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log using "D:\jason\workshop\complex survey deisgn\complex survey2.log",
replace

*****
* Example 1. Survey data collected with a complex survey design
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webuse highschool, clear

des weight height race sex county sampwgt ncounties state school nschools

quietly svyset county [pw = sampwgt], fpc(ncounties) strata(state)|| school,
fpc(nschools)

*****
* 1.1 Analyzing the data without the sampling deisgn variables
*****

reg weight height race

*****
* 1.2 Analyzing the data, using only the personal weights
*****

reg weight height race [pweight=sampwgt]

*****
* 1.3. Analyzing the data, using all the sampling design variables
*****

svy: reg weight height race

*****
* Example 2: Analyzie the sub-sample
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*****
2.1. Analyzing the data from a subpopulation, without considering the
sampling design and the change to the variance estimate
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reg weight height race if sex ==2

*****
* 2.2. Analyzing the data from a subpopulation, without considering the
change to the variance estimate
*****

svy: reg weight height race if sex ==2

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*****
* 2.3. Analyzing the data from a subpopulation, considering both the
sampling design and the change to the variance estimate
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svy, subpop(if sex ==2): reg weight height race
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* Example 3: The error message caused by strata with only one sampling unit
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use http://www.stata-press.com/data/r15/nhanes2b, clear
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svyset psuid [pweight=finalwgt], strata(stratid)
svy: mean hdresult
```

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*****
3.1. if there are strata with only one sampling unit, Stata does not
calculate the standard error
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```
svyset psuid [pweight=finalwgt], strata(stratid) singleunit(missing)
svy: mean hdresult
```

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*****
* 3.2. Treat the only unit of the stratum as being selected with certainty
and selecting this sampling unit does not contribute to the standard error
*****
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```
svyset psuid [pweight=finalwgt], strata(stratid) singleunit(certainty)
svy: mean hdresult
```

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*****
* 3.3. using the average of the variances from the strata with multiple
sampling units for each stratum with one sampling unit
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```
svyset psuid [pweight=finalwgt], strata(stratid) singleunit(scaled)
svy: mean hdresult
```

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*****
* 3.4. using the average of the variances from all strata with multiple
sampling units for each stratum with one sampling unit
*****
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```
svyset psuid [pweight=finalwgt], strata(stratid) singleunit(centered)
svy: mean hdresult
```

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log close
```