31 Stearns St.
Newton, MA 02459
March 16, 2010

Notice of *Ex Parte* Presentation

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
The Portals
445 Twelfth Street, S.W.
Washington, D.C. 20554

RE: CC Docket No. 96-45, WC Docket No. 05-337

Dear Ms. Dortch:

On March 16, 2010 I had a telephone conversation with Amy Bender and Richard Kwiatkowski. The purpose of the conversation was to clarify two matters associated with appendix C-1 of NASUCA's March 27, 2006 submission.

First, the Staff wanted clarification on why, when I constructed Appendix C, I concluded that there was no statistically significant difference in the average price as a function of the percent of the population. The conclusion of no statistically significant difference in average prices follows from the Table that appears at page 3 of Appendix C.

Percent of the population living in urban areas	Number of Wire Centers	Average price of flat-rate residential service + SLC + FUSF	Standard deviation	Min-imum	Max-imum	Average Population	Total Population	Percent of population[1]
0	1,808	21.00	3.79	11.43	31.82	2,611	4,721,471	1.8%
0-20%	3,979	20.81	3.76	11.43	31.82	3,332	13,259,982	5.1%
20-40%	545	20.47	3.56	11.91	30.86	10,295	5,610,606	2.1%
40-60%	1057	20.42	3.72	10.99	31.82	12,291	12,991,492	5.0%
60-80%	1,393	20.34	3.71	12.54	30.86	16,876	23,507,836	9.0%
80-100%	4,278	19.40	3.86	9.29	30.86	48,134	205,915,241	78.8%
100%	1092	19.57	4.20	9.29	29.64	58,861	64,275,873	24.6%
Sample avg. (0-100%)	11,252	19.63	3.85	9.29	31.82	23,221	261,285,167	

The table illustrates that the prices are concentrated around $20 and we do not see any mean value that is far away from $20.

The rejection region for a hypothesis test is typically the sample mean plus or minus the t-value times the standard deviation of the test statistic. The t-value for a 95% level of confidence is 1.96. Therefore the acceptance region for the hypothesis of equal means is the sample mean plus or minus 1.96 times the standard deviation of the sample mean.

For example, the mean and standard deviation for the 80-100% urban classification is 19.4 and 3.86 respectively. The 95% confidence interval for this group of wire centers is $19.40 \pm 1.96 * 3.86 = (11.83,26.97)$. All the means that appear in column three fall in this range and therefore we would not reject the hypothesis of equal means at the 95% level of confidence.

The March 27, 2006 submission stated: "In constructing these averages, we weighted the rate in each wire center by the percentage of the population that resided in the wire center." The Staff wanted to know if the reported standard deviations were weighted by the population, just as the reported mean was weighted.

The reported standard deviations are also weighted by the population in each wire center. The average and standard deviation values were calculated simultaneously using the same command in Stata "sum." The attached Stata documentation explains that when

[1] The 0 and 100 % urban row values are included in the 0-20% and 80-100% rows, respectively.

weights are applied to the observations to calculate the mean, the reported standard deviations are calculated using the same weights that applied in the calculation of the average.

If any questions arise concerning this submission, please feel free to contact me.

Very truly yours,

David Gabel

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Syntax

```
summarize [varlist] [weight] [if exp] [in range] [ , [ detail | meanonly ]
    format separator(#) ]
```

by ...: may be used with summarize; see [R] **by**.

aweights, fweights, and iweights are allowed. However, iweights may not be used with the detail option.

The *varlist* following summarize may contain time-series operators; see [U] **14.4.3 Time-series varlists**.

Description

summarize calculates and displays a variety of univariate summary statistics. If no *varlist* is specified, then summary statistics are calculated for all the variables in the dataset.

Also see [R] **ci** for calculating the standard error and confidence intervals of the mean.

Options

detail produces additional statistics, including skewness, kurtosis, the four smallest and largest values, and various percentiles.

meanonly, which is allowed only when detail is not specified, suppresses the display of results and calculation of the variance. Ado-file writers will find this useful for fast calls.

format requests that the summary statistics be displayed using the display formats associated with the variables, rather than the default g display format; see [U] **15.5 Formats: controlling how data are displayed**.

separator(#) specifies how often separation lines should be inserted into the output. The default is separator(5), meaning that a line is drawn after every 5 variables. separator(10) would draw a line after every 10 variables. separator(0) suppresses the separation line.

Remarks

summarize can produce two different sets of summary statistics. Without the detail option, the number of nonmissing observations, the mean and standard deviation, and the minimum and maximum values are presented. With detail, the same information is presented along with the variance, skewness, and kurtosis; the four smallest and four largest values; and the 1st, 5th, 10th, 25th, 50th (median), 75th, 90th, 95th, and 99th percentiles.

You have data containin
the mileage rating. We can

```
. use http://www.sta
(1978 Automobile Dat
. summarize mpg
    Variable |
-------------+
         mpg |
```

We see that we have 74 ob
deviation is 5.79. The mini

If we had not specified th
summary statistics on all th

```
. summarize, separato
    Variable |
-------------+
        make |
       price |
         mpg |
       rep78 |
-------------+
    headroom |
       trunk |
      weight |
      length |
-------------+
        turn |
displacement |
  gear_ratio |
     foreign |
```

Notice that there are only 69
are no observations on make

Example

The detail option provid
of the output also differs:

```
. summarize mpg, detail
```

Percentiles	
1%	12
5%	14
10%	14
25%	14
50%	18
	20
75%	
90%	25
95%	29
99%	34
	41

If you specify a weight (see [U] **14.1.6 weight**), each observation is multiplied by the value of the weighting expression before the summary statistics are calculated, so that the weighting expression is interpreted as the discrete density of each observation.

▷ Example

You have 1980 Census data on each of the 50 states. Included in your variables is medage, the median age of the population of each state. If you type `summarize medage`, you obtain unweighted statistics:

```
. use http://www.stata-press.com/data/r8/census
(1980 Census data by state)
. summarize medage
```

Variable	Obs	Mean	Std. Dev.	Min	Max
medage	50	29.54	1.693445	24.2	34.7

Also among your variables is pop, the population in each state. Typing `summarize medage [w=pop]` produces population-weighted statistics:

```
. summarize medage [w=pop]
(analytic weights assumed)
```

Variable	Obs	Weight	Mean	Std. Dev.	Min	Max
medage	50	225907472	30.11047	1.66933	24.2	34.7

The number listed under Weight is the sum of the weighting variable, pop. It indicates that there are roughly 226 million people in the U.S. The pop-weighted mean of medage is 30.11 (as compared with 29.54 for the unweighted statistic), and the weighted standard deviation is 1.67 (as compared with 1.69).

▷ Example

You can obtain detailed summaries of weighted data as well. When you do this, *all* the statistics are weighted, including the percentiles.

```
. summarize medage [w=pop], detail
(analytic weights assumed)
```

Median age

	Percentiles	Smallest		
1%	27.1	24.2		
5%	27.7	26.1		
10%	28.2	27.1	Obs	50
25%	29.2	27.4	Sum of Wgt.	225907472
50%	29.9		Mean	30.11047
		Largest	Std. Dev.	1.66933
75%	30.9	32		
90%	32.1	32.1	Variance	2.786661
95%	32.2	32.2	Skewness	.5281972
99%	34.7	34.7	Kurtosis	4.494223