**Homework 10. Cut-off Sampling**

**MSDS 6370**

**Objective:**

* For the student to learn more about cut-off samples.
* For the student to become familiar with the documentation provided by government agencies for their surveys that use cut-off samples.

**Introduction**

Asynchronous Lecture 10 included a discussion of cut-off samples. This assignment builds on that discussion and extends it by exploring the use of cut-off samples for some surveys conducted by some government agencies and documentation provided for these surveys.

**Exercises**

Answer the following questions:

1. Why do some agencies use cut-off samples?

Some agencies use cut-off samples in order to maximize the information they can extract from their data when faced with increasing data collection costs and heavy respondent burden.

2. What are some pitfalls that must be overcome by these agencies to use cutoff samples?

One pitfall of using cut-off samples is that size changes are challenging to model which makes it impossible to track target population coverage over time. Another pitfall is the increased chance of not detecting outliers.

3. Find data from one agency that is reported and find its discussion of the methodology it uses. Supply the link and a brief description.

https://www.bea.gov/surveys/pdf/surveysu.pdf

The BEA's surveys in international transactions in services. "Benchmark surveys capture virtually the entire universe of transactions in the covered services because it is mandatory for respondents to report their transactions. However, respondents whose transactions fall below a specific threshold are exempt from reporting detailed data by type of service and by country. Instead, these reporters must provide an estimate of the aggregate value of their transactions for all covered services. BEA periodically reviews these data to determine whether the thresholds are set at appropriate levels. "