***Lab 9. Examining documentation on weighting and variance estimation: MSDS 6370***

***Objective:***

* *For the student to learn more about weighting of surveys with complex sample designs.*
* *For the student to become familiar with the documentation for the weighting of large surveys that provide identify-protected data files available to the public.*

*Look up the documentation for a survey that interests you.*

*Here are some examples:*

1. *National crime victimization survey (*[*http://www.bjs.gov/content/pub/pdf/ncvstd13.pdf*](http://www.bjs.gov/content/pub/pdf/ncvstd13.pdf)*)*
2. *National household travel survey (*[*http://nhts.ornl.gov/2009/pub/UsersGuideV2.pdf*](http://nhts.ornl.gov/2009/pub/UsersGuideV2.pdf)*) [SELECTED]*
3. *National health information survey (*[*ftp://ftp.cdc.gov/pub/Health\_Statistics/NCHS/Dataset\_Documentation/NHIS/2013/srvydesc.pdf*](ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2013/srvydesc.pdf)*)*
4. *Current population survey (*[*https://www.census.gov/prod/2006pubs/tp-66.pdf*](https://www.census.gov/prod/2006pubs/tp-66.pdf)*)*

*Working in your breakout group, answer as many of the following questions as you can from the provided documentation and prepare BRIEF answers so that you can report what you have learned in class. Also, submit your brief answers as your Lab 9. You will be graded on your report in class and the brief answers that you submit.*

*1. Are the weights provided by the data producer for your survey a composite of several weight adjustments? If yes, what are they?*

Yes, there are several weight adjustments in the survey. Weight adjustments include: Initial Household weight, a base weight for the probability of selection for a telephone number. Useable Household Weight, a nonresponse adjustment determined using an algorithm based on information collected from a phone screener. Person and Travel Day Weights, weight adjustments based on number of cars per household and annual number of trips to either work or school. And lastly, replicate weights which are generated using a Jackknife procedure.

*2. Are there more than a single set of weights, depending on the units of analysis?*

There are a set of weights that used for adjustments, some with the unit of analysis, some with other units. There are weights for telephone number selection as well as households and individuals.

*3. If there is a nonresponse adjustment, what kinds of characteristics are used to form weight adjustment cells?*

Yes, there is a nonresponse adjustment made based on the information gathered by a screener during a phone interview. The algorithm comprised of this adjustment contains demographic, ethic, and geographical data.

*4. Is there any evidence that the survey makes a poststratification adjustment; i.e., weights to some known standard of demographic characteristics? If yes, what standard is used and what variables?*

There is remarks that poststratification adjustments were made during the replicate weights process but variables are not indicated. It only notes that “replicate weights decrease in variance from poststratification to external controls.”

*5. Are replicate weights provided by the data producer? If so, what do they say about the variance estimation method they are implementing?*

Yes, SAS, SUDAAN, are WESVARPC all are noted in allowing easy computation of a replicate variance estimate.