	59	Less than 9th grade		edu	No	No	No	No	No	No	No	No
DP02	60	9th to 12th grade, no diploma		edu	No	Yes	No	No	No	No	No	Yes
DP02	61	High school graduate (includes equivalency)		edu	Yes	Yes	Yes	Yes	No		No	
DP02	62	Some college, no degree		edu	No	No	Yes	Yes	No	No	No	Yes
DP02	63	Associate's degree		edu	No	No	No	No	No	No	No	No
DP02	64	Bachelor's degree		edu	Yes	No	No	Yes	No	Yes	No	
DP02	65	Graduate or professional degree		edu	No	No	No	No	No	No	No	No
DP02	66	Percent high school graduate or higher		edu	No	Yes	No	No	No	No	No	No
DP02	67	Percent bachelor's degree or higher		edu	No	No	No	No	No	No	No	

Table C9. Model variables and significant cluster differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference? Cluster							
					1	2	3	4	5	6	7	8
		RESIDENCE 1 YEAR AGO										
		Population 1 year and over										
DP02	79	Same house		nonmover	Yes		No	Yes	Yes	No	Yes	Yes
DP02	80	Different house in the U.S.		nonmover	Yes		No	No	Yes	No	Yes	Yes
DP02	81	Same county		nonmover	Yes		No	No	Yes	No	Yes	Yes
DP02	82	Different county		nonmover	No	Yes	No	No	No	No	Yes	No
DP02	83	Same state		nonmover	No	No	No	Yes	No	No	Yes	No
DP02	84	Different state		nonmover	No		No	No	No	No	No	Yes
DP02	85	Abroad		nonmover	No	No	No	No	No	No	Yes	No
		PLACE OF BIRTH										
DP02	87	Native		cit	No	No	No	No	No	Yes	No	No
DP02	88	Born in United States		cit	No	No	No	No	No	Yes	No	No
DP02	89	State of residence		cit	No	No	No	No	No	Yes	No	No
DP02	90	Different state		cit	No	No	No	No	No	No	No	No
DP02	91	Born in Puerto Rico, U.S. Island areas, or born abroad to American parent(s)		cit	No	No	No	No	No	No		No
DP02	92	Foreign born		cit	No	No	No	No	No	Yes	No	No
		U.S. CITIZENSHIP STATUS										
		Foreign-born population										
DP02	94	Naturalized U.S. citizen		cit	No	Yes	Yes	No	No	No	No	No
		LANGUAGE SPOKEN AT HOME										
		Population 5 years and over										
DP02	111	English only	hhother, hhspanish		No	No	No	No	No	No	No	No
DP02	112	Language other than English	hhother, hhspanish	ot_lan	No	No	No	No	No	No	No	No
DP02	113	Speak English less than "very well"	hhother, hhspanish	ot_lan	No	No	No	No	No	No	No	No
DP02	114	Spanish	hhspanish	ot_lan	No	No	No	No	No	No	No	No
DP02	115	Speak English less than "very well"	hhspanish	ot_lan	No	No	No	No	No	No	Yes	No
DP02	116	Other Indo-European languages	hhother	ot_lan	No	No	No	Yes	No	Yes	No	No
DP02	117	Speak English less than "very well"	hhother	ot_lan	Yes	No		No	No	No	Yes	Yes
DP02	118	Asian and Pacific Islander languages	hhother	ot_lan	No	No	No	No	No	No	No	No
DP02	119	Speak English less than "very well"	hhother	ot_lan	No	No	No	No	No	No	No	No
DP02	120	Other languages	hhother	ot_lan	No	No	No	No	No	No	Yes	No
DP02	121	Speak English less than "very well"	hhother	ot_lan	No	No	No	No	No	No	No	No
		EMPLOYMENT STATUS										
		Population 16 years and over										
DP03	2	In labor force		employ	Yes	No	Yes	No		No	No	No
DP03	3	Civilian labor force		employ	Yes	No	Yes	No		No	No	No
DP03	4	Employed		employ	Yes	Yes	Yes	No	No	No	No	No
DP03	5	Unemployed		unemploy, layoff, looking_work	Yes	Yes	No	No		No	Yes	No
DP03	6	Armed Forces		employ	Yes	Yes	No	Yes	No	No	No	No
		Civilian labor force										
DP03	9	Percent Unemployed		unemploy	Yes		No	No		No	No	No

Table C9. Model variables and significant cluster differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference? Cluster							
					1	2	3	4	5	6	7	8
		Females 16 years and over										
DP03	11	In labor force		employ	Yes	No	Yes	No	No	No	No	No
DP03	12	Civilian labor force		employ	Yes	No	Yes	No	No	No	No	No
DP03	13	Employed		employ	Yes	No	No	No	No	No	No	No
		Own children under 6 years										
DP03	15	All parents in family in labor force		employ,unemploy		No	No	No	No	No	No	No
		Own children 6 to 17 years										
DP03	17	All parents in family in labor force		employ,unemploy		No	Yes	No	No	No	No	
		COMMUTING TO WORK										
DP03	19	Car, truck, or van -- drove alone		car_to_work	No	No	No	No	Yes	No	No	No
DP03	20	Car, truck, or van -- carpooled		car_to_work	No	No	No	No	Yes	No	No	No
DP03	21	Public transportation (excluding taxicab)		car_to_work	No	No	No	No	No	No	No	No
DP03	22	Walked		car_to_work	No		No	No	No	No	No	No
DP03	23	Other means		car_to_work	No	No	No	No	No	No	No	Yes
DP03	24	Worked at home		work_home	No	No	No	No	No	No	No	No
		INCOME AND BENEFITS **Household total**										
DP03	53	Less than $10,000	lhinc		No	No	No	No	No	No	No	No
DP03	54	$10,000 to $14,999	lhinc		No	No	No	No	No	No	No	No
DP03	55	$15,000 to $24,999	lhinc		No	No	No	No	No	No	No	Yes
DP03	56	$25,000 to $34,999	lhinc		No	No	No	No	No	Yes	No	
DP03	57	$35,000 to $49,999	lhinc		No	Yes	No	No	No	No	No	No
DP03	58	$50,000 to $74,999	lhinc		No	No	No	No	No	Yes	No	No
DP03	59	$75,000 to $99,999	lhinc			Yes	No	Yes	No	No	No	No
DP03	60	$100,000 to $149,999	lhinc		Yes	Yes	No	No	No	No	No	No
DP03	61	$150,000 to $199,999	lhinc			No	No	No	No	No	No	No
DP03	62	$200,000 or more	lhinc		Yes	No	No	No	No	Yes	No	Yes
DP03	64	Mean household income (dollars)	lhinc		No	No	No	No	No	No	No	Yes
DP03	65	With earnings	lhinc, lhapern		Yes	No	No	No	No	Yes	No	No
DP03	66	Mean earnings (dollars)	lhinc, lhapern		No	Yes	No	No	No	No	No	No
DP03	67	With Social Security	lhass		No	No	No	No	Yes	No	No	No
DP03	68	Mean Social Security income (dollars)	lhass		No	No	No	No	No	No	No	No
DP03	69	With retirement income	lharet		No	Yes	No	No	No	No	No	Yes
DP03	70	Mean retirement income (dollars)	lharet		No	No	No	No	No	No	No	Yes
DP03	71	With Supplemental Security Income	lhassi		No	No	No	No	No	Yes	No	No
DP03	72	Mean Supplemental Security Income (dollars)	lhassi		Yes	No	No		No	No	No	No
DP03	73	With cash public assistance income	lhapa		No	Yes	Yes	No	No	No	Yes	No
DP03	74	Mean cash public assistance income (dollars)	lhapa		No	No	No	No	No	No	No	No

Table C9. Model variables and significant cluster differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference? Cluster							
					1	2	3	4	5	6	7	8
		Families										
DP03	77	Less than $10,000	lhinc		No	No	No	Yes	No	Yes	No	No
DP03	78	$10,000 to $14,999	lhinc		No	No	No	No	No	No	No	No
DP03	79	$15,000 to $24,999	lhinc		No	No	No	No	No	No	No	Yes
DP03	80	$25,000 to $34,999	lhinc		No	No	No	No	No	Yes	No	
DP03	81	$35,000 to $49,999	lhinc		No	Yes	No	No	No	Yes	No	No
DP03	82	$50,000 to $74,999	lhinc		No	No	No	No	Yes	Yes	No	No
DP03	83	$75,000 to $99,999	lhinc			Yes	No	Yes	No	No	No	No
DP03	84	$100,000 to $149,999	lhinc		Yes	No	No	No	No	No	No	No
DP03	85	$150,000 to $199,999	lhinc		No	No	No	No	No	No	No	No
DP03	86	$200,000 or more	lhinc		Yes	Yes	No	No	No	Yes	No	Yes
DP03	88	Mean family income (dollars)	lhinc		No	No	No	No	No	No	No	Yes
		Nonfamily households										
DP03	92	Mean nonfamily income (dollars)	lhinc		No	No	No	No		No	No	Yes
		PERCENTAGE OF FAMILIES AND PEOPLE BELOW THE POVERTY LEVEL										
DP03	103	All families	poverty	poverty	Yes	No	No	No	No	Yes	No	No
DP03	104	With related children under 18 years	poverty, hupaoc, NOC	poverty	Yes	No	No	No	No	Yes	No	No
DP03	105	With related children under 5 years only	poverty, hupaoc, NOC	poverty	No	No	No	No	No	No	No	No
DP03	106	Married couple families	poverty	poverty	No	No	No	No	No	Yes	No	No
DP03	107	With related children under 18 years	poverty, hupaoc, NOC	poverty	No	No	No	No	No	Yes	No	No
DP03	108	With related children under 5 years only	poverty, hupaoc, NOC	poverty	No	Yes	No	Yes	No	Yes	No	No
DP03	109	Families with female householder, no husband present	poverty	poverty	Yes	No	No	No	No	Yes	No	No
DP03	110	With related children under 18 years	poverty, hupaoc, NOC	poverty	Yes	No	No	No	No	Yes	Yes	No
DP03	111	With related children under 5 years only	poverty, hupaoc, NOC	poverty	No	No	No	No	No	No	Yes	No
DP03	112	All people	poverty	poverty	Yes	No	No	No	No	Yes	No	No
DP03	113	Under 18 years	poverty, hupaoc, NOC	poverty	Yes	No	No	Yes	No	Yes	No	No
DP03	114	Related children under 18 years	poverty, hupaoc, NOC	poverty	Yes	No	No	Yes	No	Yes	No	No
DP03	115	Related children under 5 years	poverty, hupaoc, NOC	poverty	No	No			No	Yes	No	No
DP03	116	Related children 5 to 17 years	poverty, hupaoc, NOC	poverty		No	No	No	No	Yes	No	No
DP03	117	18 years and over	poverty, hupaoc, NOC	poverty	No	No	No	No	No		No	No
DP03	118	18 to 64 years	poverty	poverty,family		No	No	No	No		No	No
DP03	119	65 years and over	poverty	poverty	No	No	Yes	No	No	No	No	Yes
DP03	120	People in families	poverty	poverty, family	Yes	No	No	No	No	Yes	No	No
DP03	121	Unrelated individuals 15 years and over	poverty	poverty	No	No	No	Yes	No	No	No	No
		UNITS IN STRUCTURE										
DP04	9	2 units in structure	smallmult, central_city		Yes	No	No	No	No	No	No	No
DP04	10	3 or 4 units	smallmult, central_city		No	No	No	No	No	No	No	No
DP04	11	5 to 9 units	smallmult, central_city		No	No	No	No	No	Yes	Yes	No
DP04	12	10 to 19 units	lgmult, central_city		No	No	No	Yes	No	No	No	Yes
DP04	13	20 or more units	lgmult, central_city		No	No	Yes	No	No	No	No	No
DP04	14	Mobile home	mobileoth, central_city		No	No	No	No	No	No	No	No
DP04	15	Boat, RV, van, etc.	mobileoth, central_city		Yes	No	No	Yes	No	No	No	Yes

Table C9. Model variables and significant cluster differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference? Cluster							
					1	2	3	4	5	6	7	8
		BEDROOMS										
DP04	38	No bedroom	bds		No	No	Yes	No	No	No	No	No
DP04	39	1 bedroom	bds		No	No	Yes	No	No	No	No	Yes
DP04	40	2 bedrooms	bds		No	No		No	No	Yes	No	No
DP04	41	3 bedrooms	bds		No	No	No	No	No	No	Yes	
DP04	42	4 bedrooms	bds		Yes	No	No	No	No	No	No	Yes
DP04	43	5 or more bedrooms	bds		No	No	No	No	No	Yes	Yes	No
		HOUSING TENURE **Occupied units**										
DP04	45	Owner-occupied	own	own	No	No	No	No	No	No	No	No
		YEAR HOUSEHOLDER MOVED INTO UNIT										
DP04	51	Moved in 2000 or later		nonmover			No		No	No		
DP04	52	Moved in 1990 to 1999		nonmover			No	No	No	No		
DP04	53	Moved in 1980 to 1989		nonmover	Yes	Yes	No	No	No	No	No	No
DP04	54	Moved in 1970 to 1979		nonmover	No	No	No	No	No	No	No	No
DP04	55	Moved in 1969 or earlier		nonmover	No	No	No	No	No	No	Yes	No
		VEHICLES AVAILABLE										
DP04	57	No vehicles available	veh		Yes	No	No	No	No	Yes	No	No
DP04	58	1 vehicle available	veh		No	Yes	No	No	No	No	Yes	No
DP04	59	2 vehicles available	veh		No	No	No	No	No	No	No	No
DP04	60	3 or more vehicles available	veh		No	No	Yes	No	No	No	No	No
		OCCUPANTS PER ROOM										
DP04	76	1.00 or less	pprtop		No	Yes	No	No	Yes	No	No	No
DP04	77	1.01 to 1.50	pprtop		No	Yes	No	No	Yes	No	No	No
DP04	78	1.51 or more	pprtop			Yes	No		No	No	No	Yes
		MORTGAGE STATUS **Owner occupied units**										
DP04	90	Housing units with a mortgage	mortgage		No	No	No	No	No	No	Yes	No
		SELECTED MONTHLY OWNER COSTS (SMOC) **Housing units with a mortgage**										
DP04	93	Less than $300	lsmoc		No		No	No	No	No	No	
DP04	94	$300 to $499	lsmoc		No	No	No	No	No	No	No	
DP04	95	$500 to $699	lsmoc		No	No	No	No	No	No	No	No
DP04	96	$700 to $999	lsmoc		No	No	No	No	No	No	No	No
DP04	97	$1,000 to $1,499	lsmoc			No	No		No	No	No	
DP04	98	$1,500 to $1,999	lsmoc		No	No	No	No	No	Yes	No	No
DP04	99	$2,000 or more	lsmoc		Yes	No	No	No	No	No	Yes	No

Table C9. Model variables and significant cluster differences

tblid	line	Characteristic	Variables in HU model	Variables in person model	Significant difference? Cluster 1	2	3	4	5	6	7	8
		Housing units without a mortgage										
DP04	102	Less than $100	lsmoc		No	Yes	No	No	Yes	No	No	No
DP04	103	$100 to $199	lsmoc					No	No	No	No	
DP04	104	$200 to $299	lsmoc			No	No	No	No	No	No	
DP04	105	$300 to $399	lsmoc		No	No	No	No	No		No	No
DP04	106	$400 or more	lsmoc				No	No		No	No	Yes
		SMOC AS A PERCENTAGE OF HOUSING COSTS **Housing units with a mortgage**										
DP04	109	Less than 20.0 percent	lsmoc		No	Yes	No	No	No	No	No	No
DP04	110	20.0 to 24.9 percent	lsmoc		No	No	Yes	No	No	No	No	No
DP04	111	25.0 to 29.9 percent	lsmoc		No	Yes	No	No		No	Yes	Yes
DP04	112	30.0 to 34.9 percent	lsmoc, highcost		No	No	No	Yes	No	No	No	No
DP04	113	35.0 percent or more	lsmoc, highcost		No	No	No	No	No	No	No	Yes
		Housing units without a mortgage										
DP04	117	10.0 to 14.9 percent	lsmoc		No	No	No	Yes	No	No	No	Yes
DP04	118	15.0 to 19.9 percent	lsmoc		No	No	No	No	No	No	No	No
DP04	119	20.0 to 24.9 percent	lsmoc		No	Yes	No	No	No	Yes	No	No
DP04	120	25.0 to 29.9 percent	lsmoc		Yes	No	No	No	No	No	No	Yes
DP04	121	30.0 to 34.9 percent	lsmoc,highcost		No	Yes	No	Yes	No	No	Yes	No
DP04	122	35.0 percent or more	lsmoc,highcost			Yes	No	Yes	No	No	No	
		GROSS RENT **Occupied units paying rent**										
DP04	125	Less than $200	lgrnt		No	No	No	No	No	Yes	No	No
DP04	126	$200 to $299	lgrnt		No	No	No	No	No	No	No	No
DP04	127	$300 to $499	lgrnt		Yes	Yes	No	No	Yes	No	No	No
DP04	128	$500 to $749	lgrnt		Yes	No	No	No	No	No	No	No
DP04	129	$750 to $999	lgrnt		No	No	No	No	Yes	Yes	Yes	No
DP04	130	$1,000 to $1,499	lgrnt		No	No	No	No	No	No	No	No
DP04	131	$1,500 or more	lgrnt		No	No	No	No	Yes	No	No	Yes
		GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME **Occupied units paying rent**										
DP04	135	Less than 15.0 percent	lgrnt		No	No	No	No	Yes	No	No	No
DP04	136	15.0 to 19.9 percent	lgrnt		No	No	No	No	No	No	No	No
DP04	137	20.0 to 24.9 percent	lgrnt		No	No	No	No	No	No	No	No
DP04	138	25.0 to 29.9 percent	lgrnt		No	No	No	No	No	No	No	Yes
DP04	139	30.0 to 34.9 percent	lgrnt, highcost		No		No	No	No	No	No	No
DP04	140	35.0 percent or more	lgrnt, highcost			No	Yes	No	No	No	No	No